

SIGACCESS FY '15 Annual Report
July 2014 – June 2015
Submitted by: Shari Trewin, Chair

SIGACCESS continues to refine its activities to meet member needs. This report highlights SIGACCESS Awards as well as the SIG's conference, publication, and other activities.

Awards

SIGACCESS Best Paper Award

Charles Fage, Léonard Pommereau, Charles Consel, Émilie Baland, and Hélène Sauzéon. 2014. Tablet-based activity schedule for children with autism in mainstream environment. In Proceedings of the 16th International ACM SIGACCESS Conference on Computers & Accessibility (ASSETS '14). ACM, New York, NY, USA, 145-152. DOI=10.1145/2661334.2661369

<http://doi.acm.org/10.1145/2661334.2661369>

SIGACCESS Best Student Paper Award

Catherine M. Baker, Lauren R. Milne, Jeffrey Scofield, Cynthia L. Bennett, Richard E. Ladner. 2014. Tactile Graphics with a Voice: Using QR Codes to Access Text in Tactile Graphics. In *Proceedings of the 16th International ACM SIGACCESS Conference on Computers and Accessibility* (ASSETS '14). ACM, New York, NY, USA, 75-82. DOI=10.1145/2661334.2661366

<http://doi.acm.org/10.1145/2661334.2661366>

SIGACCESS Outstanding Contribution to Computing and Accessibility Award

This award is given every other year. For 2014, the recipient was Professor Vicki L. Hanson, Distinguished Professor of the Thomas Golisano College of Computing and Information Sciences, Rochester Institute of Technology. Professor Hanson has made sustained and wide-ranging contributions to the field of accessibility, over a distinguished career including industry, academia, and policy organizations. Prof. Hanson's innovations and research and publications are out in the world, being used every day by consumers and influencing researchers and developers.

SIGACCESS Scholarship in Computers and Accessibility

The SIGACCESS Scholarship Award aims to provide support for participation in the ASSETS conference for individuals who would not otherwise be able to attend. Practitioners, researchers, members of advocacy groups, or individuals with disabilities are eligible to apply. Applicants must have a demonstrated interest in accessible computing. Awardees will have the opportunity to actively participate in the ASSETS conference and gain experience and knowledge from interacting with experts in the field. The scholarship award is in the amount of \$2,000. SIGACCESS awards up to five scholarships per year, pending availability of funds. The 2014 scholarships were awarded to Cynthia Bennet, Katherine Duchastel de Montrouge, Vincent Martin and Aditya Vashistha to attend ASSETS 2014. In addition, consistent with the mission of SIGACCESS, we provided travel support for an assistant that needed to travel with one of the recipients.

ASSETS 2014 ACM Student Research Competition Winners

Graduate Category

- First Place: Benjamin Gorman, University of Dundee
"VisAural: a wearable sound localization device"
- Second Place: Vikas Ashok, Stony Brook University
"Capti-Speak: A Speech Enabled Accessible Web Interface"
- Third Place: Valentyn Melnyk, Stony Brook University
"Accessible Web Chat Interface"

Undergraduate Category

- First Place: Mitchell Gordon, University of Rochester
"Web Accessibility Evaluation with the Crowd"
- Second Place: Nata Barbosa, Syracuse University
"Strategies an Inclusive Authentication Framework"

Supporting ACM-W Scholarships

Beginning with ASSETS 2010, SIGACCESS has supported the ACM-W Scholarship program by providing a complimentary registration to ACM-W Scholarship recipients. For ASSETS 2014, SIGACCESS hosted Andrea Fletcher, Georgia Institute of Technology.

Significant Programs

ASSETS Conference

ASSETS 2014 was held in Rochester, New York, USA. The number of submissions was the highest in history at 106 with submissions from numerous countries spanning a variety of topics. The acceptance rate of 26%, was a little lower than recent history. Attendance was also the highest for any ASSETS conference, and the conference was profitable.

As has become the norm, the conference featured an NSF sponsored Doctoral Consortium (see the January 2015 issue of the SIGACCESS Accessible Computing Newsletter). This consortium allowed doctoral students to present their dissertation topics and receive feedback during formative stages of their work. The conference also hosted a Microsoft Student Research Competition (SRC) event (see information about the winners of the competition above). The first place undergraduate winner, Mitchell Gordon, won 2nd place in the ACM Grand Finals.

ASSETS 2014 continued the captioning competition introduced in 2013. Since captioning is an active area of research for a number of groups in the ASSETS community, we invited participants for a competition that was held at ASSETS 2014 in which teams used their technology to caption one or more of the sessions. Our aim was to promote research that will make it possible for ASSETS, and other organizations, to create captions of good quality at very low cost.

ASSETS 2014 also continued the new submission venue for 'experience reports', and added a text entry challenge. Experience reports are direct reports from people with disabilities on their use of technology. The text entry challenge invited researchers to demonstrate alternative text entry methods, and conference attendees enjoyed testing and evaluating them.

Another important innovation at ASSETS 2014 was a successful experiment with the use of Beam telepresence robots to enable attendance by two remote participants with disabilities, who would not otherwise have been able to attend. The remote attendees were able to participate in conference sessions, including asking questions, and to socialize during breaks. Going forward, we plan to explore how telepresence attendance could be managed as an accessibility accommodation within the funding and bandwidth limitations of the conference.

The SIGACCESS Business Meeting, held at ASSETS, updated attendees on SIG activities and discussed ideas for new activities. We continued discussions regarding supporting workshops or other smaller events that were more focused with regard to topic or geographical location.

ASSETS offers a mentoring program to authors who are new to the conference as well as authors who are new to presenting research or are submitting work to a new category. Authors who are not familiar with preparing papers in English can also seek assistance. Mentors are experienced ASSETS authors, providing advice to the prospective authors about how their work may fit with the conference and how to effectively present their ideas. Normally, mentoring does not include detailed copyediting. This year the mentoring program received 12 requests with two resulting in full papers being accepted for presentation at ASSETS 2014.

ACM Transactions on Accessible Computing

TACCESS is a quarterly journal that publishes refereed articles addressing issues of computing as it impacts the lives of people with disabilities. It provides a technical forum for disseminating innovative research related to computing technologies and their use by people with disabilities. In addition to regular issues published this year, expanded versions of top papers from the ASSETS 2013 conference appeared in special issue 6:2, and additional articles will be appearing in an upcoming issue. TACCESS also published a multi-part set of special issues on Speech and Language Interaction for Daily Assistive Technology, containing articles that investigate the intersections between computer accessibility and current work in computational linguistics. In early 2014, TACCESS announced an experimental program by which articles accepted for publication in the journal would be eligible for presentation at the ASSETS conference; two articles were presented at ASSETS 2014: "Distinguishing Users By Pointing Performance in Laboratory and Real-World Tasks" by Amy Hurst, Scott E. Hudson, Jennifer Mankoff, and Shari Trewin (<http://doi.acm.org/10.1145/2517039>) and "Automatic Task Assistance for People with Cognitive Disabilities in Brushing Teeth - A User Study with the TEBRA System" by Christian Peters, Thomas Hermann, Sven Wachsmuth, and Jesse Hoey (<http://doi.acm.org/10.1145/2579700>). SIGACCESS received positive feedback from ASSETS attendees about these presentations. Therefore, the program was continued for 2015: Manuscripts accepted to TACCESS by early June 2015 are eligible for presentation at ASSETS 2015. Several articles are expected to be presented at the upcoming conference under this arrangement.

SIGACCESS Newsletter

The SIGACCESS newsletter continues with its regular online publications: see <http://www.sigaccess.org/community/newsletter/>.

SIGACCESS Website

The SIGACCESS web site provides information about the SIG's activities including awards and conferences as well as a repository of dissertations and theses, our newsletter, writing guidelines, and other resources, which may be of value to the community.

Innovative programs

SIGACCESS has developed several resources, which are made available to the community at large via the SIGACCESS web site. The first is a set of writing guidelines, which reflect current thinking on language for writing in the academic accessibility community. Certain words or phrases can (intentionally or unintentionally) reflect bias or negative, disparaging, or patronizing attitudes toward people with disabilities and in fact any identifiable group of people. Choosing language that is neutral, accurate, and represents the preference of the groups to which it refers can convey respect and integrity. As language changes over time, the guidelines are intended to be revised periodically. This year, an updated version of the original guidelines with added coverage of language for work with older adults is to be published in the Interactions magazine. This effort was led by Prof. Vicki Hanson.

The second resource is a guide for planning accessible conferences, which is linked from the ACM Conference Organizers' Manual. This document contains information for organizers of academic conferences who wish to make their events as accessible as possible, so that people with disabilities can participate fully. SIGACCESS is working with the SIGCHI accessibility community to expand this document to ensure it covers the needs of large conferences.

In 2014 SIGACCESS updated a third community resource on creating accessible PDF documents, in both video and document form. The current version was pilot tested by ASSETS 2014 authors preparing their camera-ready papers, and will soon be disseminated broadly within ACM through inclusion in the ACM publications pages for authors.

Key Issues

Moving forward, there are a number of issues that SIGACCESS must address including developing future leaders for the community and continuing our efforts to reach new audiences. The SIG is actively engaged in developing leaders, recruiting new members of the community to participate both in the conference organizing committee and in other SIG activities. To reach new audiences, and become a more international organization, the SIG arranges for ASSETS to be periodically held in Europe. ASSETS 2015 will be held in Lisbon, Portugal. We were pleased that ASSETS continues to receive numerous submissions and have very strong attendance. We will be considering the possibility of holding ASSETS outside of the US more frequently.

SIGACT FY '15 Annual Report
July 2014 – June 2015
Submitted By: Paul Beame, Past Chair

1. Awards

- 2015 Gödel Prize: This was awarded to **Daniel A. Spielman and Shang-Hua Teng** for their series of papers on nearly-linear-time Laplacian solvers: “Spectral sparsification of graphs”. SIAM J. Computing 40:981-1025, 2011. “A local clustering algorithm for massive graphs and its application to nearly linear time graph partitioning”. SIAM J. Computing 42:1-26, 2013, and “Nearly linear time algorithms for preconditioning and solving symmetric, diagonally dominant linear systems”. SIAM J. Matrix Anal. Appl. 35:835-885, 2014. The prize is awarded jointly with the EATCS and this year was awarded at the ACM STOC 2015 conference at FCRC.
- 2015 Knuth Prize: This was awarded to **László Babai** for his fundamental contributions to theoretical computer science including algorithm design and complexity, and especially for pioneering a new understanding of mathematical proof. The Knuth Prize is given jointly by SIGACT and IEEE CS TCMF and the Knuth Prize and Lecture was given this year at the ACM STOC 2015 conference at FCRC.
- Paris Kanellakis Theory and Practice Award: This was awarded to **James Demmell**, for his work on linear algebra libraries. This is an ACM award sponsored in part by SIGACT.
- The 2015 Edsger W. Dijkstra Prize in Distributed Computing is given jointly to "Another Advantage of Free Choice: Completely Asynchronous Agreement Protocols", by **Michael Ben-Or**, published in *Proceedings of the 2nd ACM Symposium on Principles of Distributed Computing (1983)* and "Randomized Byzantine Generals", by **Michael O. Rabin**, published in *Proceedings of 24th IEEE Annual Symposium on Foundations of Computer Science (1983)*. The Dijkstra Prize is given jointly by SIGACT and SIGOPS.
- SIGACT Distinguished Service Award: **Avi Wigderson**
- The STOC 2015 Best Paper Award was shared between the papers: **Anat Ganor, Gillat Kol, and Ran Raz**, “Exponential Separation of Information and Communication for Boolean Functions”, **James R. Lee, Prasad Raghavendra, and David Steurer**, “Lower Bounds on the Size of Semidefinite Programming Relaxations” and **Zeev Dvir and Sivakanth Gopi** “2-Server PIR with Sub-Polynomial Communication.”
- Danny Lewin Best Student Paper Award (STOC 2015): “Inapproximability of Nash Equilibrium” by **Aviad Rubinfeld**.
- SIGACT made approximately 45 student travel awards to allow students to attend the 2015 STOC conference. Student travel awards were also given for students attending many other SIGACT sponsored conferences.

2. Significant papers on new areas published in proceedings

STOC 2015

The ACM Symposium on Theory of Computing (STOC 2015) covers much of computer science theory.

James R. Lee, Prasad Raghavendra, and David Steurer, in their paper “Lower Bounds on the Size of Semidefinite Programming Relaxations”, which won a Best Paper Award, prove that a wide range of techniques based on semidefinite programming for solving, or even approximating, the solution of many important NP optimization problems such as the TSP, Independent Set, and 3-SAT require exponential time. These semi-definite programming techniques have yielded the best approximation algorithms known for these and other NP-optimization problems, so this is very strong. These lower bounds follow by showing that any set defined by a semi-definite program, in any number of dimensions, whose projection is an approximation to the natural 01-polytope associated with any of these NP-optimization problems requires an exponential number of constraints.

Anat Ganor, Gillat Kol, and Ran Raz in their paper, “Exponential Separation of Information and Communication for Boolean Functions”, which won a Best Paper Award, showed that the number of bits of communication between two players required to compute a function of their joint inputs must, in some instances, be exponentially larger than the amount of information that those bits must contain. This is in contrast to the situation with one-way communication between two players where Shannon’s theorem shows that the communication can always be reduced so that it matches the information required. It shows that a previous upper bound on the relationship between communication and information is tight and shows that the communication required to compute multiple independent instances of a function can be asymptotically less than solving each of them separately – in the terminology of the field “a pure direct sum bound does not hold”.

Zeev Dvir and Sivakanth Gopi in their paper “2-Server PIR with Sub-Polynomial Communication” which won a Best Paper Award, studied the 2 server private information retrieval (PIR) problem. In this problem the goal is to split a database between two non-communicating servers and design a protocol for retrieving data from it so that one can extract a desired piece of information from it while maintaining complete privacy from each server about which piece of information was desired. If one wishes to extract one bit from an n -bit database, a trivial solution would be to ask a server for all n bits. This paper shows that it is possible to retrieve only $n^{o(1)}$ bits from each server. In fact, this matches the bounds previously known only for splitting the database across 3 servers, a key result that Yekhanin showed in his ACM Award winning PhD dissertation.

Aviad Rubinfeld, in his paper "Inapproximability of Nash Equilibrium", which won the Danny Lewin Best Student Paper Award, studied the problem of computing Nash equilibria in multiplayer games in which the entire game is decomposable into many small pairwise games. Previously it was known that for 2 players playing a single game for which each player has n possible pure strategies, finding an approximate Nash equilibrium is PPAD-complete, a level of complexity between P and NP-complete that is believed to be hard. In this work, the same PPAD-completeness is shown for the case when each player has only two or three pure strategies, but the payoff to each player for a given outcome depends on the sum of payoffs of all the games in which they participate. These results also cover all other cases that have been studied where the payoffs for a multiplayer Nash equilibrium can be succinctly specified.

SODA 2015

SODA is a major conference that focuses on algorithms and combinatorics.

Bingkai Lin's paper "The Parameterized Complexity of k -Biclique", which won both the Best Paper and Best Student Paper Awards at SODA 2015, solved a longstanding problem in parameterized complexity, showing that the problem of finding a size $k \times k$ complete bipartite subgraph is at least as hard as finding a k -clique subgraph. This problem has been open for about 25 years. In parameterized complexity one measures problems in terms of both their size n and some other parameter k . The best known algorithms for both the k -clique and k -biclique problems were $n^{O(k)}$ - both are in the fixed parameter complexity class $W[1]$. It was known that k -clique is $W[1]$ -complete but it was open whether the k -biclique problem is $W[1]$ -complete, which this paper now shows. The result resolves a key open case of Grohe's conjecture that subgraph embedding problems are fixed-parameter tractable if and only if the subgraphs have bounded treewidth.

SPAA 2015

SPAA is a major conference that focuses on the theory of parallel algorithms and architecture for parallel computation

Yossi Azar, Nikhil Devanur, Zhiyi Huang and Debmalya Panigrahi's Best Paper at SPAA 2015, "Speed Scaling in the Non-clairvoyant Model", tackled the problem of scheduling jobs on a processor that can be run at varying clock speeds that each have different energy requirements. The goal is to minimize some linear combination of response time (called flow time in the literature) and energy costs. This optimization is being done in a situation in which the amount of computation required by each job is not known in advance (the "non-clairvoyant model") and the measurement of flow time is an integral of the delay between release times of individual components of a job. The result here is an online method that always comes within a small constant factor of the best cost possible, even if the requirements of each job are fully known in advance and the schedule is done with complete information from the beginning.

PODC 2015

PODC is a major conference that focuses on the theory of distributed computing.

Leonid Barenboim's Best Paper at PODC 2015 "Deterministic $(\Delta+1)$ Coloring in Sublinear (in Δ) Time, in Static, Dynamic and Faulty Networks" considers distributed message-passing algorithms in a network with maximum degree Δ that may be dynamically changing or may have faulty edges. In such a network it is always possible to color the graph with $\Delta+1$ colors. Graph coloring is a very useful starting primitive since the colors can be used to schedule operations so at most one processor on each edge is active at any time. This paper gives the first solution that runs in $o(\Delta)$ rounds of communication (in fact in $O(\Delta^{3/4} + \log^* n)$ time where $\log^* n$ is an extremely slow growing function that is essential for finding a coloring in graphs on n vertices). This problem had been open and the subject of considerable study for roughly 30 years.

Mohsen Ghaffari's Best Student Paper at PODC 2015 "Near-Optimal Scheduling of Distributed Algorithms" studied how arbitrary distributed computation tasks can be run simultaneously on a network of processors that has bounded queues. For the special case in which each task is to send one message along a path to some other processor it was shown that the delay is $O(\text{congestion} + \text{dilation})$ where dilation is the length of each individual task and congestion is the maximum number of messages across any one edge. In this more general case, this optimum is not always achievable. This paper shows that the delay can be as large as $\Omega(\text{congestion} + \text{dilation} * \log n / \log \log n)$ where the network has n vertices. It also gives an algorithm showing a nearly matching time bound of $O(\text{congestion} + \text{dilation} * \log n)$. This was Mohsen's second Best Student Paper Award at PODC.

3. Significant programs that provided a springboard for further technical efforts

SIGACT sponsored or co-sponsored a number of important conferences including the Symposium on Theory of Computation (STOC), Symposium on Principles of Distributed Computing (PODC), Symposium on Parallel Algorithms and Architectures (SPAA), Innovations in Theoretical Computer Science (ITCS), and Symposium on Discrete Algorithms (SODA).

SIGACT also supports several conferences in-cooperation including the Computational Complexity Conference (CCC), Symposium on Principles of Database Systems (PODS), Symposium on Foundations of Computer Science (FOCS), Symposium on Principles of Programming Languages (POPL).

4. Innovative programs which provide service to our technical community

The Committee for the Advancement of Theoretical Computer Science (CATCS) sponsored by SIGACT continues to be very active. The committee meets by conference call every month and has developed and executed action plans to increase the visibility of theoretical computer science and to increase the funding base for theory of computation at the NSF. The Committee has helped advise the NSF CCF Director and other NSF officers on several matters including recruiting for positions within. The committee has

also been working to obtain a more detailed and complete picture of the state of academic employment in theoretical computer science within the broad range of US research universities.

SIGACT continues to support student attendance at SODA and STOC by funding Student Best Paper Awards, travel, lunches, and reduced registration fees. This year SIGACT also covered all ACM allocations for sponsored conferences and provided additional student support for all of its other sponsored and co-sponsored conferences this year. This helps ensure that the maximum number of students can attend these conferences and helps keep registration fees low.

5. Summary of key issues that the membership of the SIGACT will have to deal with in the next 2-3 years

Funding and articulating the importance of theoretical computer science are perennial issues that are being addressed by the Committee for the Advancement of Theoretical Computer Science (CATCS) in conjunction with SIGACT. One issue that CATCS is currently documenting is an apparent relative concentration of researchers in theoretical computer science at highly ranked institutions versus a relative lack of such researchers at lower ranked institutions. Spreading theoretical computer science more broadly to these institutions could have significant impact on academic employment in theoretical computer science. Some of this may involve educating those institutions that theoretical computer science researchers are indeed able to obtain research funding. The process of collecting the data and making it available is nearly complete.

A major positive development for SIGACT in the last year has been the change in ACM policies that now allows permanent OpenTOC access for sponsored conferences. This now means that conference papers will be available freely to members of the community in perpetuity, an issue that had been a sticking point for a large number of people in the theoretical computer science community. This has dramatically changed the dynamic that had hurt ACM within the theory community. We have to continue to make sure that all these links are made available in a timely and efficient manner so that the promise of these changes is truly fulfilled.

Despite the departure of SoCG from ACM in the summer of 2014 after a community vote, there is a strong interest in making sure that SIGACT conferences retain and increase their breadth within theoretical computer science. SIGACT began a process this year towards re-invigorating the STOC conference so that it is more of a "must-attend" event for members of the theoretical computer science community. The quality and selectivity of the STOC conference published work is very high and has even improved in recent years, but there is concern that the energy of the event itself has declined – attendance has remained strong but it has not grown significantly with the growth of the community. Plans are being developed to broaden the reach of the STOC conference event for 2017 while retaining its quality. These include lengthening the event to involve a wider range of conference activities. These plans need further development and execution.

**SIGADA FY '15 Annual Report
July, 2014 – June, 2016
Submitted by: David Cook**

AWARDS

Started in 1994, the ACM SIGAda Awards recognize individuals and organizations that have made outstanding contributions to the Ada community and to SIGAda. The Outstanding Ada Community Contribution Award is given for broad, lasting contributions to Ada technology and usage. The Distinguished Service Award is given for exceptional contributions to SIGAda activities and products.

This year the **Outstanding Ada Community Contribution Award** was awarded to Carl Brandon, Professor at Vermont Technical College.

Dr. Brandon has a long and distinguished career as an Ada educator and advocate. He has been instrumental in demonstrating and promoting the effective use of Ada and SPARK in real-world research projects at Vermont Technical College including an Arctic Sea Ice Buoy and, most recently, a Lunar CubeSat. Of the 12 university CubeSats launched on this mission, the Vermont Lunar is the only one still working (8 were never heard from at all); its success was due largely to its use of SPARK/Ada software technology. Photos downloaded from the CubeSat can be seen at cubesatlab.org.

This was the first CubeSat to use Ada, and the first spacecraft of any kind to use SPARK. The project received widespread publicity in the technical press and has helped bring Ada and SPARK to the attention of the real-time software community, many of whom had previously looked on Ada as only a legacy language.

The **ACM SIGAda Distinguished Service Award** was presented to Dr. Dirk Craeynest, Senior I.T. Consultant at Eurocontrol – CFMU. This award was presented to Dirk for his consistent service to SIGAda as the International Representative, his key role in promoting Ada in Europe, his success in the liaison role between SIGAda and Ada Europe.

Dirk encourages people to promote Ada and by actively promoting Ada himself he plays a central role in the development of the Ada community in Europe and Belgium. He is the advocate for getting SIGAda US representatives to appear at the annual Ada Europe conference and Ada Europe representatives to appear at the SIGAda conferences. He has been dedicated to keeping these two organizations connected for many years.

CONFERENCES/WORKSHOPS

HILT (High Integrity Language Technology) 2014

Our conference, HILT 2014, was held in Portland, Oregon October 18-21, 2014. The conference was a success technically, and also produced a small surplus (approximately \$150). This is the second conference in a row (HILT 2013 and HILT 2014) that had a surplus. We had multiple invited speakers, and several excellent technical papers, workshops, and tutorials.

We at SIGAda feel that we have reversed the trend of our conferences and workshops producing large deficits.

Upcoming Workshops

The SIGAda Executive Committee decided this year to skip our traditional yearly conference, and move to a two-year conference. The decision has been made to hold a scaled-down workshop focused on narrower topics for 2016.

Our next workshop is tentatively scheduled to be the SIGAda/HILT Workshop on Model-Based Engineering and Contract-Based Programming, Huntsville, AL scheduled for Summer or Fall, 2016. We will be selecting a time to de-conflict with AdaEurope, 2016.

A workshop focused on Modeling languages such as AADL, Simulink, and SCADE, combined with contract-based programming languages such as Ada 2012, SPARK 2014, and Frama-C/ACSL. (tentatively scheduled for Summer 2016 in Huntsville, AL).

PROGRAMS

Significant Programs that provided a springboard for further technical efforts

A formal liaison exists between SIGAda and ISO WG9. ISO/IEC JTC1/SC22 WG9 is that body of international representatives responsible for the maintenance and evolution of the Ada International Standard. The National Bodies represented on WG9 are Belgium, Canada, France, Germany, Italy, Japan, Switzerland, the United Kingdom, and the United States.

In March 2007 the ISO (the International Organization for Standardization) in Geneva, Switzerland announced the formal completion of the process to revise the Ada 95 language, with the publication of the Ada 2005 standard — officially named ISO/IEC

8652:1995/Amd 1:2007. This announcement culminates a collaborative international effort under ISO's Ada Working Group (WG9) to enhance the 1995 version of the Ada language.

In November 2012, ISO (the International Organization for Standardization) in Geneva, Switzerland, announced the successful 14-0 ballot on the final draft of the Ada 2012 Standard, the document arising from the collaborative international process under ISO's Ada Working Group (WG9) to revise the Ada 2005 standard. The official publication of Ada 2012 occurred in December 2012 -- officially named ISO/IEC 8652:2012.

At least one SIGAda Officer participates and represents the membership at the WG9 meetings held twice each year. This year the meetings were in Portland, Oregon (at the SIGAda HILT 2014 conference) and via teleconference at the 2014 Ada Europe conference in Madrid, Spain. Tucker Taft (Vice Chair) represented SIGAda for these meetings, while I (as Chair) prepared our formal SIGAda report to WG9.

Innovative Programs which provide service to some part of our technical community

Since 1994 SIGAda has conducted an "Ada Awareness Initiative". Its centerpiece has been our SIGAda professional booth display unit in exhibition halls at important software engineering conferences. This lets folks know that Ada is very much alive and a sound part of any software engineering effort having real-time, high integrity, high-assurance, and highly distributed requirements. We brought the booth to the SIGCSE conference this year (Kansas City, Missouri, March 4 – 7 2015) providing good visibility for SIGAda to the Computer Science educational community. We decided not to take the booth to the Software and Systems Technology Conference (SSTC) due to declining attendance at the conference.

Via this exhibiting, SIGAda sustains Ada visibility ("name recognition"), provides various Ada-advocacy materials and makes available Ada experts (our booth staff volunteers) who can intelligently answer questions, provide pointers and help, and debunk the misinformation about Ada that many attendees at these shows have. This program continues to be extremely successful and viewed as a highly important thrust by the SIGAda membership.

FUTURE ISSUES

Summary of key issues to deal with in the next 2-3 years

The key issue SIGAda will deal with over the next 2-3 years is the financial stability of the organization. Prior to HILT 2013, the conferences have not produced a profit with the exception of the SIGAda 2011 conference in Denver. The HILT 2013 conference produced a small surplus (approximately \$500). The HILT 2014 conference produced a small surplus, also (\$150). The annual conference is the main source of revenue for the SIGAda organization; so continued losses on the conferences will eventually make SIGAda not viable in the eyes of ACM. SIGAda had a viability review in March 2014, and received a two-year status. We feel that the HILT 2013 and 2014 conferences show us to have a stable population of Ada enthusiasts and advocates, and our ability to hold two conferences in a row that did not produce a deficit show that we have found our "niche". To optimize this "niche", we are shifting to a "focused Workshop" rather than a conference agenda. We feel that this will increase our yearly surplus.

In 2012, we decided to rename the SIGAda annual conference in order to focus on a niche in the safety critical, high integrity area of Computer Science. The SIGAda 2012 annual conference was called the High Integrity Language and Technology (HILT) conference. This conference was well attended and included outstanding keynote speeches and paper presentations. The conference suffered a loss in revenue around \$5K. The committee for the HILT 2013 conference made changes to registration policies that avoided this situation (and we showed a \$500 surplus, which, while small, is better than a deficit.) We also showed a surplus during HILT 2014, which was co-located with SIGPLAN's SPLASH conference in Portland, Oregon during October 2014.

We will publish two issues of the Ada Letters journal and seek participation in the form of contributing articles and papers.

SIGAda conference viability

As mentioned above, SIGAda had its viability review in March, and received a two-year status. Our major issue is the declining revenue of our conference, which is our major source of income. While the 2013 conference produced a minor surplus (approximately \$500), it was not a major financial success. The 2014 conference was a well-attended conference (by SIGAda standards) produced another small surplus (about \$100). To optimize our resources, we want to shift from a yearly conference to a bi-yearly focused workshop format. This will be held in Huntsville Alabama, during late summer or early fall, 2016. We feel that Huntsville – which is a short "hop" from Atlanta – will attract both US and international attendees.

In terms of conference "competition", SIGAda maintains a relationship with Ada-Europe, which has its own yearly (summer) conference – this year, their conference, the "20th International Conference on Reliable Software Technologies (Ada-Europe)", was held in Madrid, Spain. SIGAda and Ada-Europe are the two major Ada conferences worldwide.

Tucker Taft (SIGAda Vice Chair) and I (as SIGAda Chair) are still working with Ada-Europe to possibly coordinate a joint tri-yearly publication. We understand that there are some obstacles with combining an ACM and outside publication, but we hope to find a way to make this happen. It would better meet the needs of SIGAda members, as it would give them a wider range of articles to enjoy.

SIGAI FY '15 Annual Report
July 2014 – June 2015
Submitted by: Yolanda Gil, Chair

The scope of SIGAI consists of the study of intelligence and its realization in computer systems. This includes areas such as autonomous agents, intelligent user interfaces, knowledge discovery, human language technologies, cognitive modeling, knowledge representation, planning, robotics, problem solving, machine learning, and computer vision.

Activities during 2014/2015:

1. LAUNCH OF A QUARTERLY NEWSLETTER

SIGAI launched a new quarterly newsletter, "AI Matters", that features articles of general interest to the AI community. The first issue was published in August 2014.

2. LAUNCH OF A NEW CONFERENCE FOR EARLY CAREER RESEARCHERS

SIGAI launched the SIGAI Career Network Conference (SIGAI CNC), a conference to showcase the work of early career researchers to their potential mentors and employers. The first conference was held in February 26, 2015 in Austin, Texas, collocated with AAAI-2015. Ten oral presentations and twenty posters were selected for the conference. Several industry sponsors participated in the conference. In addition, a mentoring panel was held that included speakers representing industry research labs, academia, and liberal arts colleges. Three awards were given to early career researchers for the best presentations.

3. CONFERENCES

SIGAI co-sponsored the following conferences:

- * ACM SIGAI Career Network and Conference (CNC), January 26, 2015, Austin, Texas.
- * ACM International Conference on Intelligent User Interfaces (IUI), May 29-April 1, 2015, in Atlanta, Georgia.
- * 9th ACM/IEEE International Conference on Human-Robot Interaction (HRI), March 2-5, 2015, Portland, Oregon.
- * 29th IEEE/ACM International Conference on Automated Software Engineering (ASE), November 9-13, 2015 Lincoln, Nebraska.
- * IEEE/WIC/ACM International Conference on Web Intelligence (WI-IAT), December 6-9, 2015, Singapore.

In addition, SIGAI granted in-cooperation status to many international conferences.

SIGAI continues to have an agreement with the International Foundation for Autonomous Agents and Multiagent Systems (IFAAMAS) to continue a special cooperation status regarding the AAMAS conference and the ACM SIGAI Autonomous Agents Research Award indefinitely. The recipient of the award is invited to give a talk at the conference.

4. AWARDS

The ACM SIGAI Autonomous Agents Research Award is an annual award for excellence in research in the area of autonomous agents.

The 2015 ACM SIGAI Autonomous Agents Research Award recipient is Professor Catherine Pelachaud, Director of Research at CNRS at Telecom ParisTech. Dr. Pelachaud is honored for her sustained and substantial contributions to the area of intelligent virtual agents. Her seminal work in this area helped launch the area of intelligent virtual agents, and her many subsequent publications have exerted a strong influence on virtual agent research at AAMAS and the Intelligent Virtual Agents conferences. Furthermore, her research on the role that bodily communication plays in face-to-face interaction has helped set the agenda of embodied agent research. In the process, it has firmly established a research area of modeling the body, its relation to the mind and its role in social interaction. Overall, this work has filled critical gaps in agents research often ignored by the larger community. Dr. Pelachaud gave a plenary address at the 2014 International Conference on Autonomous Agents.

5. EDUCATIONAL ACTIVITIES

SIGAI awarded a number of scholarships to students to attend the conferences co-sponsored by SIGAI. The amounts of scholarships varied from \$1,000 to \$10,000 per conference, depending on the conference size. Funding students is a good way to ensure long term growth and vitality in the AI community and a good investment for the future.

SIGAI co-sponsored with AAAI the 2015 SIGAI/AAAI Doctoral Consortium. The Doctoral Consortium is held each year during the AAAI conference, and provides an opportunity for Ph.D. students to discuss in depth their research interests and career objectives with the other participants and a group of established AI researchers that act as individual mentors. Presentations and discussions take place over two days of intense meetings prior to the AAAI conference.

6. LAUNCH OF A NEW LOCAL CHAPTER OF SIGAI

A new local chapter of SIGAI was founded in the San Francisco Bay area. The chapter will organize presentations of interest to people in the local area interested in AI.

7. MEMBERSHIP

SIGAI has more than 900 members. This includes members from academia, industry, and government institutions, as well as many students. The enrollment of new members has been increasing over the last few years.

8. PLANS FOR THE FUTURE

SIGAI plans to continue to support communities related to AI in a broad sense. SIGAI will continue expanding the areas covered by co-sponsored and in-cooperation conferences to ensure that communities that work in AI or find inspiration with AI topics maintain ties with AI. This will increase the visibility of SIGAI and help the growth of new communities.

SIGAPP FY'15 Annual Report
July 2014 - June 2015
Submitted by: Jiman Hong, Chair

The SIGAPP mission is to further the interests of the computing professionals engaged in the development of new computing applications and applications areas and the transfer of computing technology to new problem domains.

SIGAPP Officers

Chair - Jiman Hong, Soongsil University, Seoul, Korea
Vice Chair – Tei-Wei Kuo, National Taiwan University, Taiwan
Secretary – Maria Lencastre, University of Pernambuco Recife, Pernambuco, Brazil
Treasurer – JungYeop (John) Kim, Utica College, USA
Immediate Past Chair – Sung Y. Shin, South Dakota State University
Web Master - Hisham Haddad, Kennesaw State University, USA
ACM Program Coordinator, Irene Frawley, ACM HQ

Status of SIGAPP

The main event that took place within SIGAPP for this year was the Symposium on Applied Computing (SAC) in Salamanca, Spain after taking place in Gyeongju, Korea in 2014. This year's SAC was very successful. More details about SAC will follow in the next section. We also supported several additional conferences with in-cooperation status. We have 10% co-sponsorship for two conferences. The first one, 2014 International Conference on Ubiquitous Information Management and Communication (IMCOM) was held in Bali, Indonesia in January, 2014, and the 2014 Reliable and Convergent Systems (RACS) was held in Baltimore, MD in October 2014. The IMCOM 2014 and RACS conferences were successful, and have been beneficial for SIGAPP. We will continue supporting those conferences in the coming years.

ACR is now stabilized, and we have begun publishing quarterly electronically since spring of 2012. Ultimately, we would like to have ACR appear in the SCI (Science Citation Index). ACR contains invited papers from world-renowned researchers and selected papers presented by prominent researchers and professionals who attended the Symposium on Applied Computing 2015 in Salamanca, Spain. The selected papers have been expanded, revised, and peer-reviewed again for publishing in ACR. The next issue will be published in fall of 2015. We selected good quality papers from two SIGAPP partially sponsored conferences, IMCOM and RACS, as well. We have a number of in-cooperation conferences, and the list of in-cooperation conferences are below:

- SENSORNETS 2015 (International Conference on Sensor Networks)
- ICPRAM 2015 (International Conference on Pattern Recognition Applications and Methods)
- FedCSIS 2015 (Federated Conference on Computer Science and Information Systems)
- MOBIQUITOUS 2015 (International Conference on Mobile and Ubiquitous Systems : Computing, Networking, and Services)
- PECCS 2015 (International Conference on Pervasive and Embedded Computing and Communications Systems)
- ENASE 2015 (International Conference on Evaluation of Novel Approaches to Software Engineering)
- SBSI 2015 (Brazilian Symposium on Information Systems)
- MEDES 2015 (International Conference on Management of Computational and Collective Intelligence in Digital Ecosystems)
- PPPJ 2015 (Principles and Practice of Programming in Java Platform, Virtual Machines, and Platforms)
- XSEDE 2015 (Extreme Science and Engineering Discovery Environments)
- ICPRAM 2014 (International Conference on Pattern Recognition Applications and Methods)
- ICCASA 2014 (International Conference on Context-Aware Systems and Applications)
- MOBIQUITOUS 2014 (International Conference on Mobile and Ubiquitous Systems : Computing, Networking, and Services)
- FedCSIS 2014 (Federated Conference on Computer Science and Information Systems)
- MEDES 2014 (International Conference on Management of Computational and Collective Intelligence in Digital Ecosystems)
- CTS 2014 (International Conference on Collaboration Technologies and Systems)
- XSEDE 2014 (Extreme Science and Engineering Discovery Environments)
- ICITCA 2014 (International Conference on Information Technology, Computation and Applications)
- HPCS 2014 (International Conference on High Performance Computing and Simulations)
- Urb-IoT 2014 (International Conference on IoT in Urban Space)

We hope that ACR will serve as a platform for many new and promising ideas in the many fields of applied computing. It is strongly related to nearly every area of computer science, and we feel an obligation to serve the community as best we can. The papers in ACR represent the current applied computing research trends. These authors truly contribute to the state of the art in applied computing.

The Student Travel Award Program continues to be successful in assisting SIGAPP student members in attending conferences sponsored by or in-cooperation with SIGAPP. 41 students were granted awards to attend SAC 2015, representing 12 countries. \$43,173 was spent for this year of these awards, and it was significantly increased compared to the last year, \$42,563. We also implemented a Developing Countries Travel Award for researchers from developing countries who would otherwise have difficulty

attending the SAC conference. For 2015, this award was suited exclusively for students from developing countries but in 2012 and beyond, we also hope to support faculty-level researchers from such countries. We may implement this award for the 2016 SAC.

SIGAPP continues to have a stable membership. SIGAPP's and SAC's strength and uniqueness among ACM SIGs continues to be the opportunity for scientific diversity and crosscutting multiple disciplines within the ACM community. The officers look forward to continue working with the ACM SGB to further develop the SIG by increasing membership and converting SIGAPP ACR, Applied Computing Review to a new journal on applied computing.

Status of SAC

The 30th Annual edition of SAC has marked another successful event for the Symposium on Applied Computing. This international gathering attracted over 400 attendees from over 50 countries. It was hosted and held on the campus of Salamanca University, Spain, in April 2015. There was an open Call for Track Proposals and after prescreening the proposals, 37 Tracks were finally accepted for SAC 2015. The prescreening and selections were made based on the success of those Tracks in the previous SACs as well as targeting new and emerging areas. The Call for Papers for these Tracks attracted 1,211 final paper submissions from 57 different countries. The submitted papers underwent the blind review process and 291 papers were finally accepted as full papers for inclusion in the Conference Proceedings and presentation during the Symposium. The final acceptance rate for SAC 2015 is 24% for the overall track. In addition to the accepted full papers, 77 papers that received high enough review scores were accepted as short papers for the Poster Program. The Monday Tutorials program offered over 40 tutorials and attracted over 50 attendees included coffee breaks and a social luncheon that took place on campus. The Student Research Competition (SRC) program, sponsored by Microsoft Research, was added from SAC 2013. The SRC program is designed to provide graduate students the opportunity to meet and exchange ideas with researchers and practitioners in their areas of interest. 42 submissions were received and finally 15 SRC contributions were actually presented in the final program.

SAC 2016 will be held in and will be hosted by University of Pisa, Pisa, Italy from April 4 – 8, 2016. The web site <http://www.acm.org/conferences/sac/sac2016/> has further details such as symposium committee, technical tracks, and track chairs.

SAC 2017 is being considered for Morocco. A decision by the SAC steering will be made soon. To date, 2017 SAC local host proposals have been submitted from Morocco.

Summary

1. Awards that were given out: Student Travel Awards - 41 awards granted, totaling \$43,173
2. SIGAPP Distinguished Service Award was given to, Prof. Jiman Hong, Soongsil University, Seoul, Korea
3. New SIGAPP officers elected and serving as new officers for the Executive Committee from July 1, 2015:

- Chair: Jiman Hong, Soongsil University, Seoul, Korea
- Vice Chair: Tei-Wei Kuo, National Taiwan University, Taiwan
- Secretary: Maria Lencastre, University of Pernambuco Recife, Pernambuco, Brazil
- Treasurer: JungYeop (John) Kim, Utica College, USA

Immediate Past-Chair, Prof. Sung Shin will serve as the member of the SIGAPP Executive Committee by the minor SIGAPP bylaw change in 2014.

4. Significant programs that provided a springboard for further technical efforts - SAC continues to have tracks that represent application and convergent areas which are not covered by other SIGs. SAC has always been open to new tracks in applied computing.
5. Innovative programs which provide service to some part of your technical community - expansion of Student Travel Award Program for SIGAPP student members, initiation of Developing Countries Travel Award Program for students and faculty.
6. The Student Research Competition (SRC) program, sponsored by Microsoft Research. The SRC program is designed to provide graduate students the opportunity to meet and exchange ideas with researchers and practitioners in their areas of interest. The 15 SRC contributions actually presented in the final program have been selected out of 42 submissions.
7. A very brief summary for the key issues:
 - To increase SIGAPP membership
 - Re-structure the editorial board of the ACR
 - To continue the awards including STAP
 - To achieve SCI index for ACR (SIGAPP Newsletter)

SIGARCH FY '15 Annual Report
July 2014 - June 2015
Submitted by: David Wood, Chair and Doug Burger, Past Chair

Overview

The primary mission of SIGARCH continues to be the forum where researchers and practitioners of computer architecture can exchange ideas. SIGARCH sponsors or co-sponsors the premier conferences in the field as well as a number of workshops. It publishes a quarterly newsletter and the proceedings of several conferences. It is financially strong with a fund balance of over a million dollars. The SIGARCH bylaws are available online at http://www.acm.org/sigs/bylaws/arch_bylaws.html.

Officers and Directors

During the past fiscal year David Wood served as SIGARCH Chair, Sarita Adve served as Vice Chair, and Partha Ranganathan served as Secretary/Treasurer. Norm Jouppi, Kai Li, Scott Mahlke, and Per Stenstrom served on the Board of Directors, and Doug Burger also served as Past Chair. 2015 is an election year for SIGARCH; the current slate of elected officers is serving their second two-year term in accordance with SGB bylaws. In addition to these elected positions, there are three appointed positions. Doug DeGroot continues to serve as the Editor of the SIGARCH newsletter Computer Architecture News. Boris Grot has been appointed to serve as the SIGARCH Information Director, providing SIGARCH information online. Mattan Erez continues to serve as SIGARCH's liaison on the SC conference steering committee.

The election was delayed due to a combination of personal issues among the nomination committee---consisting of David Wood, Doug Burger, and Norm Jouppi---and difficulty getting qualified candidates to agree to run for the senior positions. The slate has been submitted and the election will be completed this summer. The current officers will continue to serve until a new board is elected.

Awards

The Eckert-Mauchly Award, cosponsored by the IEEE Computer Society, is the most prestigious award in computer architecture. SIGARCH endows its half of the award, which is presented annually at the Awards Banquet of ISCA. Norm Jouppi, Google, Inc., received the award in 2015, for "For pioneering contributions to the design and analysis of high-performance processors and memory systems." In 2009, SIGARCH petitioned ACM to increase the ACM share of the award to \$10,000, using an endowment taken from the SIGARCH fund balance, which ACM has approved. The increase will happen when IEEE approves a matching increase, which will increase the amount of the award to \$20,000.

SIGARCH has endowed the Maurice Wilkes Award, an award established to recognize computer architects early in their careers, named after one of the pioneers of computer architecture who began making significant contributions early in his career. The award is selected by a vote of the Executive Committee and Board of SIGARCH, from a list of nominees supplied by a three person nominating committee. The 2015 award went to Christos Kozyrakis, of Stanford/EPFL, "For outstanding contributions to transactional memory systems."

SIGARCH also cosponsors, along with the IEEE-CS TCCA, the Influential ISCA Paper Award which is presented annually at the ISCA conference. This award recognizes the paper, presented at the ISCA conference 15 years previously, which has had the most impact on computer architecture. The tenth Influential ISCA Paper Award was presented to David Brooks, Vivek Tiwari, and Margaret Martonosi, "Wattch: A Framework for Architectural-Level Power Analysis and Optimizations," which appeared in the proceedings of the 26th ISCA (2000).

In 2009, SIGARCH and the ASPLOS co-sponsors (SIGPLAN and SIGOPS) approved the creation of an ASPLOS Best Paper Award, the first one of which was awarded in 2009. The Award is determined by a vote of the Program Committee, and announced at the conference. In 2015, the best paper was "GhostRider: A Hardware-Software System for Memory Trace Oblivious Computation," by Chang Liu, Austin Harris, Martin Maas, Michael Hicks, Mohit Tiwari, and Elaine Shi .

Starting in 2011, ASPLOS began awarding an Influential Paper Award, modeled after the award presented at ISCA. The ASPLOS Influential Paper Award is awarded to any paper published in ASPLOS conferences ten or more conferences prior to the conference in which the award is being made. In 2015, the award was given to "The Case for a Single-Chip Multiprocessor," by Kunle Olukotun, Basem A. Nayfeh, Lance Hammond, Ken Wilson, and Kunyung Chang, which was published at ASPLOS 1996.

In 2007 the ACM Awards Committee approved the establishment of the SIGARCH Distinguished Service Award, for "important service to the Computer Architecture community." Nominations are due each year by February 15th, and can be sent to the SIGARCH Secretary/Treasurer at any time. In 2015, the award was not given.

SIGARCH is a co-sponsor of the Ken Kennedy Award, founded in 2009. The ACM-IEEE CS Ken Kennedy Award is awarded annually and recognizes substantial contributions to programmability and productivity in computing and substantial community service or mentoring contributions. The award includes a \$5,000 honorarium and the award recipient will be announced at the SC Conference. The recipient will give a presentation, normally technical, at the SC conference at which it is announced, or at an ACM or IEEE conference of the winner's choosing during the year following the announcement. The 2014 recipient of the Ken Kennedy Award was Charles Leiserson, for "For enduring influence on parallel computing systems and their adoption into mainstream use through scholarly research and development and for distinguished mentoring of computer science leaders and students."

Three of the above awards, the Eckert-Mauchly Award, the Maurice Wilkes Award, and the Influential ISCA Paper Award were presented at ISCA 2015 in Portland, OR.

New Areas and Programs

SIGARCH continues to broaden its definition of Computer Architecture to encompass both new technology challenges and new application areas. On the technology front, as Moore's Law draws to a close, decreasing transistor reliability is driving a resurgence in novel ideas to build dependable systems from unreliable components. Similarly, the end of Dennard Scaling, which enabled power to largely scale with transistor counts, has resulted in a plethora of novel solutions using heterogeneity and/or new instruction set architectures to achieve fundamental increases in energy efficiency. And new non-volatile memory technologies have spurred the development of novel memory and storage architectures, which have great promise for transforming solutions for Big Data applications. On the application front, new architectures have been proposed to fundamentally revisit how to provide software security and increase programmer productivity. Finally, the importance of energy efficiency---at all levels---is driving an increasing recognition of the commonalities between the mobile space and the data center.

To address these emerging areas, SIGARCH has sponsored tutorials and workshops in these emerging areas. ISCA 2015 included tutorials on accelerating Big Data computations, exploitation of emerging accelerators, and virtualization, as well as workshops on architectures for Big Data, Machine learning, Cloud Computing, security and privacy, reconfigurable logic, and mobile platforms.

Innovative Programs

SIGARCH supports child care and companion support travel programs to conferences, although participation since approval of these programs has been low. Reimbursement for child care is capped at \$1000 per conference. SIGARCH has also formalized funding levels for its student travel grant program, and now provides a level of support to all conferences that SIGARCH sponsors at a 33% level or higher, which previously was only provided to the ISCA and ASPLOS conferences. SIGARCH, as co-sponsor of ISCA, was one of the largest supporters of the FCRC child care program.

SIGARCH, with the encouragement of ACM, has begun exploring the creation of SIGARCH Chapters in Europe, India, China, and South Korea. Goals of these chapters include:

- * promote student research and education activities to make the computer architecture community grow long term
- * promote networking events; conferences, workshops and summer schools
- * promote collaboration with other SIGs (e.g. SIGPLAN, SIGOPS, SIGBED) within Europe as well as globally

FY2015 marked the creation of the first SIGARCH Chapter in South Korea, currently with forty members, which is well timed with plans to host ISCA in Seoul in June 2016. Efforts are well established to create a SIGARCH Chapter in Europe and in the early stages elsewhere.

Travel Grants

SIGARCH has regularly supported student travel grants to its flagship conferences, ISCA and ASPLOS, but starting from 2011, SIGARCH broadened this program to other SIGARCH-sponsored conferences. The allocation to each conference is based on SIGARCH revenues and the percentage sponsorship of the conference and is set by dividing the travel grant budget by number of attendees, giving an extra 33% allocation to international conferences, and a small additional budget (~10%) to ISCA as the flagship conference. The grants are restricted to student members of SIGARCH, following several votes of the SIGARCH membership. (But the travel grant administrators are encouraged to highlight the cheap SIGARCH online membership option available for students.) For FY2014, SIGARCH budgeted \$80,000 for travel grants. For ISCA 2015, SIGARCH funding for student travel was also supplemented by sponsorship from IEEE, Intel, Huawei, AMD, Google, IBM, Microsoft Research, Unisys, and NSF (SIGARCH funds accounted for half the total student travel funds). 145 students were funded by the ISCA student travel. SIGARCH plans to continue to emphasize and support student participation in SIGARCH-sponsored conferences going forward as well. SIGARCH also supports a companion travel grant program for SIGARCH members who are either (1) a person with a physical disability necessitating a companion, or (2) a parent of an infant less than one year old who cannot travel without the infant and a care-provider for the infant. This program was utilized once in 2015.

END SUMMARY

Chapters

The Korea ACM SIGARCH Chapter was established July 2014 with a kick-off meeting attended by 20 founding members on July 15th 2014. Professor Jung Ho Ahn was elected as chapter chair. As the primary activity, an inaugural workshop was held January 30th 2015 at Seoul National University. The workshop was a great success: 87 people registered, two keynote speeches made - one from professor Sang Lyul Min, the general co-chair of ISCA 2016 and the other from professor Nam Sung Kim at University of Wisconsin Madison, 30 posters presented, and a good mixture of a discussion section and invited talks from both Academia and Industry (Samsung, SK Hynix, and LG) given. As a result of these activities, the chapter has grown to forty members. The second workshop will take place July 23rd 2015 at KAIST. In order to further recruit members and raise the visibility of computer architecture in Korea, the chapter plans to hold a tentatively named "simulation camp", where tutorials on famous computer architecture simulators, such as gem5, GPGPUsim, and McPAT, will be given. The chapter will leverage ISCA 2016, which will be

held in Seoul, Korea, to increase participation.

Conferences

SIGARCH is a 50% cosponsor of ISCA, the International Symposium on Computer Architecture, which is the premier conference in the field of computer architecture. The 42nd annual ISCA (ISCA 2015) was held in Portland, OR as part of ACM FCRC. Debbie Marr was the General Chair, and David Albonesi was the Program Chair. ISCA 2016 will be held in Seoul, South Korea, with Gabe Loh and Sang Lyul Min as General co-Chairs and Andre Seznec as Program Chair.

The SC'XY Conference is jointly sponsored by SIGARCH and the IEEE Computer Society. Formerly known as the Supercomputing Conference, the conference has successfully evolved away from its focus on supercomputers and is now the High Performance Networking and Computing Conference. In addition to its technical success, SC'XY is large enough that it must be scheduled many years in advance. SC 2014 was held in New Orleans, LA, and SC'15 will be held in Austin, TX. In Fall 2012 the ACM SGB with SIGARCH's support approved creation of the Special Interest Group in High-Performance Computing (SIGHPC). SIGARCH has since entered into an agreement with SIGHPC to transition sponsorship of SC'XY to SIGHPC, with SIGARCH remaining in-cooperation in the long term. Beginning with SC'12, any surpluses net of special projects will accrue to SIGHPC, to build up their fund balance. SIGHPC is also liable for any losses, with SIGARCH effectively acting as their banker in this event (i.e., in this hopefully rare case, SIGARCH will cover the loss, but SIGHPC will remain obligated to eventually repay SIGARCH).

SIGARCH is a cosponsor of the Conference on Architectural Support for Programming Languages and Operating Systems, commonly known as ASPLOS, along with SIGPLAN and SIGOPS. Starting in 2008 the conference has been held annually. ASPLOS 2015 begins a cycle where every third year the conference is held internationally. ASPLOS 2012 was held in London, England. ASPLOS 2015 was held in Istanbul, Turkey with Kemal Ebcioglu and Ozcan Ozturk as General Chairs and Sandhya Dwarkadas as Program Chair. ASPLOS 2016 will be held in Atlanta, GA with Tom Conte as General Chair and Yuanyuan Zhou as Program Chair.

SIGARCH sponsors the International Conference on Supercomputing (ICS). ICS 2015 was held in Newport Beach, CA, with Laxmi Bhuyan as General Chair and Fred Chong and Vivek Sarkar as Program Chairs. Planning for ICS 2016 is underway.

The 20th Symposium on Parallel Algorithms and Architectures (SPAA) is jointly sponsored by SIGARCH and SIGACT. SPAA 2015 was held as part of FCRC, with Kunal Agrawal as Program Chair. SPAA 2016 will be held at the Asilomar Conference Grounds in CA.

SIGARCH is a 10% co-sponsor of CCGrid: The IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing. CCGrid 2015 was held in Shenzhen, China, with Pavan Balaji and Cheng-zhong Xu as General Chairs and Daniel Katz and Xiaobo Zhou as Program Chairs. CCGrid '16 will be held in Cartagena, Columbia, with Harold Castro, Carlos Varela, and Carlos Jaime Barrios as General Chairs.

SIGARCH is one-half cosponsor of the International Symposium on High Performance Distributed Computing. HPDC 2015 was held as part of FCRC in Portland, OR, with Thilo Kielmann as General Chair and Dean Hildebrand and Michela Taufer as Program Chairs. HPDC '16 will be held in Kyoto, Japan, with Hiroshi Nakashima as General Chair and Kenjiro Taura and John Lange as Program Co-Chairs.

SIGARCH is one-third cosponsor of the Conference on Parallel Architectures and Compiler Techniques (PACT), along with the IEEE Computer Society and IFIP, and annually held in the fall. PACT 2014 was held in Edmonton, Alberta, Canada, with J. Nelson Amaral as General Chair and Josep Torrellas as Program Chair. PACT 2015 will be held in San Francisco, CA with Costin Iancu and Kathy Yelick as General Chairs and Marc Snir as Program Chair.

SIGARCH is one-fourth co-sponsor of the Symposium on Architectures for Networking and Communications Systems (ANCS). ANCS 2015 was held in Oakland, CA with Gordon Brebner as General Chair and Alex Bachmutsky and Chita Das as Program Chairs. ANCS 2016 will be held in Santa Clara, CA with Patrick Crowley as General Chair and Luigi Rizzo and Laurent Mathy as Program Chairs.

In 2007 SIGARCH was a founding co-sponsor of the International Symposium on Networks-on-Chips (NOCS). NOCS 2014 was held in Ferrera, Italy, with Davide Bertozzi and Luca Bernini as General Chairs and Sudhakar Yalamanchili and Joerg Henkel as Program Chairs. NOCS 2015 will be held in Vancouver, Canada with Andre Ivanov and Diana Marculescu as General Chairs and Partha Pratim Pande and Jose Flich as Program Chairs.

In addition to the above conferences, SIGARCH is co-sponsoring, or is in cooperation with, several other conferences. SIGARCH has a 10% sponsorship position in SenSys, a conference on Sensor Systems and a 40% sponsorship of International Conference on Utility and Cloud Computing (UCC). In addition, SIGARCH has in-cooperation status with CloudComp, TCE, HotPar, HIPEAC, HiPC, HPCS, HPDS, ICWET, IPDPS, HotChips, CoolChips, PAPA, Nano-Net, and TridentCom.

Publications

CAN (Computer Architecture News), SIGARCH's newsletter, is published 5 times a year. Of those five, the ISCA Proceedings form a special issue, and the ASPLOS Proceedings is likewise distributed as a special issue. The regular issues of the newsletter consist of technical contributions, reports of panels, Internet nuggets (the most interesting or controversial articles from the comp.arch

newsgroup), book reviews, and calls for papers. There are occasional single topic special issues based principally on workshops. Proceedings of SC, SPAA and ICS are available through the Member Plus program. In 2009, SIGARCH began offering a new electronic membership for regular members and students, at reduced cost with no proceedings mailed. Currently more than half, 900 of 1400, of SIGARCH's members have registered under the electronic membership option. Given the continuing shift to electronic memberships, the SIGARCH Executive Committee is exploring alternatives to revitalize, reform, or replace CAN.

Finances

SIGARCH enjoys a healthy fund balance that is currently larger than the \$1.2M fund balance required by the ACM for sponsorship of SIGARCH conferences for FY'15. The projected SIGARCH fund balance for FY'15 is \$2.7 million. Given prior large surpluses, SIGARCH and the SC Steering Committee have an agreement that some of the future profits from SC'XY will be in large part returned to the SC community, in the form of a series of project-oriented grants (to be matched by the other sponsor of SC'XY, the IEEE Computer Society). The grant amounts are capped by the average surplus over the first two of the previous three years. ISCA, SIGARCH's flagship conference, continues to be healthy and show attendance near the top of historical levels.

SC Conference Grants

As part of the transition plan, SIGARCH was responsible for ACM's share of the special projects budget for SC'12 and SC'13 and was responsible for a pro rata share with SIGHPC (based on relevant surpluses) for SC'14. SIGHPC will be fully responsible for ACM's share of special projects beginning with SC'15.

Membership

SIGARCH membership was declining gradually since 1999, dropping from its peak of 1452 in 2005 to 1344 in 2009, but has started to recover, increasing to 1400 as of April 2015. SIGARCH's membership continues to shift to electronic-only membership, available at reduced cost, and is likely a factor in growing membership. Last year, more than half of SIGARCH's members chose electronic-only membership. There is opportunity to increase membership, particularly of students, and we will explore increased outreach to facilitate increased student participation. ISCA, SIGARCH's flagship conference, continues to be healthy and show attendance near the top of historical levels.

Summary

SIGARCH remains a financially healthy institution with an enthusiastic membership. The interest of its members can be gauged by the health of all of its major conferences in the past year. The challenges remain as they have in previous years: how to better serve our members, how to encourage other members of the architecture community to join, how to help steer the community as the nature of our field changes, and how to use our fund balance most effectively.

**SIGBED FY '15 Annual Report
July, 2014 – June 2015
Submitted by: Insub Lee, Chair**

Awards

The Paul Caspi Memorial Dissertation Award is a new SIGBED award established in 2013. The award recognizes outstanding doctoral dissertations that significantly advance the state of the art in the science of embedded systems, in the spirit and legacy of Dr. Paul Caspi's work. Details about the selection and nomination process can be found on SIGBED's awards page, <http://sigbed.blogspot.com/p/awards.html>

The 2014 Paul Caspi Memorial Dissertation Award recipient is Arjun Radhakrishna, IST Austria, for his thesis "Quantitative Specifications for Verification and Synthesis." The recipient of the inaugural 2013 award was Bernard Blackham from the University of New South Wales for his thesis "Towards Verified Microkernels for Real-Time Mixed-Criticality Systems." The winner of the 2014 award was chosen from a total of 6 nominations. The selection committee found the winning thesis to be a significant theoretical contribution to state of the art in verification technology.

SIGBED also offers the SIGBED-EMSOFT Best Paper Award. The annual award is presented to the individual(s) judged by an award committee to have written the best paper appearing in the EMSOFT (Embedded Software) conference proceedings. The selection criteria are the scientific quality of the paper and the exposition of the ideas. The 2014 SIGBED-EMSOFT Best Paper is titled "Multiple Shooting, CEGAR-based Falsification for Hybrid Systems" by Aditya Zutshi, Sriram Sankaranarayanan, Jyotirmoy V. Deshmukh, James Kapinski.

Student Travel Grants

To promote excellence in embedded systems education and research, SIGBED offers TRAVEL GRANTS for STUDENTS to attend ESWEEK and CPSWEEK, the premier forums in the areas of embedded and cyber-physical system design areas. The travel grants are given at a preset amount, which may vary from year to year (but no greater than \$500), and can be used to partially cover conference registration and/or hotel accommodation. 10 students received travel grants to attend ESWEEK 2014 in New Delhi, India, and 18 students received travel grants to attend CPSWEEK 2015 in Seattle, Washington, USA. 34 applications have been received for CPSWEEK travel grants.

Events highlighting new areas of interests at conferences

The main conferences supported by SIGBED are invariably concerned with identifying new directions and challenges for the research community and related industries. ESWEEK 2014 featured the following keynotes on new directions and challenges:

- "System of Systems and the Geography of Computing" by Jaswinder S. Ahuja, Corporate Vice President and Managing Director, Cadence Design Systems
- "Emerging Trends in Electronics in an Intelligent Connected World" by Guru Ganesan, President and Managing Director, ARM India
- "Smart Energy: Ubiquitous Role of Embedded Systems" by Krithi Ramamritham, Vijay and Sita Vashee Chair Professor, Department of Computer Science, Indian Institute of Technology Bombay

ESWEEK keynotes also highlighted broadening participation of researchers and industries from the Indian subcontinent.

CPSWEEK 2015 featured three keynotes discussing new CPS applications and significant challenges:

- "Sensors, Predictions, and Decisions" by Eric Horvitz, Distinguished Scientist and Director at Microsoft Research
- "Population Control" by John Lygeros, Professor, Head of Automatic Control Laboratory at ETH Zurich
- "Up close and personal with human-robot collaboration" by Elizabeth Croft, Professor and Associate Dean at University of British Columbia

New ACM journal on Cyber-Physical Systems

A new ACM journal on Cyber-Physical Systems (CPS), supported by SIGBED, has been launched. Call for contributions to the inaugural issue has been circulated through the community. Given significant growth in a global research community on CPS in recent years, thanks to CPS Week, the ACM/IEEE International Conference on Cyber-Physical Systems (ICCPS), a large CPS program at NSF, sister programs at other federal agencies including NIST and USDOT, multiple CPS centers/projects around the world including in Germany, Sweden, S. Korea, India, China and Japan, as well as greater emphasis on CPS in the EU research program. All of these recent developments make the new journal is very timely, and will help to grow the global CPS community.

Innovative programs which provide service to some part of our technical community

SIGBED continues to sponsor two major federated conferences, CPSWEEK [HiCoNS, HSCC, ICCPS, IPSN, RTAS] in the spring and ESWEEK [CASES, CODES+ISSS, EMSOFT] in the fall, as well as several other leading conferences in the embedded systems community. Sponsorships approved this year include SenSys/BuildSys 2015,

NOCS 2015, Memocode 2015, ICCPS 2016, as well as “in cooperation” status for Ada-Europe 2015. Support for ICDSC 2015 has changed from sponsorship to “in cooperation.” Also, “in cooperation” status has been newly established for HILT 2014.

SIGBED continues to operate a blog for announcements and other information at sigbed.org and the @sigbed Twitter account. The SIGBED-MEMBERS mailing list is used for announcement of events of interest to the community.

The SIGBED review, edited by Oleg Sokolsky of University of Pennsylvania, provides a forum for technical contributions by members as well as lists of upcoming events.

SIGBED continues to offer low membership rates at \$15 for a regular membership and \$5 for a student membership.

Issues

The main focus of SIGBED leadership remains on increasing SIGBED membership numbers, which have remained relatively stable in the past several years, even though the embedded and CPS research community have visibly grown.

SIGBIO FY'15 Annual Report
July 2014 - June 2015
Submitted by: Aidong Zhang, Past Chair

ACM SIGBIO

ACM Special Interest Group in Bioinformatics, Computational Biology, Biomedical Informatics

The ACM Special Interest Group on Bioinformatics, Computational Biology, and Biomedical Informatics (SIGBIO) has been instituted in January 2011 with the aim of focusing on research on bioinformatics data management topics, roughly covered by the so-called biological and biomedical data, knowledge, and information management. The focus of SIGBIO is to bridge computer science, mathematics, statistics with biology and biomedicine sharing research interests in the management of data related to life sciences. The mission of ACM SIGBio is to support advanced research, training, and outreach in Bioinformatics, Computational Biology, and Biomedical Informatics by stimulating interactions among researchers, educators and practitioners from related multi-disciplinary fields. The original name of this group was SIGBioinformatics, and in 2012, the name was shortened as SIGBio and currently has 340 members.

SIGBIO Website

The SIGBIO website was created and is maintained by Dr. Mohammed Zaki of Rensselaer Polytechnic Institute (see <http://www.sigbioinformatics.org/>). The new SIGBio logo is:

SIGBIO Conference (ACMBCB):

The 2014 ACM International Conference on Bioinformatics, Computational Biology, and Biomedical Informatics (ACM BCB 2014) (Newport Beach, CA, September 20-23, 2014) was the fifth ACM conference in the areas of bioinformatics, computational biology, and biomedical informatics (207 attendees, 125 paper submissions, 28 regular papers and 35 short papers accepted). The conference was preceded by 7 international workshops on emerging topics of bioinformatics, systems biology, and biomedical informatics such as immunoinformatics, structural bioinformatics, and next-gen sequencing bioinformatics, and by 6 tutorials. The conference also featured 2 industrial sessions, 3 contributed highlight papers, 42 posters, 2 demos, 6 tutorials, 2 panels, and 1 Ph.D. forum.

ACMBCB2014 Best Paper Award:

Unconstrained Gene Tree Diameters for Deep Coalescence
Paweł Górecki, Jarosław Paszek, and Oliver Eulenstein

ACMBCB2014 Best Student Paper Award:

CNVnet: Combining Sparse Learning and Biological Networks to Capture Joint Effect of Copy Number Variants
Zhiyong Wang, Jinbo Xu and Xinghua Shi

ACMBCB2014 Best Poster Award:

Identification of Protein Coding Regions in RNA Transcripts
Shiyuyun Tang, Alexandre Lomsadze and Mark Borodovsky

The 2015 ACM International Conference on Bioinformatics, Computational Biology, and Biomedical Informatics (ACM BCB 2015) will be held in Atlanta, GA, September 9-12, 2014.

SIGBio Community meeting was held on September 21, 2014 during the ACM BCB 2014 conference.

In Cooperation Conferences

SIGBio was in cooperation with the following conferences:

- BIOSTEC'15: International Joint Conference on Biomedical Engineering Systems and Technologies, Lisbon, Portugal, January 12-15, 2015.
- MobiHealth '15: 5th International Conference on Wireless Mobile Communication and Healthcare, October 14-16, 2015, London United Kingdom.

NSF Awards

SIGBIO was awarded one National Science Foundation grant to support the ACM BCB conference:

1. 'ACM BCB 2014: Conference on Bioinformatics and Computational Biology'
(period:5/1/14-4/30/15, amount:\$24800, PI: Catherine Welsh)

Special Program 1 – Women in Bioinformatics

In 2011, we started a special program, called Women in Bioinformatics, sponsored by the National Science Foundation during the BCB 2011 conference. The purpose of this program is to encourage female students to get involved in the bioinformatics research. We continued this program in BCB2014 meeting. A “Women in Bioinformatics” Forum was held on September 22, 2014, which featured a set of presentations of both female faculty members and PhD students. There was a large audience.

Special Program 2 – PhD Students Forum

A PhD students Forum was held in BCB 2014 which featured poster presentations of 33 PhD students from various universities. This forum provided a platform for PhD students to network, practice presentation skills, and exchange their ideas and research experiences.

Special Program 3 – Knowledge Repository

As part of our knowledge repository, we have started our PhD Dissertation Abstract Repository. An initiative to create a PhD dissertation abstract repository has been proposed and implemented by Dr. Armin Mikler. This repository hosts PhD dissertation abstracts collected from PhD students and will be available for public access.

SIGCAS FY' 15 Annual Report
July 2014 — June 2015
Submitted by: Michael Goldweber, Chair

1. General Report

FY 2015 was a rebuilding year for SIGCAS. A new leadership team was elected with the hope that new blood and enthusiasm would bring SIGCAS out of “viability concern” and into health.

The first order of business was to work with the recently installed newsletter editorial team of Vaibhav Garb and Dee Weikle. Under their capable leadership all four scheduled newsletters from FY 2015 were published; two in calendar year 2014 and two (so far) in 2015.

In addition to assembling a healthy editorial calendar, the newsletter’s editorial team along with the SIG leadership have crafted a new vision for the newsletter. The old/current newsletter has been functioning as a non-peer reviewed journal. It was concluded that this is no longer appropriate for SIGCAS – which is often a member’s secondary SIG affiliation. The new plan envisions the newsletter as being more of an annotated news aggregator. We solicited over a dozen different “area editors,” each responsible for at least two articles/year. We amended the notion of what constitutes an article. Instead of it being an “original” (though non-reviewed) piece of scholarship, it can take on any number of additional forms. These include: Movie or book reviews, link/reference to an article (scholarly or popular press) along with a response or elaboration, etc.

Given the already “in place” editorial calendar for 2015, the new format newsletter will begin with the first edition in 2016.

The second rebuilding task was with regard to focus. Computers and Society is a rather large umbrella. Historically, the SIG’s primary focus was professional ethics; both in practice and in education. While this work remains important, by itself, was insufficient to sustain the SIG. The additional focus that is championed by the incoming EC is “Computing for the Social Good” (CSG). In March 2015, the SIG held a half-day symposium as a pre-event at the annual SIGCSE Technical Symposium for educational practitioners working in this space. The event was very successful, generating new lists of volunteers and SIG members.

In addition to restoring the newsletter to health and adding a new invigorating focus to the SIG, other initiatives that the SIG is working toward include: increase the number of member-focused webinars (one held this past fall, and 1-2 more planned for this fall), helping bring a sustainability focus to the forefront of the ACM’s activities, keep up our social media presence, and outreach to undergraduates to inculcate that ACM membership in general and SIGCAS membership in particular are important professional practices.

While it is a bit early to measure the success of these initiatives, it is worth noting that the SIG’s total membership is up, and close to the 2012 numbers, after two consecutive declining years.

2. Awards

- The previous SIGCAS EC let slide distributing either of its two awards in 2014. The new SIG EC focused on the newsletter, the CSG initiative and bringing the SIG back into viability. Hence award distribution was delayed.
- Recently a committee has been formed to put SIGCAS’s awards structure on a solid footing.
- The committee’s recommendations are being turned into action items. We expect a full slate of awards to be given out in calendar year 2015.

3. Significant papers on new areas that were published in proceedings

N/A

4. Significant programs that provided a springboard for further technical efforts

N/A

5. Innovative programs which provide service to some part of our technical community

- As discussed above, SIGCAS is spearheading the effort to recast computing as a field that one can go into if one wishes to have a socially relevant impact. SIGCAS, in addition to continue working with SIGCSE in planning another pre-Symposium event, is also exploring cooperative ventures with Google.
- SIGCAS has also begun participating in a joint IEEE/ACM Ethics project.
- We agreed "In Cooperation Status" with the following conferences:
 - SmartGreens 2015
 - ICTD'15 International Conference on Information and Communication Technologies and DevelopmentWe also have an agreement in place for the upcoming Ethicomp 2015.

6. Brief summary of key issues that the SIG membership will have to deal with in the next 2-3 years

At the March 2014 SGB meeting, SIGCAS was found wanting with regard to viability. At the March 2015 SGB meeting, the SGB EC applauded our efforts to return to viability. At that time the SIG was asked to report back in two years to see if the newly infused energy was sustainable. Hence, maintaining the SIGs new energy and viability is a key issue.

Currently, our social media presence is being carried out by one individual; Karla Carter, SIGCAS Vice-Chair. Attracting additional volunteers in this space will be important as we move forward.

SIGCAS wishes to back a more interactive web presence to coordinate with our plans for our newsletter. Managing our web space has been a continued frustration over the past year. Autonomy for this might well be a key issue as we move forward, if not resolved.

Finally, like all SIGs we struggle with understanding what value SIG membership conveys to its membership and how we can improve this. A key goal is target undergraduates. By providing value we hope to inculcate a habit of professional practice.

SIGCHI FY'15 Annual Report
July 2014 – June 2015
Submitted by: Gerrit van der Veer, Past Chair

1. Awards

1.1 SIGCHI made the following awards in 2014-2015:

- Social Impact Award: Leysia Palen
- Lifetime Service Award: Michel Beaudouin-Lafon, Jean Scholtz
- Lifetime Achievement in Research Award: Jim Hollan
- Lifetime Achievement in Practice Award ; Susan M. Dray
- CHI ACADEMY: Stephen Brewster, Andy Cockburn, Anind Dey, Ernest Edmonds, Scott MacKenzie, Sharon Oviatt, Catherine Plaisant, Bill Verplank,

1.2 SIGCHI Conference awards:

- CHI 2015 Best Papers:

Affordance++: Allowing Objects to Communicate Dynamic Use
Pedro Lopes, Patrik Jonell, Patrick Baudisch

VelociTap: Investigating Fast Mobile Text Entry using Sentence-Based Decoding of Touchscreen Keyboard Input
Keith Vertanen, Haythem Memmi, Justin Emge, Shyam Roy, Per Ola Kristensson

What Makes Interruptions Disruptive? A Process-Model Account of the Effects of the Problem State Bottleneck on Task Interruption and Resumption

Jelmer P Borst, Niels A Taatgen, Hedderik van Rijn

Lightweight Relief Shearing for Enhanced Terrain Perception on Interactive Maps

Wesley Willett, Bernhard Jenny, Tobias Isenberg, Pierre Dragicevic

The Social Impact of a Robot Co-Worker in Industrial Settings

Allison Sauppé, Bilge Mutlu

Sangeet Swara: A Community-Moderated Voice Forum in Rural India

Aditya Vashistha, Edward Cutrell, Gaetano Borriello, William Thies

Understanding and Supporting Fathers and Fatherhood on Social Media Sites

Tawfiq Ammari, Sarita Schoenebeck

Patina Engraver: Visualizing Activity Logs as Patina in Fashionable Trackers

Moon-Hwan Lee, Seijin Cha, Tek-Jin Nam

Fluid Grouping: Quantifying Group Engagement around Interactive Tabletop Exhibits in the Wild

Florian Block, James Hammerman, Michael Horn, Amy Spiegel, Jonathan Christiansen, Brenda Phillips, Judy Diamond, E. Margaret Evans, Chia Shen

Resilience Mitigates the Negative Effects of Adolescent Internet Addiction and Online Risk Exposure

Pamela J Wisniewski, Haiyan Jia, Na Wang, Saijing Zheng, Heng Xu, Mary Beth Rosson, John M Carroll

BaseLase: An Interactive Focus+Context Laser Floor

Jörg Müller, Dieter Eberle, Constantin Schmidt

Tiree Energy Pulse: Exploring Renewable Energy Forecasts on the Edge of the Grid.

Will Simm, Maria Angela Ferrario, Adrian Friday, Peter Newman, Stephen Forshaw, Mike Hazas, Alan Dix

iSkin: Flexible, Stretchable and Visually Customizable On-Body Touch Sensors for Mobile Computing

Martin Weigel, Tong Lu, Gilles Bailly, Antti Oulasvirta, Carmel Majidi, Jürgen Steimle

Designing Political Deliberation Environments to Support Interactions in the Public Sphere

Bryan Semaan, Heather Faucett, Scott P Robertson, Misa Maruyama, Sara Douglas

From User-Centered to Adoption-Centered Design: A Case Study of an HCI Research Innovation Becoming a Product
Parmit K Chilana, Andrew J Ko, Jacob Wobbrock

Acoustruments: Passive, Acoustically-Driven, Interactive Controls for Handheld Devices
Gierad Laput, Eric Brockmeyer, Scott E Hudson, Chris Harrison

The Heart Work of Wikipedia: Gendered, Emotional Labor in the World's Largest Online Encyclopedia
Amanda Menking, Ingrid Erickson

Unequal Representation and Gender Stereotypes in Image Search Results for Occupations
Matthew Kay, Cynthia Matuszek, Sean A Munson

Sharing is Caring: Assistive Technology Designs on Thingiverse
Erin Buehler, Stacy Branham, Abdullah Ali, Jeremy J Chang, Megan K Hofmann, Amy Hurst, Shaun K Kane

"I always assumed that I wasn't really that close to [her]": Reasoning about invisible algorithms in the news feed
Motahhare Eslami, Aimee N Rickman, Kristen Vaccaro, Amirhossein Aleyasen, Andy Vuong, Karrie G Karahalios, Kevin Hamilton, Christian Sandvig

ColourID: Improving Colour Identification for People with Impaired Colour Vision
David R Flatla, Alan R Andrade, Ross D Teviotdale, Dylan L Knowles, Craig Stewart

2. Significant Papers on new areas that were published in proceedings

See 1.2

3. Significant programs that provided a springboard for further technical efforts

CHI Communities:

We currently have 18 communities ranging in size from 9 (the African HCI Community) to 365 (CSCW) members. We continue to refine this so as to provide support to the various kinds of members that make up CHI. Most of these communities have formed a suite of officers for their own governance and held elections. This provides a self-renewing mechanism for these members to work with each other. The largest communities form the governing mechanism for some of our conferences.

4. Innovative programs which provide service to some part of our technical community

4.1. Public Policy

The Public Policy has been posted on the SIGCHI website (<http://www.sigchi.org/about/sigchi-public-policy-report/view>). A short summary of the report will appear in Interactions Magazine; a full report will appear as an article in the journal Foundations and Trends of HCI.

4.2. Education

The SIGCHI Education group (Jenny Preece, Elizabeth Churchill and Ann Bowser), produced a Final report that will be uploaded to SIGCHI site. The group has, in the last term, been more focused on conducting research about education worldwide, and focused on collecting input regarding university courses. Three areas of focus: what courses are missing for emerging landscape and how do course needs vary worldwide; how can we get HCI more representation in recommended curricula (ACM, IEEE); how can we build community for sharing - and what can SIGCHI do in any of these arenas? We experienced a modest success in getting HCI into the ACM-IEEE curriculum recommendations. We still see the need for the concept of a living curriculum; we have a CHI Community that needs invigorating possibly seeded with the people who have attended the workshops; educational possibilities for SIGCHI could be via courses and course materials at conferences and the DSP materials.

4.3. SIGCHI branding and presence in Social media

Elizabeth Churchill and Patrick Gage Kelley continue to work on a strategy for social media presence for SIGCHI. We have a growing presence at our Facebook page, twitter, and LinkedIn, and we are working on publishing plenaries on our YouTube Channel <http://j.mp/chiVideos>. The SIGCHI Media Guidelines are finished, we have archived the CHI source (vectors) logos for CHI 2007-2015 and we are drafting a SIGCHI document on conference logo best practices.

4.4. SIGCHI Newsletter

The "ACM TechNews SIGCHI Edition" (intended for all SIGCHI members and members of SIGCHI Local Chapters), in April 2013, continues to run, though there seem to be some problems regarding the mailing list.

4.5. SIGCHI distinguished speakers

We continue to develop a HCI-dedicated list of Distinguished Speakers. So far, we have submitted a list of potential HCI –dedicated speakers residing in Europe to the ACM Europe Board, where we distinguish the speakers' expertise in different subfields of the complex multidisciplinary domain of HCI. Our next effort includes developing a list for Asia.

5. Events or programs that broadened participation either geographically, or among under-represented members of our community

5.1. Developing worlds

SIGCHI continued the activities focused on developing worlds, focusing on the existing HCI Communities in Asia (we initiated and supported a series of 8 workshops over the last 6 years), Latin America (where we funded workshops and invited keynotes), and Africa (an initiating workshop and support for the initiative for a bi-annual conference AfriCHI) . We implemented Guidelines for Supporting HCI in Developing Worlds (<http://www.sigchi.org/about/policies/sigchi-guidelines-for-developing-world/view>) and a Student Development Fund named after Gary Marsden (<http://www.sigchi.org/resources/gary-marsden-student-development-fund>).

5.2. Local Chapters

Interest and need for HCI all over the world, especially in the vast developing world, has been growing *recently*. *Local communities affiliated with SIGCHI—the SIGCHI Local Chapters—gather together HCI students, academics, and practitioners from their specific regions. In 2015, SIGCHI has 32 Professional Chapters and 5 Student Chapters local chapters in 25 countries on 6 continents, reaching over 6,690 chapter members (in fact there are many more people regularly attending local chapter activities). Our current approach for supporting chapters is to enable closer interactions between the chapters. We continue to organize a Chapters Workshop at CHI, and in 2015 we additionally organized a Chapters SIG. See <http://www.sigchi.org/connect/local-sigs> for the actual overview of the SIGCHI Local Chapters and for the regular chapter related publications in Interact.*

6. Summary of key issue that the membership of SIGCHI will deal with in the next 2-3 years

6.1. Internationalization

We will continue to advance the internationalization of SIGCHI in the next few years with a continuing focus on Asia, to which end the new EC installed an Asian Development Committee. We will also entertain specific proposals for workshops in other areas such as, but not limited to, Africa, the Indian subcontinent, and South America.

6.2. Relations to other societies

We will continue to seek to enhance our relationships to other societies and organizations broadly concerned with human computer interaction.

6.3. Strategic directions for SIGCHI

Build on and expand SIGCHI presence in Asia

Communication

Preserve institutional memory

Improve SIGCHI communication with its membership; transparency

Articulate SIGCHI identity and external communication/outreach strategy

Support SIGCHI members; increase participation; develop volunteer pipeline

Strategically manage our portfolio of specialized conferences

Modernize and scale conference / reviewing processes as needed

Draw on talents of distinguished members (Past Presidents, SIGCHI Academy...)

SIGCOMM FY'15 Annual Report
July 2014 - June 2015
Submitted by: S. Keshav, Chair

SIGCOMM continues to be a vibrant organization serving a broad community of researchers from both academia and industry interested in all aspects of computer networking. We sponsor several successful, single-track, high-impact conferences, several of these being in co-operation with other SIGs. There are a number of highlights to report from the past year.

Conferences

The SIG sponsors an eponymous flagship conference as well as, solely, CoNEXT, eEnergy, Information-Centric Networking (ICN), and HotNets Workshop, and jointly, Internet Measurement Conference (IMC), SenSys, ACM/IEEE Symposium on Architectures for Networking and Communications Systems (ANCS), and, starting this year, Symposium on SDN Research (SOSR).

Our flagship conference, continuing our policy of rotation among regions on a 3-year cycle, was held in Chicago (the 'North American' location in the rotation) in August 2014. The conference had an attendance of about 715 participants. Notably, about a quarter of the attendees were from industry, which is a new and welcome trend. Due to our strong financial position, we had budgeted the conference without a contingency fund. Despite strong fundraising, there was an overall loss of about \$50,000. The overall financial strength of the SIG, however, continues to be extremely strong, with profits accruing this year from all of our other remaining conferences.

This year, the SIG agreed to co-sponsor of the ACM Symposium on Software Defined Networking Research (SOSR), a new conference in this exciting area, along with Open Network Summit. Software defined networking (SDN) refactors the relationship between network devices and the software that controls them. Opening up the interfaces to programming network devices enables more flexible and predictable network control, and makes it easier to extend the network with new functionality. Over the past several years, SDN has gained significant momentum in the research community and the larger networking industry, but many important research challenges remain. Building on the success of the HotSDN (Hot Topics in Software Defined Networking) workshop, the Symposium on SDN Research (SOSR) is the premiere venue for research publications on SDN. The first event was held June 17-18, 2015 in Santa Clara, CA (co-located with Open Networking Summit 2015). For details, please refer to <http://opennetsummit.org/conference/sosr/>

As in previous years, we continued to financially support regional conferences in computer networking. The current set of regional conferences we support financially includes COMSNETS, a major networking conference in India, the Latin American Networking Conference (LANC) and the Asian Internet Engineering Conference (AINTEC). We continue to foster the success of these conferences by means such as invited speaker travel funds and student travel grants. In addition to supporting regional conferences, the SIG provides generous general student travel support to all of its sponsored conferences.

We also are in cooperation with IPTcomm 2015, CNSM 2015, NetGames 2015, BuildSys 2015, CFI 2015, NSDI 2015, and MMSys 2015.

Newsletter

Our newsletter, Computer Communications Review (CCR), is widely respected as a journal with high quality and timely publication. CCR turnaround time is rapid compared to most journals: for technical papers it is 8 weeks for review and 16 weeks for publication; for editorials it is 1-3 days for review and 6 weeks for publication. We continue to offer both online and print access to the newsletter. Starting in 2012, we offer discounted, online-only SIG membership that does not include a print copy of the journal. SIG members who still desire a print membership can continue to receive a print copy (at a slightly higher membership rate).

During the past year, CCR established a student mentoring column edited by Prof. Aditya Akella as well as a column from the SIGCOMM industrial board, edited by Dr. Renata Teixeira (SIG Co-Chair). Two articles have appeared already. We continue to present the best papers from CCR during a special session of our flagship conference. This year, these papers were:

Technical paper: "Programming Protocol-Independent Packet Processors", by P. Bosshart (Barefoot Networks), D. Daly (Intel), G. Gibb (Barefoot Networks), M. Izzard (Barefoot Networks), N. McKeown (Stanford University), J. Rexford (Princeton University), C. Schlesinger (Barefoot Networks), D. Talayco (Barefoot Networks), A. Vahdat (Google), G. Varghese (Microsoft), and D. Walker (Princeton University).

Editorial paper: "A Primer on IPv4 Scarcity", by P. Richter (TU Berlin/ICSI), M. Allman (ICSI), R. Bush (Internet Initiative Japan), and V. Paxson (UC Berkeley/ICSI).

Awards

This year, SIGCOMM recognized Dr. Albert Greenberg, Microsoft with the SIGCOMM award for lifetime achievement; he will receive the award and present a keynote talk at the annual SIGCOMM conference in August 2015 in London. He was recognized for pioneering the theory and practice of operating carrier and datacenter networks.

The SIGCOMM Doctoral Dissertation Award winner was Keith Winstein for his dissertation entitled "Transport Architectures for an Evolving Internet." This dissertation proposes and develops the idea of computer-generated congestion control, creatively solving

both classical and new problems in network resource management. The Honorable Mention went to Hongqiang Liu for his dissertation "Traffic Planning under Network Dynamics" Liu's dissertation presents the design and implementation of practical, uniform, automatic, and proactive techniques to prevent the link congestion commonly caused by network faults and maintenance.

The SIGCOMM Rising Star award was given to 2014 to Prof. Aditya Akella (University of Wisconsin). The award is for fundamental contributions in the areas of network management and content distribution, impacting technology in both areas.

The Test of Time awards were made to (1) A clean slate 4D approach to network control and management by Albert Greenberg, Gisli Hjalmtýsson, David A. Maltz, Andy Myers, Jennifer Rexford, Geoffrey Xie, Hong Yan, Jibin Zhan, and Hui Zhang. CCR October 2005. This paper led to a resurgence of interest in the topic of separated data and control planes to better manage networks that developed into Software Defined Networking (SDN) (2) Sizing router buffers by Guido Appenzeller, Isaac Keslassy, and Nick McKeown. SIGCOMM 2004. This paper questioned the old rule-of-thumb for buffering at routers and contributed theory and experiments to show much less buffering is needed. It has ongoing relevance to issues such as bufferbloat and small buffers in commodity switching chips.

At the ACM level, during the year, three SIGCOMM members were recognized as ACM Fellows: Johannes Gehrke, Robert Morris, Henning Schulzrinne. Also, Sylvia Ratnasamy, a faculty member at the University of California, Berkeley won the ACM Grace Murray Hopper Award for her seminal work on distributed hash tables, a fundamental contribution to the design of large-scale distributed and decentralized computing systems.

In related news, two SIGCOMM members, Kimberly Claffy and Vern Paxson, jointly won the IEEE Internet Award, and Albert Greenberg won the IEEE Koji Kobayashi Computers and Communications Award.

Support for the community and new projects

The SIG has been using its strong financial position to initiate and support a number of activities, as discussed next:

- We are providing student travel grants of \$200K to support student attendance at *all* of our sponsored conferences.
- We decided to begin support national networking summits with grants totalling \$30K, to be given in the form of student travel grants.
- We increased our support for educational activities by continuing funding for summer schools in the area of networking.
- We continue to subsidize childcare at our sponsored conferences, for which the SIGCOMM 2014 conference in Chicago served as initial trial. Here, we subsidized full-time child care using a cost-sharing model for parents attending the conference. Similar services will be offered at SIGCOMM 2015 in London.
- We have continued the practice of waiving the SIGCOMM contingency share for our fully sponsored conferences to give the organizers more flexibility and allow them reducing registration fees. To remain fiscally prudent, we will review this every year for every sponsored conference.
- Last year, we set up an industrial liaison board whose goal is to come up with ideas and suggestions to increase industry participation at SIG-sponsored conferences. A better industry-academic collaboration should help improve the practice of networking, because academics have many ideas that are likely to be of value to industry; and also improve academic research, because industry has many interesting problems that would benefit academic research; and create opportunity for students.

The SIGCOMM industrial liaison board has worked on many fronts increase industry-academic collaboration:

- Continued the industrial demo session at the SIGCOMM 2015 conference. This year the board accepted 11 industrial demos, a significant uptick from the past year.
- Worked with the Open Networking Summit to collocate the new SOSR with ONS. See <http://opennetsummit.org/conference/sosr/>
- Worked with the IETF/IRTF to organize an industry day on network measurements called workshop on Research and Applications of Internet Measurements (RAIM) between IMC and IETF, which will both be in Japan. See <https://irtf.org/raim-2015>
- Planning, in collaboration with SIGMOBILE, an industry day on wireless co-chaired by Sachin Katti (Stanford) and Ranveer Chandra (Microsoft).
- Started a new editorial series in CCR entitled "Examples of Research Affecting the Practice of Networking". The goal of this series is to create a forum to learn about the transfers of ideas from research to practice by presenting articles that shine a spotlight on specific examples; not only on the technology and ideas, but also on the path the ideas took to affect the practice.

- Finally, in an effort to maintain continuity and reduce the burden on our volunteers, we have engaged MeetGreen, a professional conference services company. MeetGreen will help all SIG-sponsored conferences with support for registration, travel grants, and publications.

Events or programs that broadened participation either geographically, or among under-represented members of our community

- To support the participation of women in SIG conferences and in our community, we support N²women lunches at all our conferences.
- In addition to the student travel grants, we are offering \$40K for geodiversity grants to support faculty and students from under-represented regions in attending our sponsored conferences. This enables graduate students and young faculty from under-represented regions to attend our flagship conference. We have also increased the volumes of individual grants to that awardees can benefit from attending the full event, including workshops.
- We are maintaining in-cooperation status and travel support with a number of conference events of particular regional importance (COMSNETS, LANC, AINTEC).
- We financially supported a panel at a workshop in Uruguay on networking research in Latin America.
- To further support geodiversity, we now also provide travel grants for program committee members from developing countries to travel to program committee meetings

Key issues facing the SIG

The SIG faces two key issues that are both consequences of the underlying strength of the SIG. First, we continue to have a large reserve fund of more than \$1.5 million. We have begun to spend this down by removing contingency amounts in all our conference budgets (thus reducing registration fees) and by substantially increasing our investment in the community, as documented above. We will continue to increase our outlay on community support this coming year.

The second major issue that faces us is that networking plays a greater role in society, some research techniques have raised ethical concerns. To address this, a well-attended panel was held during IMC 2014, and there will be a full-day workshop on the topic at SIGCOMM 2015.

**SIGCSE FY' 15 Annual Report
July 2014 – June 2015
Submitted by: Susan H. Rodger, Chair**

1. Awards that were given out:

The SIGCSE Award for Outstanding Contribution to Computer Science Education was presented to Mark Allen Weiss from Florida International University for authoring textbooks on introductory programming and data structures that have had a profound impact on generations of students, and for dedicated service contributions regarding the Advanced Placement Computer Science program.

The SIGCSE Award for Lifetime Service to the Computer Science Education Community was presented to Frank Young, Emeritus Professor of Rose-Hulman Institute, for dedicated service to the computing education community. He especially had many contributions to SIGCSE including co-chairing the Symposium, leading efforts for many years with the registration system for the Symposium and most recently spent many years as the SIGCSE Information Co-Director.

2. Significant papers on new areas that were published in proceedings

ICER 2014 had two best paper awards. The Chair's award is selected by the organizing committee and was presented to:

Leo Porter, Daniel Zingaro and Raymond Lister, Predicting student success using the fine grain clicker, ICER '14, Proceedings of the tenth annual conference on international computing education research, pages 51-58, 2014.

The ICER 2014 John Henry Award is selected by the conference delegates and was presented to:

Josh Tenenberg and Yifat Ben-David Kolikant, Computer programs, dialogicality and intentionality, ICER '14, Proceedings of the tenth annual conference on international computing education research, pages 99-106, 2014.

The best paper selected at ITiCSE 2015 was:

Insa, David and Silva, Josep, Semi-Automatic Assessment of Unrestrained Java Code: A Library, a DSL, and a Workbench to Assess Exams and Exercises, ITiCSE '15 Proceedings of the 2015 ACM Conference on Innovation and Technology in Computer Science Education, pages 39-44, 2015.

The best paper selected at SIGCSE 2015 was:

Celine Latulipe, N. Bruce Long, and Carlos E. Seminario, Structuring Flipped Classes with Lightweight Teams and Gamification, SIGCSE '15 Proceedings of the 46th ACM Annual Technical Symposium on Computer Science Education, pages 392-397, 2015.

3. Significant programs that provided a springboard for further technical efforts

SIGCSE Special Projects Fund provides grants up to \$5000 per project and has calls in November and May each year. The November call funded three projects for a total of \$10,000. One award was made to Steve Wolfman and William Byrd to make video blogs about computer science education. A second award was made to Yifat Kolikant, Sally Fincher and Josh Tenenberg for adapting computer science education to the internet age. A third award was made to Alessio Gaspar and Amruth Kumar to assess the potential of Parsons Puzzles with learning programming. The May call funded two projects for a total of \$8277. One award was made to Samantha Foley and Joshua Hursey to create an interactive learning portal for parallel computing environments. The second award was made to Stanislav Kurkovsky for a low-cost adaptation of Lego serious play to teach software engineering.

ITiCSE 2015 had seven working groups on the topics of Global Software Engineering Courses, Educational Data Mining, CS Education in K-12 Schools, key concepts in K-9 CS education, a repository for high school computer science questions, designing an Information Technology Curriculum Framework, and a Taxonomy of Computing Education Terminology. Many of the working groups start projects that continue collaborations.

4. Innovative programs which provide service to some part of our technical community

We restarted a Department Chair's workshop for future or present Department Chairs that ran on March 11, 2015, the day before the SIGCSE Symposium. The last such workshop had been held in 2011. We plan to run this workshop every other year. The SIGCSE 2015 Chair's workshop had five presenters (Sandra DeLoatch, Frank Young, George Berg, Mary Lou Maher, and Aurelia T. Willams), and 16 attendees, and was held the day before SIGCSE on March 11, 2015. On alternate years, the SIGCSE Board plans to run the New Educator's Workshop, with the next one at SIGCSE 2016.

The 2015 SIGCSE Symposium held twenty-eight three-hour workshops for professional development. In addition, the SIGCSE Symposium provided the meeting space for nine pre-symposium events for educators that included a CRA-W career mentoring workshop, LittleFe Build-Out, GENI in your classroom, Cyber Education Steering Committee meeting, Department Chair's Roundtable, Git and Github, CS Teaching Tips, Teaching to Diversity in Computer Science and an ACM SIGCAS meeting.

A Doctoral Consortium was held on August 10, 2014, the day before ICER 2014, and attended by seventeen graduate students in computer science education with travel support from SIGCSE. These students present their work and get feedback from senior researchers in the field. This event also helps to grow the community of computer science education researchers.

5. Events or programs that broadened participation either geographically, or among under-represented members of our community and;

ITiCSE conferences have always been in or near Europe. ITiCSE 2016 will be in a different geographical location, in Peru. With locating ITiCSE 2016 in South America we hope to grow ITiCSE and increase the number of delegates from this new region.

In 2013, SIGCSE started a Travel Grant Program for faculty who have never attended the SIGCSE Symposium. Five awards were made for SIGCSE Symposium 2014, but two of the attendees could not attend due to visa issues. This year we moved the deadline earlier and six awards were made to attend SIGCSE Symposium 2015. Three of the awardees were from the United States and three were from Jamaica, Albania and the United Kingdom.

SIGCSE provides grants to non-ACM conferences that are in-cooperation with SIGCSE to bring one or more speakers from a recent SIGCSE Symposium, ITiCSE or ICER conference to repeat their presentation. This past year this program provided a grant to CCSC-MW for a keynote talk by Joel Adams.

In February 6, 2015 a new SIGCSE chapter was launched, iSIGCSE in Goa India at the ACM India Annual conference. That same week there were two iSIGCSE Workshops held in India, one in Goa and one in Pune. We hope to work with them on growing the computer science education community in India.

6. A very brief summary of the key issues that SIG membership will have to deal with in the next 2-3 years.

One key issue is the growth of our smallest conference of computer science education researchers, ICER. ICER has had between 60 and 80 participants in its first ten years and is approaching its 11th conference in August with ICER 2015. This time the conference will exceed expectations on many counts. ICER 2015 has over 100 registrants, the largest Doctoral Consortium with twenty graduate student awards, two pre-workshop events, twenty-five accepted research papers, and an increase in lightning talk and poster presenters (from 10 to over 20). We hope for this conference to maintain this increase and to continue to grow.

A second issue is growing computer science education in other parts of the world, in particular in Europe. Although still in the early stages, SIGCSE is working with several other organizations (ACM-Europe, Informatics Europe) and conferences (WiPSCE, ISSEP, CSERC, and possibly others) on a stronger presence of computing education conferences in Europe for 2017, possibly a federated conference of many existing conferences. This timing is being coordinated with the return of ITiCSE to Europe in 2017.

A third issue is to continue to expand SIGCSE internationally by making sure there are international members on the SIGCSE Board. The previous SIGCSE Board had only United States-based members, but the current board has two members from Australasia. With an election coming up in mid-2016, we will encourage non-United States members to run for a position on the SIGCSE Board.

A fourth issue is the cost of our membership. In 2013, we determined that our membership dues were not covering the cost of our membership. Starting in 2014 we created two membership rates, an electronic membership rate at the same membership price as before, \$25, and a paper membership rate to include ACM Inroads as a paper copy for \$45. The majority of new memberships and renewals are signing up for the electronic membership rate.

A fifth issue is to continue to get new volunteers involved with SIGCSE. We have created a volunteer coordinator position and an online signup form at SIGCSE.org to make it easier for volunteers to see what types of volunteer opportunities are available and to indicate their interest in volunteer positions. This past year we have filled many new positions such as Information Co-Director (managing SIGCSE listservs) with Sam Rebelsky, SIGCSE Bulletin co-editor with Maureen Doyle, SIGCSE Social Media coordinator with Brianna Morrison, Conference Review Supporter Software with Leen-Kiat Soh and Brad Miller, and SIGCSE Volunteer Coordinator with Tiffany Barnes.

SIGDA FY'15 Annual Report
July 2014 – June 2015
Submitted by Naehyuck Chang, Chair

Naehyuck Chang (Chair), R. Iris Bahar (Vice Chair and Award Chair), Frank Liu (Conference Chair), Matthew Guthaus (Finance Chair), Gi-Joon Nam (Educational Activity Chair), Alex Jones (Technical Activity Chair), Patrick Madden (Past Chair)

1. Awards that were given out:

SIGDA Outstanding New Faculty Award

The SIGDA Outstanding New Faculty Award (ONFA) recognizes a junior faculty member early in his/her academic career who demonstrates outstanding potential as an educator and/or researcher in the field of electronic design automation. While prior research and/or teaching accomplishments are important, the selection committee especially considers the impact that the candidate has had on his/her department and on the EDA field during the initial years of their academic appointment. The award is presented annually at the Design Automation Conference, and consists of a \$1,000 award to the faculty member, along with a citation. The 2015 ONFA was awarded to Muhammad Shafique, Lecturer and Research Group Leader at the Chair for Embedded Systems, Department of Computer Science, Karlsruhe Institute of Technology (KIT), Germany.

SIGDA Outstanding Ph.D. Dissertation Award

The SIGDA Outstanding Ph.D. Dissertation Award (OPDA) is given each year to an individual to an outstanding Ph.D. dissertation that makes the most substantial contribution to the theory and/or application in the field of electronic design automation. To qualify the dissertation must be submitted between July 1, 2012 and June 30, 2013. The award is presented annually at the Design Automation Conference, and consists of a \$1,000 award, along with a citation. The 2015 OPDA was awarded to Wenchao Li (advisor: Sanjit Seshia), University of California, Berkeley.

ACM Transactions on Design Automation of Electronic Systems (TODAES) Best Paper Award

This year ACM TODAES best paper was carefully selected by an external award committee among ACM TODAES papers that have appeared in a 2-year window from January 2013 to December 2014 issues (Volumes 18, 19 and 20 of TODAES.) This year award goes to Haid Shojaei, Twan Basten, Marc Geilen, Azadeh Davoodi, "A Fast and Scalable Multidimensional Multiple-Choice Knapsack Heuristic," Volume 18, Issue 4, October 2013.

SIGDA Pioneering Achievement Award

The SIGDA Pioneering Achievement Award was created to recognize early work that has played a pivotal role in the design of electronic systems. The award is presented annually at ICCAD at the member meeting banquet dinner. The recipient of the award normally presents a short talk, which is recorded and made available through the ACM Digital Library. The 2014 Pioneering award was given to John Hayes from the University of Michigan, Ann Arbor, for his pioneering work to logic design, fault tolerant computing, and testing.

SIGDA Service Awards

In recognition of their efforts and contributions to creating or supporting SIGDA sponsored programs, SIGDA gives annually several service awards to our volunteers who tirelessly dedicate their time to running publication, professional development, or awards programs sponsored by ACM/SIGDA. We have two levels of awards, Distinguished Service, and Service. This year the first SIGDA Distinguished Service Award was given to Tatsuo Ohtsuki, Hiroto Yasuura, and Hidetoshi Onodera, for their distinguished contributions to the Asia and South Pacific Design automation Conference (ASP-DAC) as well as their many years of dedicated service on the conference's steering committee. This award was jointly sponsored by SIGDA, IEEE CEDA, as well as the ASP-DAC sister conferences (ICCAD, DAC, and DATE). The second distinguished service award was given to Massoud Pedram, for his many years of service as Editor-in-Chief of the ACM Transactions on Design Automation of Electronic Systems (TODAES). For our service awards, we recognized Laleh Behjat for service as chair of the SIGDA PhD forum at DAC, as well as Soonhoi Ha and Jeonghee Shin for their service as co-chairs of the University Booth at DAC.

SIGDA-Affiliated ACM Fellows

SIGDA recognized a total of seven 2015 SIGDA Affiliated ACM Fellows. Six of these new fellows were able to attend the General Session and Award Ceremony of the 2015 Design Automation Conference, where they received special recognition as well as an engraved paperweight from the SIGDA Executive Committee. The recipients included:

- Srinivas Devadas — *For contributions to secure and energy-efficient hardware*
- Nikil Dutt — *For contributions to embedded architecture exploration, and service to electronic design automation and embedded systems*

- Shard Malik — *For contributions to efficient and capable SAT solvers, and accurate embedded software models*
- Subhasish Mitra — *For contributions to the design and testing of robust computing systems*
- Vijay Narayanan — *For contributions to power estimation and optimization in the design of power-aware systems*
- Parthasarathy Ranganathan — *For contributions to the areas of energy efficiency and server architectures*
- Alberto Sangiovanni-Vincentelli — *For contributions to electronic design Automation*

ACM/IEEE A. Richard Newton Technical Impact Award

This year ACM/IEEE A. Richard Newton Technical Impact Award was given to Blaise Gassend, Dwaine Clarke, Marten van Dijk, and Srinivas Devadas, for an outstanding technical contribution within the scope of electronic design automation, as evidenced by a paper published at least ten years ago; "Silicon Physical Random Functions", , pp. 148-160, November 2002, " published in 9th ACM Conference on Computer and Communication Security (CCS) in 2002. This award was jointly sponsored by SIGDA and IEEE CEDA.

ACM/IEEE William J. McCalla Award (ICCAD Best Paper)

The McCalla Best Paper award is given in memory of William J. McCalla for his contribution to ICCAD and his CAD technical work throughout his career. This year ACM/IEEE William J. McCall Award Front End was given to Ping Chi, Cong Xu, Yuan Xie, Tao Zhng, and Xiangyu Dong, for the paper Session 4C.3, "Using Multi-Level Cell STT-RAM for Fast and Energy-Efficient Local Checkpointing". The Back End award was given to Ahmet Gokcen Mahmutoglu and Alper Demir, Koc University, for the paper Session 4D.1, "Medeling and Analysis of Nonstationary Low-Frequency Noise in Circuit Simulators: Enabling Non Monte Carlo Techniques."

CADathlon Winners

CADathlon is a SIGDA-sponsored programming contest that challenges students in their CAD knowledge, and their problem solving, programming, and teamwork skills. It serves as an innovative initiative to assist in the development of top students in the EDA field. During the competition, students are presented with problems in six areas: circuit design and analysis; physical design; logic and high-level synthesis; system design and analysis; functional verification; and bio-EDA. This year's winners are Ching-Yu Chin and Chun-Kai Wang (national ChiaoTung University, 1st place), HungChih Ou and Po-Ya Hsu (NCTU, 2nd place).

2. Significant papers on new areas that were published in proceedings

2014 ACM TODAES best paper

- Peter Milder, Franz Franchetti, James C. Hoe and Markus Püschel, "Computer generation of hardware for linear digital signal processing transforms," in ACM Transactions on Design Automation of Electronic Systems (TODAES), Vol. 17, No. 2,15, 2012.

2013 ICCAD best paper Frontend

- Stephan Eggersglüß, Robert Wille and Rolf Drechsler, "Improved SAT-based ATPG: More constraints, better compaction," in Proceedings of the International Conference on Computer-Aided Design (ICCAD), pp. 85-90, 2013.

2013 ICCAD best paper Backend

- Bei Yu, Xiaoqing Xu, Jih-Rong Gao and David Z. Pan, "Methodology for standard cell compliance and detailed placement for triple patterning lithography," in Proceedings of the International Conference on Computer-Aided Design (ICCAD), pp. 349-356, 2013.

2014 DAC best paper

- Viraj Athavale, Sai Ma, Samuel Hertz and Shobha Vasudevan, "Code Coverage of Assertions Using RTL Source Code Analysis," In Proceedings of the the 51st Design Automation Conference (DAC), pp. 1-6, 2014.

2014 DATE best paper

- Weiwei Chen, Xu Han and Rainer Dömer, "May-happen-in-parallel analysis based on segment graphs for safe ESL models," in Proceedings of the conference on Design, Automation & Test in Europe (DATE), pp. 287-292, 2014.
- Mudit Bhargava and Ken Mai, "An efficient reliable PUF-based cryptographic key generator in 65nm CMOS," in Proceedings of the conference on Design, Automation & Test in Europe (DATE), pp. 70-75, 2014.
- Dominik Erb, Karsten Scheibler, Matthias Sauer and Bernd Becker, "Efficient SMT-based ATPG for interconnect open defects," in Proceedings of the conference on Design, Automation & Test in Europe (DATE), pp. 1-6, 2014.
- Sofiane Lagraa, Alexandre Termier and Frédéric Pétrot, "Scalability bottlenecks discovery in MPSoC platforms using data mining on simulation traces," in Proceedings of the conference on Design, Automation & Test in Europe (DATE), pp. 186-191, 2014.

2014 ASP-DAC best paper

- Chris Chu and Wai-Kei Mak, "Flexible packed stencil design with multiple shaping apertures for e-beam lithography," in Proceedings of the 19th Asia and South Pacific Design Automation Conference (ASP-DAC), pp. 137-142, 2014.

2013 CODES+ISSS best paper

- Wei Zuo, Peng Li, Deming Chen, Louis-Noël Pouchet, Shunan Zhong and Jason Cong, "Improving polyhedral code generation for high-level synthesis." in Proceedings of the 9th IEEE/ACM/IFIP International Conference on Hardware/Software Codesign and System Synthesis (CODES+ISSS), pp. 15-24, 2013.

2013 ISLPED best paper

- XianWei Zhang, Le Jang, Youao Zhang, Chuanjun Zhang and Jun Yang, "WoM-SET: Low power proactive-SET-based PCM write using WoM code," in Proceedings of the 2013 IEEE International Symposium on Low Power Electronics and Design (ISLPED), pp. 217-222, 2013.
- Lawrence T. Clark, Samuel Leshner and George Tien, "SRAM cell optimization for low AV T transistors," in Proceedings of the 2013 IEEE International Symposium on Low Power Electronics and Design (ISLPED), pp. 57-63, 2013.

• 2014 GLSVLSI best paper

- Tao Zhang, Ke Chen, Guangyu Sun and Yuan Xie, "3D-SWIFT: A High-Performance 3D-Stacked Wide IO DRAM," in Proceedings of the 2014 ACM GLS Symposium on VLSI (GLSVLSI), 2014.

• 2014 FPGA best paper

- Safeen Huda, Jason Anderson, and Hirotaka Tamura. "Optimizing effective interconnect capacitance for FPGA power reduction." In Proceedings of the 2014 ACM/SIGDA international symposium on Field-programmable gate arrays (FPGA '14). ACM, New York, NY, USA, 11-20.

3. Significant programs that provided a springboard for further technical efforts

Combined Design Automation Summer School and A. Richard Newton Young Fellowship Program (RYFP)

Co-Chairs: Eli Bozorgzadeh (UC Irvine) and Hai (Helen) Li (Univ. of Pittsburgh)

The Design Automation Summer School (DASS) is a one-day intensive course on recent research and development in design automation (DA). This program is one of several SIGDA educational activities and targets new graduate students or undergraduate students interested in EDA research and industry. Each topic in this course is covered by a distinguished speaker who defines the topic, describes recent accomplishments, and outlines remaining challenges. This program is intended to introduce and outline emerging challenges, and to foster creative thinking in the next generation of EDA engineers. In addition, students will socialize and establish networking with their peers.

Until last year, DASS used to be a two-day, biannual event. DASS strived in terms of number of registrations. SIGDA expected DASS students to attend DAC right after the program, but most of the students were not able to attend DAC since DASS could not afford students free registration for DAC. On the other hand, DAC RNYF (A. Richard Newton Young Fellowship Program) provides free registration and travel grant to students attending DAC for the first time. This year, the efforts and budgets provided by these two programs were combined as follows: a) DASS provided opening session and full day summer school to students; and b) RYFP program provided free DAC registration and travel grant to students. The combined program allows the new graduate students to first attend introductory presentations in DASS and to get an overview of EDA research and then, to attend DAC conference to learn about state-of-the-art and cutting-edge research activities and industry tools and products during one week. SIGDA executive committee and DASS organizers believe that this co-sponsorship has been a great achievement to outreach a large number of new graduate students and allows students to experience DAC very efficiently and productively over a longer period of time (5 days). This idea is certainly beneficial to both DASS and RNYF (and the same is true for DAC), but there has been complicated dynamics between SIGDA and DAC EC.

SIGDA showed great leadership and made the combined DASS and RNYF program come true this year. As a result, there were 80 students attending DASS. The lectures were given by seven speakers who are top researchers in EDA community (one from industry and 6 from academia). The topics covered various concepts in EDA such as applications (automotive), security, energy management in IoT and neuromorphic computing. On overall, the event was very well attended and well organized. Without devotion of two volunteers, Eli Bozorgzadeh (UC Irvine) and Hai (Helen) Li (Univ. of Pittsburgh), this year DASS could not be successful.

Although DASS was a very successful event this year, there is still room for improvement in various ways. From now on, SIGDA plans to organize DASS every year as a collocated event with DAC and in co-sponsorship with RYFP program. Some future plans includes lectures by industry speakers to provide an insight on emerging software and hardware technologies in EDA, outreach to more female students and minorities to introduce them to EDA research and industry by attending DASS and DAC, and including more interactive discussions and follow-up activities among the participants in DASS. In addition, SIGDA plans to allocate a repository in SIGDA website to make all DASS presentations available to public online.

4. Innovative programs which provide service to some part of our technical community

The PhD Forum is one of the premier events for PhD students in design automation to disseminate their research works and to get feedback from their industry and academic colleagues. It has been being hosted and sponsored by ACM SIGDA at the Design Automation Conference (DAC) in US and it has become one of the most attended events at DAC. Based on the success of DAC PhD Forum, SIGDA expanded its efforts to host/sponsors similar events in other continents. From 2014, SIGDA started to sponsor the DATE (Design, Automation and Test in Europe) conference PhD forum. This year, SIGDA successfully hosted/sponsored SRF (Student Research Forum) at ASP-DAC (Asia and South Pacific Design Automation Conference) 2015.

Now, SIGDA proudly supports all PhD forum events at 3 major design automation conferences in three different continents. Here are brief summaries of these events in 2015.

PhD Forum at Design Automation Conference 2015

The DAC PhD Forum was successfully held at 7:00-8:30PM on June 9, 2015. The forum was at Room 206 of Moscone Center in San Francisco, CA, USA, co-located with the Design Automation Conference. Prof. Naehyuck Chang, the chair of ACM SIGDA, gave the opening speech, summarizing the major activities of ACM SIGDA during the past year. Next, Prof. Xin Li, the chair of DAC PhD Forum, made a short presentation to summarize the key statistics of the forum, including Technical Program Committee formulation, abstract submission and review, DAC PhD Forum awards, and financial sponsor information.

The posters presented at the DAC PhD Forum were selected from 66 abstract submissions. A Technical Program Committee with 42 members from 8 different countries was formed to review these submissions. After the reviewing process, 34 abstracts were accepted for poster presentation. At the PhD Forum, 33 PhD students presented the posters about their research work in front of academic and industrial experts. Food and drinks were provided at the forum. One poster presentation was missing, because the student recently graduated and could not attend the forum in person.

An award committee with 12 members was formed and these committee members voted to choose two Best Poster Awards: Taeyoung Kim from University of California, Riverside received the award of "Best Poster – Research", and Wujie Wen from University of Pittsburgh received the award of "Best Poster – Presentation". Based on the voting results from all attendants, Hamed Tabkhi from Northeastern University received the award of "Popular Choice". Each of them received a cash prize of USD 300.

All students presented at the DAC PhD Forum received financial support to partially cover the travel and conference costs. Students traveling within North America received USD 650 and students traveling from outside North America received USD 1000. The travel support was made possible by the financial sponsorship from SIGDA, Intel, Oracle, Cadence and Synopsys. Each of the aforementioned four companies sponsored USD 2000 and the remaining cost was covered by SIGDA.

Chair: Xin Li, Carnegie Mellon University
Co-organizer: Zhuo Li, Cadence Design Systems
Co-organizer: Swaroop Ghosh, University of South Florida

PhD Forum at Design Automation and Test in Europe 2015

The DATE PhD Forum 2015 took place on March 9th, 2015 in Grenoble, France and was associated with the Design Automation and Test in Europe (DATE) Conference and Exhibition. It provided a poster session and a buffet dinner organized and sponsored by ACM SIGDA and the European Design and Automation Association (EDAA).

The purpose of the PhD Forum was to offer a forum for PhD students to discuss their thesis and research work with people of the design automation and system design community. It represented a good opportunity for students to get exposure on the job market and to receive valuable feedback on their work. For the first time, this year's DATE PhD Forum has been organized by Rolf Drechsler from the University of Bremen/DFKI GmbH, Germany. The DATE PhD Forum attracted a total of 48 submissions from all over the world which constituted a slight increase compared to the previous year. All submissions have been evaluated by a program committee composed of 15 experts from both, academia and industry. They intensely evaluated all submissions and conducted a total of 144 reviews (three for each submission). Eventually, this resulted in a total of 36 contributions which have been accepted for presentation at the forum. In order to support students in participating at the event, 16 travel grants (à EUR 300,-) have been issued to selected students (totaling to EUR 4800,-). Besides that, two poster awards (with a financial reward amounting to EUR 500,- each) have been given to the best presentations at the site.

The event gained significant interest and was well received (approx. 250 participants). Longer than originally scheduled, discussions between attendees and presenters took place. ACM SIGDA supported this event financially with EUR 5125,- which has been used to cover expenses for the travel grants, the Best Poster Awards, as well as the dinner.

Chair: Rolf Drechsler, University of Bremen/DFKI, DE

ACM SIGDA SRF at Asia and South Pacific Design Automation Conference 2015

Chair: Yiran Chen, University of Pittsburgh
Co-chair: Yasuhiro Takashima, University of Kitakyushu

The Student Research Forum (SRF) at the ASP-DAC 2015 was successfully held on January 20, 2015 between 18:00-20:00PM at Room 201 of International Conference Hall of Chiba, Japan. Prof. Naehyuck Chang, the chair of ACM SIGDA, gave the opening speech of SRF 2015. Then Prof. Hidetoshi Onodera, the former chair of SRF@ASP-DAC, introduced the history of the SRF. Mr. Ting Li, the representative of the sponsor of SRF 2015 – Huawei Technologies Co. Ltd., introduced the storage division of Huawei and announced the start of SRF review session. Total 23 graduate students from Asia (17), Europe (2), and North America (4) presented their posters about their research in front of academic and industry experts and exchanged the ideas. Based on the vote of reviewers, Boxun Li from Tsinghua University received "Best Poster – Research" and Mengying Zhao from City University of Hong Kong received "Best Poster – Presentation," respectively. Xiang Chen from University of Pittsburgh received "Most Popular Poster," which is voted by all the attendants of SRF. Each of them received a cash award of JPY 10,000. The graduate students presented at SRF are selected from 38 abstract submissions. About twenty-five reviewers from both industry and academia

participated in the remote abstract review and onsite poster review of SRF@ASP-DAC 2015. Each student presenting their posters in the final SRF event at ASP-DAC 2015 received travel supports (\$250-\$450) based on the financial needs. The SRF is organized by ACM SIGDA and sponsored by ACM SIGDA (\$10,000) and Huawei Co. Ltd. (\$5000). The actual expense is \$14,958.61. About 150 researchers, engineers and students attended the event. Food and drinks/wines are provided, offering an enjoyable and pleasure atmosphere of SRF@ASP-DAC 2015.

5. Events or programs that broadened participation either geographically, or among under-represented members of our community

Naehyuck Chang (SIGDA Chair) represented ACM SIGDA at the Women in Engineering Workshop (WIE) (<http://www.iccd-conf.com/wie.html>) collocated with International Conference on Computer Design (ICCD 2014) and gave a talk about "Professional career development in academia" in front of young female students and researchers from Asia and Africa.

6. A very brief summary for the key issues that the membership of our SIG will have to deal with in the next 2-3 years

ACM SIGDA starts with a new SIGDA Executive Committee. The new SIGDA Executive Committee is as follows:

- Chair: Vijaykrishnan Narayanan, Pennsylvania State University
- Vice Chair and Conference Chair: Xiaobo Sharon Hu, University of Notre Dame
- Award Chair: Marilyn Claire Wolf, Georgia Institute of Technology
- Finance Chair: Xin Li, Carnegie Mellon University
- Education Activity Chair: Yiran Chen, University of Pittsburgh
- Technical Activity Chair: Frank Liu, IBM
- Past Chair: Naehyuck Chang, Korea Advanced Institute of Science and Technology

ACM SIGDA continues to expand and develop a range of activities with the new leadership.

SIGDOC FY '15 Annual Report
July 2014 – June 2015
Submitted by: Liza Potts, Chair

SIGDOC has successfully rebuilt itself and realigned its mission to distinguish the SIG in the DOC community. This report highlights SIGDOC activities, awards, publications, and conferences that support this work.

1. Awards Given Out

For the 2014 SIGDOC Conference, we honored Patricia Sullivan with our Rigo Award for her outstanding contributions to the field of technical communication, her mentorship of several generations of scholars and practitioners, and her leadership in the Women in Technical Communication group. She is the author of several ground-breaking books, including *Electronic Literacies in the Workplace* (co-edited with Jennie Dautermann), *Opening Spaces* (co-authored with James Porter), *Professional Writing Online* (co-authored with James Porter and Johndan Johnson-Eilola), and *Technology, Labor, and Writing* (co-edited with Pamela Takayoshi).

Our graduate student competition winner was Dawn Opel. Her paper, *Social Justice in Technologies of Prenatal Care: Toward a User Centered Approach to Technical Communication in Home Pregnancy Testing*, focuses on technical communication and women's reproductive health. She received a travel reimbursement and a conference fee waiver.

2. Significant Proceedings Papers

Our proceedings papers and articles from *Communication Design Quarterly* continue to show an increase in impact in 2014. We are showing both higher downloads and citations, which can be attributed to our realignment with our sister organizations across technical communication and the high quality of work appearing in our publications.

Top 5 SIGDOC 2014 Papers by Downloads

- 1) All of the Things: Engaging Complex Assemblages in Communication Design by Brian J. McNely, Nathaniel A. Rivers Downloads: 68
- 2) Business process modeling: Vocabulary problem and requirements specification by Jonas Bulegon Gassen, Jan Mendling, Lucinéia Heloisa Thom, José Palazzo M. de Oliveira Downloads: 48
- 3) Social norms influence student journalists' perception of wearable technologies by Jennifer Ware Downloads: 41
- 4) Social Justice in Technologies of Prenatal Care: Toward a User Centered Approach to Technical Communication in Home Pregnancy Testing by Dawn Opel Downloads 24
- 5) Women, Religion, and Professional Communication: Communication Design for the Female Relief Society, 1842--1920 by Emily January Petersen Downloads: 23

Top Communication Design Quarterly downloads from 2014

- 1) Technology and communication design: crossroads and compromises by Claire Lauer Downloads: 177
- 2) Participatory design: barriers and possibilities by Sushil K. Oswal Downloads: 127
- 3) Remediation in data visualization: two examples of learning in real-time data processing environments by Justin Young, Charlie Potter Downloads: 121
- 4) Journey mapping: a brief overview by Tharon Howard Downloads: 103
- 5) Data visualization by Manuela Aparicio, Carlos J. Costa Downloads: 70

3. Significant Programs (that provided a springboard for further efforts)

We are focused on four key programs that advance our leadership and work in communication design.

Working with Leaders Across Technical Communication

Part of rebooting our SIG has included creating partnerships across the field of Technical Communication. We are leading in this area, and our conferences have been successful in part because of this cooperation. We are co-locating conferences, meeting with leaders at their conferences, and holding conference calls to discuss our goals and share ideas. We believe our field is better for it.

Supporting the Annual Symposium on Communicating Complex Information

We also continued to support the Annual Symposium on Communicating Complex Information in 2014. Their proceedings are part of ACM's Digital Library because of this collaboration, increasing our reach and sharing knowledge across our communities.

Euro SIGDOC

We also continue to support our Euro SIGDOC members by advertising their events and providing mentorship. We will encourage them to advertise and attend our 2015 conference, which will be held in Ireland.

4. Innovative Programs (that provide service to some part of our technical community)

Communication Design Quarterly

This year, CDQ began the process of transitioning to a new editor for the publication. Michael Albers will conclude his term as editor with the Nov./Dec. 2015 issue of CDQ and Kirk St.Amant will take over as interim editor for 2016-2016 as a formal search for a new editor is conducted. 2015 also saw the introduction of special, thematic issues to begin to address the interests of different constituencies represented by SIGDOC. The first of these special issues will be the August/September issue edited by Lisa Meloncon and Erin Frost, and the topic of that issue will be medical and health communication. The second special issue will be edited by Kirk St.Amant and will be on international aspects of communication design.

Co-Locating Conferences with Sister Organizations

In the fall of 2014, we co-located our conference with the annual conference for the Council for Programs in Technical and Scientific Communication (CPTSC). This allowed us to connect with scholars who might not have normally thought of SIGDOC as a place to publish and present. We know that this collaboration increased our attendance numbers and reach based on the feedback from our members and leaders in the field. We are aiming to reproduce this success by co-locating our 2015 conference with IEEE's ProComm conference in Limerick, Ireland.

Content Strategy

With our communications manager, we are working on a revised content strategy for our social media, website, and digital library content. A content strategy is a plan for how to write, deploy, maintain, and sustain communications with our members. Our ideas include promoting papers in the digital library to increase visibility and reach of SIGDOC's work. To do this, we will include the authors and key members of our field to promote the good work of our members. We are also updating our website with a new template, which will allow us to have a more streamlined and modern mode of communication. We will be launching this new content strategy in Fall 2015.

5. Events or Programs that Broadened Participation (geographically or among under-represented members of our community)

Support of Women in Technical Communication

SIGDOC was one of the earliest supporters and sponsors of the Women in Technical Communication organization. Our SIGDOC chair was asked to be part of the leadership team of this organization for her work leading SIGDOC. In 2014, SIGDOC hosted a Women in Technical Communication breakfast at our annual conference. We plan on hosting a similar event at our conference in 2015. This project broadens participation in SIGDOC and beyond for women who are focused on the design of communication.

Encouraging Diverse Leadership and Mentoring Junior Scholars

SIGDOC is committed to leading our field and ACM as a space for diversity and mentorship. We are a welcoming organization, proud of our growth and support of diverse and junior scholars on our Board, our committees, our conference program, and CDQ. This work will continue in June 2015, when our Chair plans to nominate new members to our board. These leadership opportunities continue our shared mission and vision to provide support and mentorship for our members. We believe this work enriches our field and ACM.

6. Brief Summary of Key Issues for 2015-2017

The following briefly describes key strategies and tactics for SIGDOC's future.

Overall Strategy: Continuing to Support Innovation and Mentor Junior Scholars

SIGDOC is an organization that aims to broaden our reach as the space to share research on the design of communication. We are supportive of early career faculty and student researchers, and as such, we are a space that is welcoming for new ideas and emerging research. In 2016, we will hold our conference in Washington D.C. to help strengthen involvement of our partners in industry and the public sector.

Key Tactic: Continuing to Make Space for New Scholars and Volunteers

SIGDOC is now viewed in our field as a space for emerging scholarship, both in terms of young scholars and new ideas. We have purposefully created this space to support, mentor, and guide our peers. As part of this initiative, we are also welcoming to new volunteers. We are a space where our peers can learn to become leaders by supporting their growth and sharing our knowledge. Part of this work includes the Microsoft student competition and the graduate student competition. We are looking forward to this event at our 2015 conference, and we already know that we had a heavy involvement of students proposing and working towards this goal during this year.

Key Tactic: Voting on Streamlined Bylaws

We will be finalizing our updated bylaws this August. They will be ready for our members to vote on them during our upcoming election. Streamlining these bylaws means aligning them with other ACM SIGs as well as removing gendered language.

Key Tactic: Elevating Communication Design Quarterly to an official ACM Journal

Our goal over the next two years is to increase the circulation and impact of our publication *Communication Design Quarterly* (CDQ). Our aim is to elevate CDQ to ACM journal status.

SIGecom FY'15 Annual Report
July 2014 – June 2015
Submitted by: David C. Parkes, Chair

SIGecom's three primary activities are convening the annual *Conference on Economics and Computation* (EC), editing the electronic newsletter *SIGecom Exchanges*, and running the journal, *ACM Transactions on Economics and Computation* (TEAC).

The 16th ACM Conference on Electronic Commerce (EC'15) was held June 15-19, 2015 in Portland, OR, along with FCRC. The Program Co-chairs were Michal Feldman (Tel Aviv University) and Michael Schwarz (Google). The General Chair was Tim Roughgarden (Stanford University). Over 190 people attended, and the conference attracted 220 submissions (accepting 72 papers), along with strong financial backing from Booking.com, Google, Facebook, and Microsoft Research.

The ACM EC'15 Best Paper award went to "Econometrics for Learning Agents" by D. Nekipelov, V. Syrgkanis and E. Tardos, and the Best Student Paper award went to "Why Prices need Algorithms" by T. Roughgarden and I. Talgam-Cohen.

We had a strong technical program, and continued the structure from recent years with two parallel tracks during most of the conference. The accepted papers covered a range of topics from core theoretical foundations to practical innovations, including those of typical strengths, such as matching, mechanism design, market design, reputation and influence, social networks, and algorithmic game theory, as well as applications to areas such as internet advertising and crowdsourcing. An emerging theme through both the technical program and the workshops and tutorials was the role of data science, statistical inference and machine learning in regard to problems in economics and computation.

The SIG continues to sustain our professional community through in-cooperation agreements with the 10th Conference on Web and Internet Economics (WINE'14), the Third Conf. on Auctions, Market Mechanisms, and Their Applications (AMMA'15), and the 8th Int. Symposium on Algorithmic Game Theory (SAGT'15). This year we also completed the second cycle of the Doctoral Dissertation and Test of Time awards. The winner of the SIGecom Doctoral Dissertation Award was S. Matthew Weinberg (MIT) for his thesis, "Algorithms for Strategic Agents." The winner of the inaugural SIGecom Test of Time award was "The Social Cost of Cheap Pseudonyms" by E. J. Friedman and P. Resnick, *J. Econ. and Manage. Strategy* 10:173-199 (2001).

We have formed the organizing committee for EC'16, which will be collocated with the *World Congress on Game Theory* (GAMES) in Maastricht, The Netherlands, in July 2016. This will be the first time that EC has collocated with GAMES, which is the premiere international forum on game theory and takes place once every four years. In addition to building geographic diversity, this marks a significant opportunity for our professional community to continue to build connections with the economics and game theory communities.

The EC conference is doing very well, and the new structure provided by the annual awards is helping to provide continuity and visibility from year to year. One area for ongoing vigilance is to ensure that we remain connected to practice, encouraging application-related or empirical contributions, while maintaining our traditional strengths in theoretical computer science and AI. We have discussed the idea of collocating with KDD or WWW in future years as a way to broaden the scope of papers in the conference.

We have made an effort this past year, spear-headed by Jason Hartline (Northwestern University) to improve the EC academic job market. I believe that a good step forward will be provided by a forthcoming issue of *SIG Exchanges*, that will contain couple of paragraphs about the research of each of our job market candidates, along with a list of their three most important papers. I hope that we can keep this going in future years, while also building some web resources to explain the research conducted by our community and its broader impact.

The TEAC journal is doing well, having now published ten issues, and continues to run by-invitation special issues of the most recent EC conferences. The editorial board will be refreshed this year.

Finally, we have just emerged from an intense discussion about our publication model. A committee chaired by Joan Feigenbaum (Yale University) put together a strong and detailed proposal, the main objective of which was to have a more carefully reviewed literature while still retaining the benefits of rapid dissemination provided by the conference model. A unique feature of the EC community is that we also strive to welcome academics from other disciplines such as economics, and for this reason the conference allows accepted papers to appear as one page abstracts in the proceedings.

The publications proposal was for paper submissions to be handled through TEAC, with quarterly deadlines and papers taking at most six months to complete a full R&R cycle. A paper at "accept subject to minor revision" status would already be invited for presentation at the next EC conference. Papers that were submitted for consideration at the conference but not publication in TEAC would be refereed but without requiring a detailed report, and would be eligible to be presented at the next conference if receiving support of the referees. Although the proposal didn't win broad support, it has led to some smaller changes that also aim to increase the number of journal papers. In particular, we are looking to provide an easier path from EC to TEAC, involving reviews being shared, and asking PC members who handled a paper at EC whether they would be willing to review a journal version of the paper for TEAC.

SIGEVO FY'15 Annual Report
July 2014 – June 2015
Submitted by: Marc Schoenauer, Chair and Wolfgang Banzhaf, Past Chair

LEADERSHIP OF SIG

SIGEVO, the SIG on Genetic and Evolutionary Computation, held elections for one third of its 18 member strong executive board. Four board members were re-elected: Wolfgang Banzhaf, Juergen Branke, Ken De Jong and Erik Goodman. Two board members were not re-elected: Anna Esparcia-Alcazar and Pier-Luca Lanzi. Instead, two new board members join the board for the next period. These are: Emma Hart and Gabriela Ochoa. With this election we continue our renewal of leadership, getting younger members into responsible positions. Our inclusive strategy for the organization of GECCO, has in time yielded capable people to become candidates for these positions on the executive board.

A business meeting of the Executive Committee was held in Madrid, during GECCO-2015 on July 13, 2015. Because this was the fourth year of activity of our elected officers, Wolfgang Banzhaf stepped down as chair. The new elections yielded the following results: Marc Schoenauer (chair), Una-May O'Reilly (vice chair), Franz Rothlauf (treasurer) and Juergen Branke (secretary).

BUSINESS MEETING IN MADRID

GECCO 2015 is formally outside the report period, but very close, so I shall report on the results of the business meeting. Besides the EC, the chair and E-i-C of the 2015 GECCO were invited. The incoming General Chair of GECCO 2016 could not attend, but the incoming E-i-C of the proceedings was in attendance. The E-i-C of MIT Press's Journal Evolutionary Computation which is closely affiliated with the SIG was also present at the meeting, as was a former general chair of GECCO, who joined a Business Committee for future GECCOs.

The following decisions were made at the meeting:

1. Election for new SIGEVO Officers were held at the meeting: There was one slate of candidates who were subsequently elected: For chair: Marc Schoenauer, for vice-chair: Una-May O'Reilly, for treasurer: Franz Rothlauf, for secretary: Juergen Branke.
2. The SIGEVO Newsletter is still seriously late in appearing. Since last year's measures to add two associate editors did not help, it was decided that a more systematic approach will be used: Emma Hart has a long-lasting experience of newsletter editing, as coordinator of the EU project FOCAS; She will hire for SIGEVO newsletter the same person who is editing FOCAS newsletter, gathering and formatting information. A provisional 10K will be allocated from SIGEVO resources to cover these hiring costs. Gabriela Ochoa and Una-May O'Reilly will help with the content, while Pier Luca Lanzi will still be responsible for one out of a couple of issues. Job ads to be placed on the SIGEVO website.
3. It was agreed that in the future the secretary will organize a vote counting for electronic votes of the board.
4. Next FOGA: Call for expressions of interest should go out soon, with a deadline of September 30. Darrell Whitley, Ken De Jong and last chair will prepare a final proposal for decision by the board by mid November 2015 the latest.
5. SIGEVO membership has declined over the years, and the board feels that the spread between registration fees for non-members and for members is not large enough to motivate participants to join. Beginning with next GECCO, membership benefits need to be increased by increasing the spread between non-member and member registration rates. It was also suggested that a strategic five or ten year development plan for SIGEVO membership be established.
6. The website / wiki for SIGEVO has now moved to a site at INRIA. Christian Gagne (former Publicity chair of some GECCOs) will be involved in the future running of this site. The 10K which were earlier set aside for the purpose turn out to be an overestimate. Chair to continue with the reorganization, including assigning work to Gerardo Valencia, who is more interested in graphical aspects of the website design. His contract will be renegotiated after the new wiki-based site has become operational.
7. A collective effort for establishing a MOOC was proposed, with a price tag of 40K. It was decided that more preparatory work was necessary before a financial decision can be made. Una-May O'Reilly in charge of this preparatory work.
8. Since last year, nothing has happened on the summer school project. A new attempt is to be made, with a 10K seed funding from SIGEVO. Franz Rothlauf and Enrique Alba to be responsible. A possible venue organizer has been found in Croatia. He has experience with larger summer schools up to 180 participants (and 25 faculty teaching). Next step is tentative budget and program to be worked out for consideration by the board.
9. The ad-hoc award committee has been charged with working out a process for the previously existing ISGEC fellow awards (re-instantiation under a different name) as well as for a plan on other possible awards to be considered at next year's board meeting. This would entail the establishment of a nomination committee.

10. The board decided to add Enrique Alba (General Chair of GECCO 2013) to the Business Committee for GECCO 2017 and later GECCOs (for 3 years). GECCO 2016 to be held in Denver, GECCO 2017 most likely to be held in Europe, e.g. Berlin, and to aim for first Asia/Pacific venue in 2018.
11. GECCO-2016 to move forward with a nanoGECCO for children, taking into account the specific insurance requirements, and the use of the ACM anti-harassment policy.

GECCO 2014

GECCO 2014 was held in Vancouver, Canada, in July 2014. In even years we usually go to a site in North America. The conference was held at a hotel in Vancouver and was relatively well attended, though less than expected from the submission numbers. The reason was identified as lying with the acceptance rates. In general, acceptance rates for GECCOs have gone down for a number of years (2010: 45%, 2011: 38%, 2012: 37%, 2013: 36%, and 2014: 33%). It was felt that the acceptance rate is too low now and definitely should not be lowered any more, but instead increased somewhat in future years. The General Chair of GECCO 2014 was Dirk Arnold (Department of Computer Science, Dalhousie University, Halifax, Canada) and the E-i-C was Christian Igel (Department of Computer Science, University of Copenhagen, Denmark). Executive Events was our conference management provider.

FUTURE GECCOS

As mentioned above, GECCO 2015 was recently held in Madrid, Spain. As expected, numbers did somewhat drop, possibly due to the heat in Madrid at that time of year and competition from other conferences held in Europe this year. The conference was held at a hotel, and was very successful.

GECCO 2016 will take place in Denver, CO, in 2016. A hotel has already been chosen, and the General Chair, Frank Neumann, is already at work in securing organizing committee, track chairs, invited speakers and other conference highlights.

For 2017, plans have not yet settled on a city. There is some consideration for a European city, e.g. Berlin. The BC for 2017 to investigate in the next weeks and liaise with Executive Events.

SIGEVO FINANCES

SIGEVO continues to be in good shape financially, with events usually not producing deficits. Our reserves are healthy, and we are looking at ways (cf. Award ad-hoc Committee) to use surplus for rewarding our membership through higher visibility.

Student support at GECCO has been at \$25-30K per year, the FOGA workshop will also be sponsored for students.

AWARDS

Again, seven competitions were held at GECCO-2014 with awards and prizes presented at the SIGEVO Annual Meeting. The areas of the competitions were

- AI Controller for the Game 2048
- Black Box and Combinatorial Black Box Optimization Competitions
- Simulated Car Racing Championship
- General Video Game AI
- Geometry Friends Game AI
- Industrial Challenge
- Virtual Creatures Competition
- Wind Farm Layout Optimization

The most prominent competition is the Humies Award for the best human-competitive application of Evolutionary Computation methods published in the last year (July 2013 - June 2014). Strict criteria are applied for what work becomes eligible in the competition, and a panel of five independent judges is responsible for the selection of winners of \$10,000 in cash prizes donated by Third Millennium Online Products Inc.

The HUMIES Gold Medal Winner for 2014 was given to the team of Omid E. David, Jaap van den Herik and Moshe Koppel and Nathan S. Netanyahu, who won for using evolutionary computation techniques to produce a chess playing program. They received a \$5,000 cash prize.

SILVER (\$3,000 cash prize) went to Justyna Petke, Mark Harman, Bill Langdon and Westley Weimer for their work on genetic improvement of a C++ class.

BRONZE (\$2,000 cash prize) went to Radek Hrbacek and Vaclav Dvorak for Bent function synthesis using CGP.

GECCO Best Paper Awards were given in different categories. We have somewhat consolidated the field by lumping smaller program tracks together. The minimum submission numbers for a best paper award are 20, with smaller tracks collaborating to select a best paper among their union set.

For the fifth time, the "SIGEVO Impact Award" was given in 2015 to recognize up to 3 high impact papers that were published in the GECCO conference proceedings 10 years earlier. Criteria for selection are high citation counts and impact deemed to be seminal. Selection is made by the SIGEVO Executive Committee.

This year the Impact Award was given to:

An Approach for QoS-aware service composition based on genetic algorithms.
Genetic and Evolutionary Computation Conference, 2005.
By G. Canfora, M. Di Penta, R. Esposito, M.L. Villani

SIGGRAPH FY '15 Annual Report
July 2014 – June 2015
Submitted by: Jeff Jortner, President

1. Awards

ACM SIGGRAPH presented its 2014 awards during the Keynote session at SIGGRAPH in Vancouver, Canada:

- Computer Graphics Achievement Award: Thomas Funkhouser, Princeton University
- Significant New Researcher Award: Noah Snively, Cornell University
- Distinguished Artist Award for Lifetime Achievement in Digital Art: Harold Cohen
- Outstanding Service Award: Scott Lang, Bergen County Academies

The SIGGRAPH Computer Animation Festival celebrated its 41st anniversary in 2014, cresting four decades of presenting the work of some of the most innovative and accomplished creators of computer-generated effects, films, visualizations, games, commercials and short animation. Like the year before, the majority of the festival winners were from outside the United States, a strong indication of the event's international appeal. The 2014 nominees were chosen by an expert panel of jury members from more than 450 submissions.

SIGGRAPH 2014 Computer Animation Festival Awards:

- Best in Show Award: *Box*, Directed by Tarik Abdel-Gawad, United States
- Jury Award: *Paper World*. Directed by Dávid Ringeisen, László Ruska, Moholy-Nagy, Hungary
- Best Animated Short: *Home Sweet Home*, Directed by Pierre Clenet, Alejandro Diaz, Romain Mazonet, Stéphane Paccolat, France
- Best Student Project Prize: *Wrapped*. Directed by Roman Kálin, Falko Paeper, Florian Wittmann, Germany
- Best Visual Effects: *Gravity*, Directed by Alfonso Cuarón, Esperanto Filmoj, United Kingdom
- Best Visualization & Simulation: *Kinematics*, Directed by Jessica Rosenkrantz, Jesse Louis-Rosenberg, United States
- Best Game: *The Crew*, Directed by Maxime Luère, Dominique Boidin, Rémi Kozyra, France
- Best Real-Time Graphics: *RYSE: Son of Rome*, Directed by Chris Evans, Peter Gornstein, Martin L'Heureux, Germany
- Best Commercial Advertisement: *Three, "The Pony,"* Directed by Dougal Wilson, United Kingdom

The SIGGRAPH Asia 2014 Computer Animation Festival received a high number of submissions, further anchoring its position as a major festival in Asia. Selections included outstanding achievements in time-based art, scientific visualization, visual effects, real-time graphics, and narrative shorts.

SIGGRAPH Asia 2014 Computer Animation Festival Awards:

- Best in Show Award: *Bang Bang!* Directed by Julien Bisaro, France.
- Jury Special Prize: *Over the Moon*, Directed by James Cunningham, New Zealand
- Best Student Project Award: *Jinxy Jenkins, Lucky Lou*, Directed by Michael Bidinger and Michelle Kwon, United States.

2. Significant papers on new areas that were published in SIGGRAPH proceedings

127 Technical Papers were presented at SIGGRAPH 2014, selected from a total of 505 submissions. 66 Technical Papers were presented at SIGGRAPH Asia 2014 out of 348 submissions. The 2014 papers program at both conferences saw participation from many of the world's leading academic research institutes, and revealed cutting-edge advances in numerous areas, including hands-on demonstrations and installations focusing on virtual reality, augmented reality, robotics, wearable devices, 3D graphics, haptic devices and more.

3. Significant programs that provided a springboard for further technical efforts

SIGGRAPH

SIGGRAPH, the world's premier conference on computer graphics and interactive techniques, returned to Vancouver, Canada in 2014, for its 41st conference and exhibition. From August 10-14, 14,045 artists, research scientists, gaming experts and developers, filmmakers, students, and academics from 50 U.S. states and 75 countries gathered to experience cutting-edge computer graphics and interactive techniques. There were 6,156 participants from the host country of Canada.

The conference boasted more than 40,000 sq. ft. of exhibit space featuring 175 participating companies - an increase from the 2013 conference in Anaheim, California. Eighteen countries were represented on the exhibit floor, 44% of which are based outside of the U.S., including 28 companies from Canada. Furthermore, 25% of the exhibitors were first-timers, which was the highest percentage in four years. An impressive 1,533 speakers and contributors participated in the conference through a variety of talks, sessions, panels, papers, presentations, tutorials, and screenings.

Among the highlights of SIGGRAPH 2014 was a riveting keynote speech delivered by Elliot Kotek, co-founder of a non-profit organization called "Not Impossible Labs," which uses 3D printers to create prosthetic arms for children wounded in Sudan's decades of warfare.

SIGGRAPH Asia

The 7th ACM SIGGRAPH Asia Conference and Exhibition in Shenzhen, China attracted around 6,000 industry professionals, researchers, artists, developers and enthusiasts from 53 countries, of which 11.6% percent were students from educational institutions across the region. In all, 38% percent of all attendees came from outside Mainland China.

SIGGRAPH Asia's featured speakers were Scott Ross, founder of Digital Domain, and Steven Feiner, Professor at Columbia University. Fascinating, engaging discussions on the developments and future trends of computer graphics and interactive techniques were seen by attendees from all around the world.

4. Innovative programs which provide service to some part of the ACM SIGGRAPH technical community

Digital Arts

The Digital Arts Committee has provided service to the SIGGRAPH technical community by creating online digital art exhibitions with easy year-round access and technical information, with the aim of improving the dialogue between technical researchers and digital arts practitioners. This year's two on-line exhibitions extended the Digital Arts Community by including more international artists and volunteers. The Digital Arts Committee worked closely with the Publications Committee and ACM Rights Management on applying the new ACM Fair Use Guidelines to Digital Art.

Education

The ACM SIGGRAPH Education Committee has existed for 31 years. The committee is currently structured so its volunteers focus on specific areas of interest to the computer graphics education community: administration, community building and support, conference activities or curricular or instructional resources.

The Education Committee was also very involved in SIGGRAPH 2014. Education-sponsored BOF's were used as a mechanism to gather as a community at the conference.

Small Conferences

In FY2015, the Small Conference Committee approved 8 sponsored, 5 co-sponsored and 8 in-cooperation conferences. In addition, several conferences co-located with SIGGRAPH 2014, including the ACM Symposium on Applied Perception, the Digital Production Symposium, Expressive 2014, and Web3D 2014.

Student Services

In FY2015, the Student Services Committee coordinated multiple programs engineered to provide value to current student members and make membership more enticing to potential student members. Three of the most popular programs; S3 Talks, Résumé Reel Review (S3R3) and S3 Mentor Me, offered year-round student membership benefits beyond the SIGGRAPH Student Volunteers program, which the committee also oversaw.

The Student Services Committee has also planned a series of webinars on the following topics: Networking 101, Simulation in VFX, The State of the Industry, Alternative Uses for a VFX Education, Discussion of Typical Production Job Titles, Resume Dos and Don'ts, Demo Reel Dos and Don'ts and Gearing up for SIGGRAPH.

Communications

The Communications Committee revamped the responsive design for the newsletter in January of 2015, providing a cleaner, more brand-aligned look that both increased the newsletter's accessibility and made the brand more recognizable, reinforcing the organization's connection with the computer graphics community. The new site's content and news items have been updated weekly by the content manager, and traffic to the site is strong.

Social media remains a major priority for the Communications Committee, which has established a process of information exchange with SIGGRAPH and SIGGRAPH Asia marketing, to ensure the conferences are promoted equally and enthusiastically. A streamlined social media management application has been adopted by the committee, which has allowed for advance scheduling of social media, strengthened lines of communication between members and the organization, and provided a deeper understanding of the way ACM SIGGRAPH is represented and discussed in the social media space.

The ACM SIGGRAPH social media accounts, maintained by the Communications Committee, send out five to ten industry-related news items and SIGGRAPH conference promotions each day, through each channel. During FY2015 alone, ACM SIGGRAPH's social media accounts gained more than 35,000 followers.

Chapters

There are currently 64 professional and student chapters of ACM SIGGRAPH, and three in-progress chapter applications. Within their local areas, professional chapters continue the work of ACM SIGGRAPH on a year-round basis via meetings and other activities. Each chapter consists of industry professionals involved in education, research and development, the arts, industry, and entertainment. ACM SIGGRAPH chapter members are interested in the advancement of computer graphics and interactive techniques, and related technologies and applications. Oversight of the ACM SIGGRAPH Chapters network is handled by the ACM SIGGRAPH Chapters Committee Chair and the ACM SIGGRAPH Chapters Committee.

5. Events or programs that broadened participation either geographically, or among under-represented members of ACM SIGGRAPH

Digital Arts Committee

The Digital Arts Committee's participation in SIGGRAPH Asia has greatly increased ACM SIGGRAPH's participation in China, Hong Kong, and Taiwan. The core committee now includes people with ties to Korea and Taiwan who will continue Asian outreach. The committee's guide for joining the online digital arts community is currently available in Japanese, Korean, and Chinese.

Education Committee

In FY2015, the Education Committee advised and worked with leadership from the SIGGRAPH Asia Education Symposium. In addition, this year, the beginning of stronger relationships with the ACM Ed Council and the Eurographics Education Chair were initiated.

Student Services Committee

Representatives from the Student Services Committee were sent to SIGGRAPH Asia 2014 to facilitate the MentorMe and S3R3 program at the conference. They also assisted with the student volunteer program on-site, strengthening ties between the communities of computer graphics students in Asia and ACM SIGGRAPH.

Chapters Committee

ACM SIGGRAPH chapters host activities for their local communities, year-round. These events facilitate geographical networking and bring together the international community of computer graphics enthusiasts as a whole. Below are some examples of chapter events from the past year, with links for more information:

Tehran ACM SIGGRAPH V-Ray Day June 2015
<http://tehran.siggraph.org/en/blog/tehran-v-ray-day-2015>

London ACM SIGGRAPH Dazzle Ship: Motion Graphics June 2015
<http://london.siggraph.org/dazzle-ship-motion-graphics/>

Toronto ACM SIGGRAPH: High Performance Computing in Computer Graphics May 2015
<http://toronto.siggraph.org/event/high-performance-computing-in-computer-graphics/>

NYC ACM SIGGRAPH: Big Hero 6 Character Design and Development Panel Jan 2015
<http://www.siggraph.org/discover/news/big-hero-6-character-design-development-panel-nyc>

Small Conferences Committee

The Small Conferences Committee brought two new international conferences into the fold during FY2015: Computer Graphics International (Strasbourg, France) and International Conference on CAD / CG (Xi'an, PRC).

6. Key issues that the membership of ACM SIGGRAPH will have to deal with in the next 2-3 years

ACM SIGGRAPH has a longstanding reputation for providing excellent content at our conferences, but we are concerned about a trend toward decreasing conference attendance in recent years. Over the next 2-3 years, our organization will be exploring new ways to engage the community and get them excited about computer graphics, both at our conferences and throughout the year. The complete overhaul of siggraph.org in 2013 was the first step toward maintaining a strong connection with our audience outside of our flagship conferences, and SIGGRAPH 2015 will feature a number of exciting new programs and events that have never before been seen at SIGGRAPH.

**SIGHPC FY '15 Annual Report
July 2014 – June 2015
Submitted by: Cherri Pancake, Chair**

1. Awards that were given out

Travel grants to attend SC14 were given to five students: 1 undergraduate and 4 graduate students from universities in the US, Australia, Germany, and Sweden.

2. Significant papers on new areas that were published in proceedings

Prize winning papers published in proceedings of SC14:

ACM Gordon Bell Prize winner:

D. E. Shaw et al., "Anton 2: Raising the Bar for Performance and Programmability in a Special-Purpose Molecular Dynamics Supercomputer"

SC14 Best Paper winner:

K. Ren et al., "Scaling File System Metadata Performance with Stateless Caching and Bulk Insertion"

SC14 Best Student Paper winner:

M. Besta and T. Hoefler, "Slim Fly: A Cost Effective Low Diameter Network Topology"

Other significant papers:from same proceedings:

J. Bedorf et al., "24.77 Pflops on a Gravitational Tree-Code to Simulate the Milky Way Galaxy with 18600 GPUs"

A. Cassidy et al., "Real-Time Scalable Cortical Computing at 46 Giga-Synaptic OPS/Watt with ~100x Speedup in Time-to-Solution and ~100,000x Reduction in Energy-to-Solution"

A. Heinecke et al., "Petascale High Order Dynamic Rupture Earthquake Simulations on Heterogeneous Supercomputers"

T. Ichimura et al., "Physics-Based Urban Earthquake Simulation Enhanced by 10.7 BlnDOF x 30 K Time-Step Unstructured FE Non-Linear Seismic Wave Simulation"

S. Misra et al., "Parallel Bayesian Network Structure Learning for Genome-Scale Gene Networks"

S. Oral et al., "Best Practices and Lessons Learned from Deploying and Operating Large-Scale Data-Centric Parallel File Systems"

S. Rajbhandari et al., "A Communication-Optimal Framework for Contracting Distributed Tensors"

J. Shirako et al., "Oil and Water Can Mix! An Integration of Polyhedral and AST-based Transformations"

J. Zhai et al, "CYPRESS: Combining Static and Dynamic Analysis for Top-Down Communication Trace Compression"

J. A. Zounmevo et al., "Nonblocking Epochs in MPI One-Sided Communication"

3. Significant programs that provided a springboard for further technical efforts:

Last we launched the SIGHPC Educators Chapter, ACM's first "virtual chapter." There was a significant learning curve, since ACM's chapter model has always assumed a fixed geographic location. Dealing with bank accounts and elections, in particular, is vastly complicated by chapters that have no face-to-face meetings and do not have a home base in any particular state. We have analyzed the process and made recommendations to ACM-HQ, and leveraged the knowledge to form our second virtual SIG a couple of months ago. For the HPC community – whose members tend to be scattered across wide geographic areas – this type of interest group will be very important.

4. Innovative programs which provide service to some part of our technical community:

SIGHPC hosted an ACM webinar. Salman Habib's "Extreme Scaling and Performance across Diverse Architecture" was well received with nearly 2200 registrants, of whom 564 attended live. 392 registrants later attended via on-demand, and the webinar has had 450 views on YouTube.

5. Events or programs that broadened participation either geographically, or among under-represented members of our community

Our first geographic chapter was chartered. It covers the region of Central Africa.

6. A very brief summary for the key issues that the membership of ourSIG will have to deal with in the next 2-3 years:

Like many SIGs, we are still coming to grips with what types of services are most useful to our members, tempered by the availability of volunteer time to implement them. Although ideas are plentiful, we're finding it difficult to find people who will spearhead an activity and then keep it going over time. We've started restructuring in an attempt to better "distribute the load."

SIGIR FY'15 Annual Report
July 2014-June 2015
Submitted by: Charles Clarke, Chair

1. Overview

The SIGIR Executive Committee consists of five elected officers, currently Charles Clarke (Chair), Yoelle Maarek (Vice Chair), Diane Kelly (Treasurer), Jaap Kamps (Secretary) and James Allan (Past Chair). The current officers started their three-year terms on July 1, 2013. Elections for a new slate of officers will be held over the next year.

SIGIR currently solely sponsors three conferences (SIGIR, ICTIR, and CHIIR) and co-sponsors three conferences (CIKM, WSDM, and JCDL). Both ICTIR (the ACM SIGIR International Conference on the Theory of IR) and CHIIR (the ACM SIGIR Conference on Human Information Interaction and Retrieval) are new, with the first occurrence of ICTIR happening in September 2015 and the first occurrence of CHIIR happening in March 2016. Our SIGIR Forum newsletter is published twice a year (June and December). We also maintain a website, mailing list, Facebook page, and Twitter feed. SIGIR offers its over 800 members the following benefits: SIGIR Forum (paper & online); reduced conference registration fees to sponsored and "in cooperation" conferences; access to the ACM Digital Library, in particular SIGIR, CIKM, JCDL, and WSDM conference proceedings. In addition, we devote a substantial portion of our surplus funds to supporting student travel to our conferences, as well as student events at our conferences.

2. Finances

The SIG's reserves of approximately \$1.5 million remain greater than one times the annual conference expenditure of approximately \$400K. The Executive Committee attempts to run a "break even" budget in which SIGIR neither gains nor loses much money. To maintain this steady-state, profits from the digital library and conferences are used to fund student travel to our conferences, particularly for students with accepted papers. For example, we funded 56 students to attend SIGIR this year, 15 students to attend ICTIR, and 90 students to attend CIKM. SIGIR places a high priority on student support, and we expect to expand our support substantially next year, providing total support up to \$250K. Our field as a whole is dependent on our future researchers, whom we now support as students.

3. Volunteers

In addition to the elected officers, SIGIR is served by a large community of volunteers, including some with named roles:

| | |
|---------------------------------|------------------------------------|
| Forum Editor, June edition: | Craig MacDonald |
| Forum Editor, December edition: | Ben Carterette |
| SIG-IRList Editor: | Claudia Huff |
| Awards Chair: | Fernando Diaz |
| Information Director: | Krisztian Balog |
| Social Media Director: | Guido Zuccon |
| Student Travel Awards Chair: | Jamie Auguello (starting May 2015) |
| JCDL Liaison: | Edie Rasmussen |
| CIKM Liaison: | Charles Clarke (ending June 2015) |
| | Jimmy Lin (starting July 2015) |
| WSDM Liaison: | Ricardo Baeza-Yates |

The position of Student Travel Awards Chair is new this year. This role will assist the treasurer in processing student applications for travel awards.

SIGIR thanks all of our volunteers for their work on behalf of the IR community during the last year.

4. Conferences

SIGIR sponsors, co-sponsors, and cooperates with other technical groups on several conferences and/or workshops during the year.

4.1 SIGIR Main Conference

Our main conference is the Annual ACM SIGIR Conference on Research and Development in Information Retrieval. The thirty-seventh SIGIR was held in Gold Coast, Australia, July 6-11. SIGIR 2015 will be held in Santiago, Chile, August 9-13. SIGIR 2016 will be held in Pisa, Italy; SIGIR 2017 will be held in Tokyo, Japan; SIGIR 2018 will be held in Ann Arbor, Michigan.

The SIGIR main conference continues to be the leading conference in the field of Information Retrieval. SIGIR 2014 received a total of 351 full paper submissions and accepted 70, or 20%. This rate is within the target acceptance rate for the conference. The number of submissions was down slightly from 2014 but similar to SIGIR 2013.

The location of the SIGIR main conference rotates between three regions: (1) The Americas (2015 Santiago, Chile; 2018 Ann Arbor, Michigan); (2) Europe, Africa, or the Middle East (2013 Dublin, Ireland; 2016 Pisa, Italy); and (3) Asia or Australia (2014 Gold Coast, Australia; 2017 Tokyo, Japan).

Our annual business meeting is held at the conference, where major announcements are officially made and feedback from the community is heard. Preliminary expressions of interest will be presented at the 2015 conference for SIGIR 2019, which will be held in Europe, Africa, or the Middle East. Interested groups will be asked to prepare formal bid documentation to be reviewed by the Executive Committee, following the ACM protocol. The bid process is documented at <http://sigir.org/bid.html>.

4.2 International Conference on the Theory of Information Retrieval

In early 2014, we officially welcomed the International Conference on the Theory of Information Retrieval (ICTIR) into the family of conferences we sponsor and co-sponsor. ICTIR grew from a series of SIGIR workshops on mathematical and formal methods for IR, regularly held during the years 2000 to 2005, and organized by Sándor Dominich, Keith van Rijsbergen, Mounia Lalmas, and Iadh Ounis. In 2007, ICTIR was founded as a fully independent conference held in Budapest. Since then, ICTIR has been held bi-annually in Cambridge (2009), Bertinoro, Italy (2011) and Copenhagen (2013). Over these years, ICTIR was supported by the BCS-IRSG, and this support will continue, with SIGIR as a new partner and sponsor. SIGIR thanks the many people involved with the BCS-IRSG who helped to make this relationship happen, particularly John Tait. Oren Kurland leads the new steering committee, which is responsible for site selection and the approval of Program Committee and General Chairs.

The first SIGIR-sponsored ACM ICTIR will be held at Northampton, Massachusetts in September 2015, with James Allan and Bruce Croft as the General Chairs. ICTIR 2016 will be held at the University of Delaware with Ben Carterette and Hui Fang as General Chairs. The steering committee expects to hold ICTIR 2017 somewhere in Europe.

4.3 Conference on Human Information Interaction and Retrieval

At our annual business meeting last July, we were pleased to announce the creation of the ACM SIGIR Conference on Human Information Interaction and Retrieval (CHIIR), which will be held for the first time in 2016. CHIIR represents the merger of IliX and HCIR, two existing conferences in related areas. IliX (Information Interaction in Context conference) grew out of a workshop organized by Peter Ingwersen, Nick Belken and Kal Järvelin at SIGIR in 2004 and 2005. In 2006, IliX became an independent event organized by Peter, Pia Borlund, and Ian Ruthven in Copenhagen, and it has been held biannually since then. The first HCIR (symposium on Human-Computer Interaction and Information Retrieval) was organized by Michael Bernstein and Robin Stewart at MIT in 2007. Under the guidance of Bill Kules, Daniel Tunkelang, Ryen, and others, HCIR became an annual conference held from 2008 until 2013.

In early 2015, Peter Ingwersen initiated a special task-force to discuss the possibility of merging HCIR and IliX. The task-force was chaired by Diane Kelly (representing IliX) and consisted of the following members: Robert Capra (HCIR), Peter Ingwersen (IliX), Ian Ruthven (IliX), Catherine Smith (HCIR) and Ryen White (HCIR). Through the task-force's efforts, a charter was created for CHIIR, which was then proposed to SIGIR for sponsorship. The SIGIR Executive Committee was very happy to receive the proposal and to welcome CHIIR to our family of sponsored and co-sponsored conferences.

CHIIR 2016 will be held in Chapel Hill, North Carolina, March 13-17, 2016 with Diane Kelly and Rob Capra as General Chairs. CHIIR 2017 will be held in Oslo, Norway, March 7-11, 2017 with Nils Pharo and Ragnar Nordlie as General Chairs. The steering committee expects the CHIIR 2018 will be held somewhere in North America in March 2018.

4.4 Co-sponsored Conferences

SIGIR also co-sponsors three other ACM conferences, CIKM, JCDL, and WSDM. In September JCDL 2014 was held jointly with TPDJ in London; JCDL 2015 was held in Knoxville in June; JCDL 2016 will be held in Newark, New Jersey. In early November 2014, CIKM was held in Shanghai; CIKM 2015 will be held in Melbourne in October. WSDM 2015 was also held in Shanghai in February 2015; WSDM 2016 will be held in San Francisco in February 2016.

4.5 In-cooperation Conferences

In addition to the four conferences that SIGIR sponsors or co-sponsors, we "cooperate" with several other IR-related conferences but have no financial stake in them. These conferences complement the technical focus of our own conferences. As a cooperating society, SIGIR members obtain reduced registration fees and other member benefits at these conferences. Current conferences we

are regularly “in cooperation” with include the Australasian Document Computing Symposium, the Asia Information Retrieval Society Conference, and the ACM Conference on Recommender Systems.

4.6 Conferences and Events Supported as “Friends”

SIGIR offers a limited amount funding (up to \$5,000) to support events related to SIGIR’s mission (our “friends”). Such events include small workshops and regional events directly related to information retrieval or of strong interest to the SIGIR community. For more information see <http://sigir.org/general-information/funding-for-sigir-related-events/>.

5.0 Awards made by SIGIR

In addition to Best Paper Award(s), SIGIR provides the triennial Gerard Salton Award (to be awarded next in 2015), and funds JCDL’s Vannevar Bush Award jointly with SIGWEB. SIGIR continues working to put forth deserving nominees for the general ACM Awards. All SIGIR awards are documented on the SIGIR web site. For 2015, we introduced a new Test of Time Award to recognize research that has had long lasting influence in our field.

5.1 Gerard Salton Award

This award is presented every three years to an individual who has made “... significant, sustained and continuing contributions to research in information retrieval”. It was established as the SIGIR Award in 1983 and renamed in 1997 in honor of Professor Gerard Salton, who is considered by many to be the person most responsible for the establishment, survival, and recognition of the field of IR. The Salton Award Committee is comprised of the available prior winners of the Salton Award, in consultation with the SIGIR Chair.

The next award will be presented at SIGIR 2015 to Nicholas J. Belkin of Rutgers for “forty years of significant, sustained and continuing contributions to, and advocacy of, the study of information retrieval in the context of human information seeking. Of particular importance are his contributions to the study of user-system interaction, to the understanding of human information seeking tasks and strategies, and to the twin challenges of designing systems which accommodate these tasks and strategies, and of evaluating such systems in the context of these tasks and strategies.”

5.2 Test of Time Award

In 2015, SIGIR introduced a new Test of Time Award. The SIGIR Test of Time Award recognizes research that has had long-lasting influence, including impact on a subarea of information retrieval research, across subareas of information retrieval research, and outside of the information retrieval research community (e.g. non-information retrieval research or industry). The winning paper is selected from the set of full papers presented at the main SIGIR conference 10-12 years before.

5.3 Vannevar Bush Best Paper Award

Along with SIGWEB, SIGIR jointly funds the Vannevar Bush award honoring the best paper at the Joint Conference for Digital Libraries.

5.4 SIGIR Best Paper Awards

The SIGIR 2014 conference Best Paper Award was presented at SIGIR 2014 in Gold Coast, Australia. The award went to Giuseppe Ottaviano and Rossano Venturini for their paper [Partitioned Elias-Fano Indexes](#), which “significantly improves on an already excellent compression technique, while preserving query time efficiency, as well as exhibiting the best compression ratio/processing speed trade-off.”

SIGIR awards a parallel Best Student Paper Award if the Best Paper award is not given to a student paper. At SIGIR 2014 the award went to Dmitry Lagun, Chih-Hung Hsieh, Dale Webster, and Vidhya Navalpakkam for their paper [Towards Better Measurement of Attention and Satisfaction in Mobile Search](#), which “addresses the problem of no clicks in answer-like mobile search, demonstrating viewport, measurable at large-scale, as a strong and reliable signal of the quality of a search result, through carefully designed experimentation.”

6. Communications

The SIGIR Web site provides timely information about SIGIR-sponsored conferences, “in cooperation” conferences, and SIGIR activities, as well as Business Meeting slides, the annual report, and other information about how SIGIR operates and SIGIR’s history. In addition to providing information about the organization, the SIGIR web site also hosts the SIGIR Forum and SIG-IRList sites. Our Information Director, Krisztian Balog, maintains the site. During the past year, he updated the site with a new look and

new content management software. In conjunction with the Web site, SIGIR now operates a Twitter feed and maintains a Facebook page, both managed by our Social Media Director, Guido Zuccon.

During the last year, the SIGIR Forum was co-edited by Craig Macdonald and Ben Carterette. The Forum is published twice a year, covering IR conferences, workshops and symposia. It includes in-depth essays based on the Salton Award Lecture and other keynote addresses, as well as short papers on current research trends. The Forum appears both online (<http://www.acm.org/sigir/forum/>) and in paper.

The SIG-IRList is a SIGIR-sponsored electronic newsletter (<http://www.acm.org/sigir/sigirlist/>), edited by Claudia Huff. The SIG-IRList provides a regular newsletter of IR information and nicely complements the archival publication SIGIR Forum. The SIG-IRList contains job announcements, notices of publications, conferences, workshops, calls for participation, and project announcements.

7. Other Programs

Because of heavy industrial activity in the Information Retrieval community, the SIGIR conference has run an industry track at the conference, now called the "SIGIR Symposium on IR in Practice" (SIRIP). The track started as a separate event in 2007 and was integrated into the main conference starting in 2009. The track has been very popular, highlighting key industrial issues and challenges as well as attracting industrial researchers to the main technical conference.

SIGIR has been collecting archive publications from the early days of the Information Retrieval field. Most of the information is unavailable anywhere on-line, so this archive provides new access to the historical information. A description of the gathered information is available at <http://sigir.org/resources/museum>. It continues to be updated with new (old) material on an on-going basis, as the information is found and can be scanned. SIGIR is exploring ways to make this information a more valuable resource for the community.

8. Key issues facing SIGIR in the next 2-3 years

Overall, SIGIR is a healthy and thriving community of researchers and practitioners. Things can always be improved, and there are a number of issues that the Executive Committee continues to see as possible challenges.

There continues to be strong concern but sharply divided opinion among members of the community regarding publications that are based upon proprietary data available to no or very few members of the community. SIGIR 2012 included a panel to debate/discuss the multiple perspectives and a summary of that panel was published in the December 2012 issue of SIGIR Forum. The Executive Committee has continued to encourage the program chairs to update reviewing questions to raise this issue to forefront of consideration, whether or not it is an explicit aspect for consideration. The adoption of ICTIR as a SIGIR-sponsored conference may help to alleviate this problem, since its overall philosophy leans in the direction of open data.

With the introduction of the new Test of Time Award some members suggested a separate mechanism to recognize much older papers, from before 2002, which have substantially impacted our research area. We have established a committee, chaired by Salton Award winner Keith van Rijsbergen to consider possibilities. We expect the committee to move forward with specific proposals over the next few years.

In addition, the SIGIR EC is continuing an effort to locate procedural documents related to the SIG and to move them onto the SIGIR web site so that they are easily available to the SIGIR EC and publicly available to all interested members of the community.

9. Summary

SIGIR had another productive and successful year, with important intellectual and social contributions. One highlight was the creation of CHIIR as a SIGIR-sponsored conference. Our conferences have been successful in all senses (with strong technical content and good international participation), and our financial situation is quite healthy. Perhaps most importantly, we continue to have very strong participation in ACM SIGIR by the international IR community, especially in a willingness to serve as volunteers for conference and SIG-related activities.

SIGITE FY'15 Annual Report
July 2014 – June 2015
Submitted by: Rob Friedman, Past Chair

The 15th Annual Conference on Information Technology Education, co-located with the 3rd Annual Conference on Research in Information Technology, was hosted by Southern Polytechnic State University and held in Atlanta, GA, October 15-18, 2014. 96 technical papers were submitted to both conferences; 14 of 36 were accepted for RIIT and 28 of 60 for SIGITE, which kept our acceptance rate to a combined 42.5%.

Awards that were given out:

At the 2014 SIGITE/RIIT Conferences, three best paper awards were presented:

(SIGITE 2014 Best Paper Award Winner)

Automatically Detectable Indicators of Programming Assignment Difficulty

Petri Ihanola and Juha Sorva, Aalto University; Arto Vihavainen, University of Helsinki 135 downloads and 1 citation as of July 1, 2015.

(RIIT 2014 Best Paper Award Winner)

Printer Water-Mark Obfuscation Maya Embar, William Wesselman, and Louis McHugh, Illinois Institute of Technology 3,525 downloads as of July 1, 2015.

Significant papers on new areas that were published in proceedings:

Three papers on Cybersecurity and Information Assurance, an important and rapidly changing computing sub-discipline include:

Printer Water-Mark Obfuscation, by Maya Embar, William Wesselman, and Louis McHugh, Illinois Institute of Technology

Insider hacking: applying situational crime prevention to a new white-collar crime, by Mark Stockman, University of Cincinnati
A survey of security vulnerabilities in social networking media: the case of facebook, by Elizabeth Fokes and Lei Li, Southern Polytechnic State University

Significant programs that provided a springboard for further technical efforts

SIGITE members, led by Bill Paterson of Mount Royal University, in cooperation with other members of the ACM Ed Council, conducted a survey to determine the nature of revisions of the 2008 IT Curriculum Guidelines for IT 2017.

A very brief summary for the key issues that the membership of that SIG will have to deal with in the next 2-3 years:

Bylaws: we continue to need to find an acceptable, agreeable way to modify our bylaws so that we can expand formal participation through representation on the executive committee.

Conference location: as reported last year, attendance improves when venues are attractive to participants. After an analysis of contributing authors, registration trends, SIGITE membership demographics and institutions willing to serve as hosts, we decided to keep our annual conferences on the eastern side of the US. We will continue our membership-based hosting protocols through 2017, but will be discussing selecting resort destinations thereafter.

Conference paper and attendance metrics remain flat. We need to increase the number of submissions and continue to reduce the acceptance rate while also increasing registrations. One way to do this is to advertise and distribute our CFP to a wider audience.

Professional accreditation: we need more members involved in enhancing the communication/coordination flow between SIGITE, CSAB and ABET/CAC.

SIGLOG FY '15 Annual Report
July 2014 – June 2015
Submitted by: Prakash Panangaden, Chair

SIGLOG was only chartered in April 2014; we have just completed our first full year as a SIG. The ACM-IEEE Symposium on Logic in Computer Science was held in July last year as part of a quadrennial event called Federated Logic Conferences which was in turn part of an extraordinary one-off event called the Vienna Summer of Logic (VSL) which brought together the logic and computation community with the pure logic community. This was a large event featuring over 2000 attendees, 12 major conferences and numerous workshops.

I. Awards:

None awarded by SIGLOG as we are still in the process of founding awards. There were, however, numerous awards for outstanding papers. Flavien Breuvert and Yaron Velner shared the Kleene Prize for the best student papers at LICS, which was part of VSL. The test-of-time award for a paper from LICS 1994 went to Martin Hofmann and Thomas Streicher for their paper on the groupoid model of type theory which was a forerunner to homotopy type theory. Also at the VSL a best paper award was given to Sylvain Schmitz for a paper in RTA/TLCA on "Implicational Relevance Logic is 2-Exptime-Complete." Our partner organization European Association for Computer Science Logic awarded the Ackerman Award for the best dissertation of the year to Michael Elberfeld currently at RWTH Aachen for "Space and Circuit Complexity of Monadic Second-Order Definable Problems on Tree-Decomposable Structures." At the ETAPS federated conferences organized by our other European partner EATCS the FoSSaCS 2015 paper "Synthesis of Strategies and the Hoare Logic of Angelic Nondeterminism" by Konstantinos Mamouras, received the EATCS Best Paper award. The paper greatly advanced the state of the art in reasoning about programs that exhibit nondeterminism of a both angelic and demonic nature.

II. Significant developments in Logic and Computation over the past year:

A remarkable result by Ouaknine and Worrell on the Skolem problem used deep insights from number theory. The problem is to show that a linear recurrence sequence (like the well-known Fibonacci sequence) is eventually always positive. They were able to give a PSPACE decision procedure; only very special cases were even known to be decidable before. This seemingly abstract question has many applications to verification and to the analysis of Markov chains. A LICS/CSL 2014 paper by Willem Heijltjes and Robin Houston on proof nets for multiplicative linear logic showed that proof equivalence is PSPACE complete, settling a nearly 30 year old problem.

The last year was notable for applications of logic and verification techniques in industry. Amazon used TLA+ a logical toolkit based on Lamport's temporal logic of actions (TLA) for a major verification effort. TLA+ is also being used at Google. A static analyzer called Infer based on separation logic is being applied at Facebook which bought the company that was developing Infer. Another major event was the discovery and fixing of a bug in the Java Timsort routine by the KeY group in Karlsruhe. Perhaps the most impactful is the breaking, and fixing, of the Transport Layer Security (TLS) protocol by a group at MSR. This combines verification, refinement types, state-space exploration etc.

Major verification projects in academia include the completion of the project for verifying Tom Hales' Kepler conjecture proof and the checking of the proof of the Godel Incompleteness Theorems by Larry Paulson.

III. Significant Programs:

The most significant SIGLOG program last year was the Federated Logic Conference (FLoC) which was held in Vienna as part of the Vienna Summer of Logic, the largest event in logic ever. There were 8 conferences in FLoC and over 70 workshops. FLoC is organized every 4 years but the VSL is special event that has never been held before. The formation of SIGLOG was announced at a special launch event held as part of VSL.

IV. Innovative programs which provide service to our technical community:

We have founded an education committee which will seek to explore and advocate for the role of logic in computer science education. We are also planning a Wiki for logic in computer science. The Wikipedia page for this topic is extremely weak and with Wikipedia becoming harder to participate in, it is worth considering hosting our own Wiki. The newsletter has proved to be a greater success than we had anticipated with excellent review articles across a wide range of topics.

V. Summary of key issues:

The fundamental issue for SIGLOG is raising the membership and making the community aware of the role and potential of SIGLOG. We are in the anomalous situation that our flagship conference is 30 years old while the SIG is just over a year old. Thus, many people identify with the LICS conference and have not become aware that SIGLOG is the sponsor of LICS. This is changing and we are optimistic that there will be growth in membership. There is a large community: the Vienna Summer of Logic, in July 2014 attracted 2000 registrants and the LICS monthly bulletin has a mailing list of around 2500 members.

SIGMETRICS FY '15 Annual Report
July 2014 – June 2015)
Submitted by: John C.S. Liu, Past Chair

ACM SIGMETRICS had a strong and active year; in particular, we had our annual conference ACM SIGMETRICS'15, which was held as part of the ACM FCRC in Portland, Oregon, from June 13 to June 20, 2015. For FCRC, SIGMETRICS was held with other reputable conferences like ACM EC, ACM ISCA, ACM PLDI as well as ACM STOC. FCRC provided an opportunity for SIGMETRICS' members to interact with researchers in other CS domains, in particular, I have seen a strong participation between SIGMETRICS and EC, as well as SIGMETRICS and STOC. SIGMETRICS'15 had a strong and well-balanced technical program at the conference. We had topics from stochastic modeling to energy efficient computing to theoretical foundation in machine learning and storage systems. All in all, it was a successful conference with many solid papers. In particular, we presented number of awards:

Achievement Award

ACM SIGMETRICS is pleased to announce the selection of Dr. Bruce Hajek of the University of Illinois at Urbana-Champaign as the recipient of the 2015 ACM SIGMETRICS Achievement Award in recognition of his contributions to stochastic analysis, optimization and control, which have provided unique mathematical insights into the performance of the Internet, wireless networks, and peer-to-peer networks such as BitTorrent.

Dr. Hajek is Center for Advanced Study Professor of Electrical and Computer Engineering, Professor in the Coordinated Science Laboratory, and Hoefft Chair in Engineering at the University of Illinois at Urbana-Champaign, where he has been on the faculty since 1979. He received a BS in Mathematics and MS in Electrical Engineering from the University of Illinois at Urbana-Champaign and a PhD in Electrical Engineering from the University of California at Berkeley. Professor Hajek's research interests include communication networks, wireless communications, and spectrum auctions. He served as Editor-in-Chief for the IEEE Transactions on Information Theory, and as President of the IEEE Information Theory Society. He is coauthor of the book Stochastic Processes in Engineering Systems with E. Wong and author of the book Random Processes for Engineers.

Dr. Hajek has contributed to understanding fundamentally important issues such as how burstiness creates delays in queuing systems, and how burstiness can be mitigated. In several contexts he elaborated the consequences of drift towards desirable equilibria in networks, with applications to simulated annealing for discrete optimization problems. His work on the structure of optimal control mechanisms for routing and load balancing led to proofs of threshold structure, and invention of the concepts of load percolation and multimodular functions. He also introduced novel applications of game theory within network analysis, such as a jamming game for timing channels and truthful mechanisms for flow control.

Dr. Hajek has received numerous honors for his work over the years including the IEEE Kobayashi Award for Computer Communication (2003) and election to the National Academy of Engineering (1999). Additional information is available on his website: www.illinois.edu/~b-hajek.

Rising Star Award

ACM SIGMETRICS is pleased to announce the selection of Prof. Jinwoo Shin of KAIST (Korea Advanced Institute of Science and Technology) as the recipient of the 2015 ACM SIGMETRICS Rising Star Research Award for fundamental contributions to design and analysis of distributed, high-performance algorithms for stochastic queueing networks and graphical models.

Jinwoo Shin is an Assistant Professor of the Department of Electrical Engineering at the Korea Advanced Institute of Science and Technology. He received his PhD in Mathematics from MIT in 2010 under the supervision of Prof. Devavrat Shah, for which he received the George M. Sprowls Award given for the best doctoral thesis in computer science at MIT. He graduated from Seoul National University in Computer Science and Mathematics (double majors). His research interests are in machine learning, algorithms, communication, and networks, with a particular focus on probabilistic graphical models, large-scale optimization, combinatorial resource allocation, and distributed scheduling. The research accomplishments of Dr. Jinwoo Shin have led to fundamental advances in distributed algorithm design and analysis for resource allocation in stochastic processing networks and inference in graphical models.

He received the Scientific Research Award from Bloomberg L.P. in 2015, the Best Publication Award from the INFORMS Applied Probability Society in 2013 for his work on optimal distributed scheduling in wireless networks, the Best Paper Award at the ACM MobiHoc Conference in 2013, and the Kenneth C. Sevcik (Best Student Paper) Award at ACM Sigmetrics/Performance in 2009.

For more information about Dr. Jinwoo Shin, please visit: <https://sites.google.com/site/mijirim/>.

Test of Time Award

Andrew W. Moore and Denis Zuev. "[Internet Traffic Classification Using Bayesian Analysis Techniques.](#)" In Proceedings of ACM SIGMETRICS 2005. This paper was one of the first to bring Bayesian techniques to bear on traffic classification, spawning a whole new research area that has continued to increase in activity and importance every year. Additionally, the techniques proposed in the paper were independently a valuable contribution to the field of machine learning.

Conference Activities

The annual ACM SIGMETRICS conference is the premier forum for performance evaluation research, which spans a wide range of application domains in computer and communication systems. This year, the ACM SIGMETRICS conference was held at Portland, Oregon on June 15-19, 2015. Professor Bill Lin (UCSD) and Professor Jim Xu (Georgia Tech) were the general chairs, and they did a wonderful job in organizing the conference, and we have to thank ACM headquarters for organizing the FCRC'15 conference. Note that Prof. Lin and Prof. Xu did a good job to seek out industrial donations, which helped the conference by providing more student travel grants. The technical co-chairs were Devavrat Shah (MIT) and Sudipta Sengupta (Microsoft Research).

The registered attendance for our event this year was above 120, which is a good number for SIGMETRICS and we like to note that it is usually lower than the conference which SIGMETRICS was held by itself (not participating in FCRC). We received healthy sponsorship from various companies so that we could reduce the conference registration fee. All in all, we expect have to a surplus, but the final amount is still under calculation.

The general feedback on the conference was very positive (the main conference and its related tutorials and workshops). This year, we have a smaller number of tutorials but the feedback to the tutorials were extremely positive. The tutorials were:

Tutorials:

Bandit Optimization: Theory and Applications

Speakers: [Richard Combes](#) (Supélec) and [Alexandre Proutiere](#) (KTH)

Abstract:

Abstract: Stochastic Multi-Armed Bandit (MAB) problems constitute the most fundamental sequential decision problems with an exploration vs. exploration trade-off. In such problems, the decision maker selects an arm or action in each round, and observes a realization of the corresponding reward whose distribution is unknown. The objective is to maximize the expected cumulative reward over some time horizon by balancing exploitation (actions with the highest observed rewards so far should be selected often) and exploration (all actions should be explored). MAB problems have found applications in many disciplines including medical treatment, communication systems, online services, economics, and physics. This tutorial provides a survey of recent advances in bandit optimization, and of the mathematical tools used to devise and analyze the performance of algorithms. We also present various relevant and contemporary applications, and highlight a few interesting open problems.

Bios: Richard Combes is currently an assistant professor in Supélec. He received the Engineering Degree from Telecom Paristech (2008), the Master Degree in Mathematics from university of Paris VII (2009) and the Ph.D. degree in Mathematics from university of Paris VI (2013). He was a visiting scientist at INRIA (2012) and a post-doc at KTH (2013). He received the best paper award at CNSM 2011. His current research interests are machine learning, networks and probability.

Alexandre Proutiere graduated in Mathematics from Ecole Normale Supérieure (Paris), and got an engineering degree from Ecole Nationale Supérieure des Télécoms (Paris). He is an engineer from Corps of Mines, and received his PhD in Applied Mathematics from Ecole Polytechnique, Palaiseau, France in 2003. From 1998 to 2000, he worked in the radio communication department at the Ministry of Foreign Affairs in Paris. He joined James Roberts' research group at France Telecom R&D in 2000. From 2007 to 2011, he held a position of researcher at Microsoft Research in Cambridge (UK). He is now Associate Professor at KTH, Sweden. Alexandre was the recipient in 2009 of the ACM Sigmetrics rising star award, and received twice the best paper awards at ACM Sigmetrics conference, and once at the ACM Mobihoc conference. He is an associate editor of IEEE Transactions on Networking, and of Queueing systems and applications. His research is supported by an ERC consolidator grant.

Learning with Strategic Agents: From Adversarial Learning to Game-Theoretic Statistics

Speaker: [Patrick Loiseau](#) (EURECOM)

Abstract: Statistical learning methods developed in the last decades have proved very useful for many applications. However, most algorithms were developed under the assumption that the data is independent from the algorithm. This is no longer true in applications where data is generated or provided by (human) strategic agents. As more and more modern applications (in particular online applications) learn from data generated or provided by external parties who can act strategically, it becomes increasingly important to account for the data-provider's incentives in order to design well-performing learning algorithms in practice.

In this tutorial, we first present the methods called adversarial learning developed for security applications since the late 2000's. These methods aim at exposing the vulnerabilities of learning algorithms to data generated by an adversary and at developing algorithms that are robust to worst-case attacks (making various assumptions on the capability and information of the adversary). Then, we present more recent methods based on game theory that propose to model the utility of the adversary and of the learner in order to develop algorithms that are optimal at Nash equilibrium. These methods are more flexible and less pessimistic than worst-case analysis. They also reveal interesting insights into the learning problem.

If time permits, we will finally present recent works on learning from data provided by strategic agents. These works, originally motivated by applications where agents obfuscate their data before revealing it to protect their privacy, propose to develop general learning methods that incentivize agents to reveal high-quality data in order to improve the model learned.

Bio: Patrick Loiseau is an Assistant Professor at EURECOM (Sophia-Antipolis, France) since November 2011. He was recently a visiting researcher at UC Berkeley (summer 2012) and at MPI-SWS (summer 2014). He received a Ph.D. in Computer Science (2009) from ENS Lyon and a M.Sc. in Mathematics from UPMC (Paris 6) and Ecole Polytechnique (2010). Patrick Loiseau's research is in the areas of game theory and statistics and their application to network economics. His main interests are currently in

game-theoretic statistical learning for security, economics of personal data, and resource allocation and pricing for cloud and security. Recent results for such auctions over different regression tasks.

Workshops

We also had three workshops. They were:

- *NetEcon 2015*
- *The 3rd Workshop on Distributed Cloud Computing (DCC), 2015*
- *The Workshop on Mathematical performance Modeling and Analysis (MAMA)*

Overall, the attendance at the tutorials and workshops was very good. This year's conference continues the long-standing SIGMETRICS tradition to publish the highest quality research on the development and application of state-of-the-art, broadly applicable analytic, simulation, and measurement-based performance evaluation techniques. We are pleased to present a diverse set of papers in areas such as e-commerce and markets, wireless networking, systems and measurements, machine learning and crowdsourcing, advertisement and information dissemination, traces and benchmarking, queueing analysis and networking. The SIGMETRICS 2016 will be held together with IFIP WG 7.3, and it will be held in France around June 2016.

New Journal

We completed our initiative for our SIG in proposing a new journal, ACM Transactions on Modeling and Performance Evaluation of Computing Systems (ACM ToMPECS). We got the final approval from ACM. The editor-in-chiefs will be Carey Williamson (University of Calgary) and Don Towsley (University of Massachusetts at Amherst). At this point, the editorial board is completed and we are seeing the first few issues of this journal.

Issues and Challenges

An ongoing challenge for our SIG is the slowly declining membership, which has been a trend for many SIGs since the introduction of the ACM Digital Library. We hope that the new journal, our awards program, and our increased visibility from co-sponsored and "in cooperation" events will help to promote the value of SIGMETRICS membership, and allow us to grow our membership base in the years ahead. We are also exploring how to increase membership in regions outside USA/Europe, for example, one can consider the growing interest of performance evaluation in Asia (e.g. China, Taiwan, India, Singapore,...etc) as well as Australia. Other issues that the officers are discussing:

- Should we change the submission format for SIGMETRICS conference and try to follow the VLDB format?
- Should SIGMETRICS slightly increase the number of papers, including long and short papers, so as to increase the size of our community and participation?
- How can we help our members to achieve senior membership in ACM, like ACM Distinguished Engineers or ACM Fellows?

SIGMICRO FY'15 ANNUAL REPORT
July 2014 – June 2015
Submitted by: Pradip Bose, Chair

The following are highlights of SIGMICRO's activities during fiscal year 2015.

SIGMICRO has worked to ensure the success of our flagship MICRO conference (in conjunction with co-sponsor, IEEE Technical committee on Microarchitecture (TCuArch)). MICRO celebrated its 47th anniversary last year in Cambridge, UK. The conference offered an excellent technical program. Attendance was at or above levels seen in the past three years. SIGMICRO has also helped start and support several other major conferences since 2001: CASES, CGO, and Computing Frontiers. All (except Computing Frontiers) are doing well as reported below. Computing Frontiers has been going through a difficult period – and SIGMICRO has been working with their steering committee to try out newer strategies to correct the problem. As also reported below, we have a strong program to encourage attendance at our conferences by students and those facing financial hardship, with numerous travel grants provided to help defray cost of attendance, in addition to heavily discounted student registration rates.

SIGMICRO has instituted a new Distinguished Service Award, and the first annual award was given in December 2014 at the annual MICRO conference. The inaugural year awardee was: Dr. Kemal Ebcioglu.

SIGMICRO awarded plaques to the two 2014 inductees to the Micro Hall of Fame: (<http://newsletter.sigmicro.org/micro-hof.txt/view>), Profs. Margaret Martonosi and Mark Hill.

SIGMICRO CONFERENCE Activities

MICRO-47: December 13-17, 2014
<http://www.microarch.org/micro47>

SIGMICRO's flagship conference was quite successful with an excellent registration count, somewhat above the "normal" target of about 300. The conference received 279 submissions from all over the world (~15 countries). Of the 279 submissions, 53 were accepted with a ~19% acceptance rate. There were also 3 workshops and 3 tutorials. As in MICRO-46, the main technical program included a "Lightning Session" as well as a "Poster Session" in addition to the regular paper presentations. The MICRO-47 conference allocated at least \$15,000 for student travel grants, of which \$8000 was committed by ACM SIGMICRO. As of July 1, 2015, all student reimbursement claims received by SIGMICRO were processed. One of the workshops held at MICRO-47 was the Career Workshop for Women and Minorities in Computer Architecture, which was co-sponsored by ACM SIGMICRO.

MICRO enjoyed excellent technical talks, keynotes, workshops, and tutorials. The local organization and facilities were excellent. SIGMICRO polled attendees using surveymonkey.com as in prior years. The satisfaction levels were more-or-less at par with the 2012 (Vancouver) offering – with regard to conference organization logistics (including meals). This was a step back up from the reported satisfaction levels from 2013. The SIGMICRO executive committee had a meeting in July 2015 to discuss the results of the survey and the technical quality of the conference. The committee did not feel the need to take any action regarding the improvement in organization for the next MICRO-48 offering. However, it was recommended that we be in touch with the General Chair no later than August 2015, to make sure that the Student Travel Grants are being administered in a timely manner.

Location: Cambridge, United Kingdom.

Excursion (including Banquet):

The organizers did an excellent job in organizing the conference excursion and banquet. It began with a guided walking tour of the Cambridge University campus, which also included a "punting" experience. This was followed by a program at the Cambridge Union Debating Chamber. Here, the Bob Rau Memorial award presentation was held, followed by a live debate chaired by Trevor Mudge (University of Michigan). The debate topic was: "It is the end of the road for von Neumann architecture." This was followed by the dinner banquet, held at the King's College.

General Chair: Krisztian Flautner, ARM
Program Chairs: Thomas F. Wenisch, Univ. of Michigan and Emre Ozer, ARM
Keynotes: Mike Muller, CTO, ARM
Trevor Mudge, University of Michigan
James E. Smith, University of Wisconsin - Madison

Bob Rau Memorial Award Recipient:

- Wen-Mei Hwu, University of Illinois at Urbana-Champaign.

Tutorials:

- *BigDataBench*: Organizer/Presenters: Jianfeng Zen, Zhen Jia, Gang Lu, Chinese Academy of Technology and University of Chinese Academy of Sciences.
- *DataCenter Simulation Methodologies*: Organizers/Presenters: Benjamin Lee, Qiuyun Wang, Seyed Zahedi, Tamara Lehman, Duke University.
- *Measuring the Power/Energy of Modern Hardware*: Organizers/Presenters: Kenneth Czechowski, Jee Choi (Georgia Tech University), and Victor Lee (Intel Corp).

Workshops:

- **NoCArc:** Workshop on Network on Chip Architectures
- **Career Workshop for Women and Minorities in Computer Architecture**
- **WoNDP:** Workshop on Near-Data Processing

Best Paper Award:

The following papers were nominated for “best paper” and presented at a specially organized session at MICRO-47. The first listed paper was eventually selected to receive the Best Paper award.

1. **Best Paper - DaDianNao: A Machine-Learning Supercomputer**
Yunji Chen (ICT), Tao Luo (ICT), Shaoli Liu (ICT), Shijin Zhang (ICT), Liqiang He (INRIA), Jia Wang (ICT), Ling Li (ICT), Tianshi Chen (ICT), Zhiwei Xu (ICT), Ninghui Sun (ICT), Olivier Temam (INRIA)
2. **B-Fetch: Branch Prediction Directed Prefetching for Chip-Multiprocessors**
David Kadjo (Texas A&M Uni.), Jinchun Kim (Texas A&M Uni.), Prabal Sharma (Samsung Austin R&D), Reena Panda (UT Austin), Paul Gratz (Texas A&M Uni.), Daniel Jimenez (Texas A&M Uni.)
3. **PipeCheck: Specifying and Verifying Microarchitectural Enforcement of Memory Consistency Models**
Daniel Lustig (Princeton Uni.), Michael Pellauer (Intel), Margaret Martonosi (Princeton Uni.)
4. **Equalizer: Dynamic Tuning of GPU Resources for Efficient Execution**
Ankit Sethia (University of Michigan), Scott Mahlke (University of Michigan)
5. **COMP: Compiler Optimizations for Manycore Processors**
Linhai Song (University of Wisconsin-Madison), Min Feng (NEC Laboratories America), Nishkam Ravi (Cloudera), Yi Yang (NEC Laboratories America), Srimat Chakradhar (NEC Laboratories America)

Student travel:

Original allocation was \$5000 for the main conference and \$2500 for the Career Workshop for Women and Minorities in Computer Architecture. This is in addition to other allocations from other sponsors. The amounts actually disbursed based on reimbursement claims were \$4916 and \$2248 respectively.

CGO 2015: February 7-11, 2015

<http://www.cgo.org/cgo2015>; co-located with HPCA-2015 and PPOPP-2015

Also Co-Sponsored by ACM SIGPLAN.

CGO [Code Generation and Optimization] was held in San Jose, CA. Submissions: 88 papers; of which 24 were accepted (27%). CGO 2015 featured three keynotes, a welcome reception / student poster session, and numerous workshops and tutorials. There were a total of 14 tutorials and workshops that were cross-listed under CGO affiliation.

Location: San Francisco, CA.

General Co-Chairs: Kunle Olukotun (Stanford University) and Aaron Smith (Univ. of Michigan)

Program Chairs: Robert Hundt (Google) and Jasom Mars (Univ. of Michigan)

Keynotes: Paolo Faraboschi, HP Labs
Dharmendra Modha IBM Research
David Wecker, Microsoft Research

14 Tutorials and Workshops:

- AMAS-BT: Workshop on Architectural and Microarchitectural Support for Binary Translation
- AutoTune: International Workshop on Code Auto-Tuning
- HPDSLs: Scala, LMS and Delite for High-Performance DSLs and Program Generators
- LLVM: An Intro to LLVM: IR, optimizations, backends and more
- Halide: Code generation for image processing and stencil computation in Halide
- Periscope: Code Auto-Tuning with the Periscope Tuning Framework
- Altera: Compiling OpenCL to a streaming dataflow architecture on FPGAs
- OpenTuner: Autotuning programs with OpenTuner
- Using Pin++ To Author Highly Configurable Pintools for the Pin
- COSMIC: Code optimization for multi and many cores
- DynamoRIO: Building Dynamic Tools with DynamoRIO on x86 and ARM
- Graal: A research platform for dynamic compilation and managed languages

Best Paper Award:

- V. Nagaraj and R. Govindarajan, "Approximating flow-sensitive pointer analysis using frequent itemset mining."

Best Student Presentation:

- B. Hawkins, "Optimizing binary translation for dynamically generated code."
- L. Zheng, "On performance debugging of unnecessary lock contentions multicore processors: a replay based approach."

Test of Time Award:

The 2005 CGO paper "SWIFT: Software Implemented Fault Tolerance" by George A. Reis, Jonathan Chang, Neil Vachharajani, Ram Rangan, and David I. August marks an important turning point in how program execution can be made more resilient to transient hardware faults. SWIFT enhances the notion of program control-flow integrity to dynamically and flexibly provide software-only, transient-fault tolerance. SWIFT can tune performance and reliability trade-offs to match the needs of the targeted system. In addition, software as a lower-cost and more flexible alternative to traditional hardware techniques has emerged as a necessary solution for building robust systems in the deep nanometer-scale CMOS era. To this end, SWIFT was one of the first attempts to leverage the compiler to improve execution reliability and to improve robustness without any hardware changes or support.

CASES 2014: October 12-17, 2014

<http://esweek.acm.org/esweek2014/cases/>

Also in cooperation with ACM SIGBED

CASES [Compilers, Architecture, and Synthesis for Embedded Systems] joined two other embedded systems conferences in 2006 to create a larger "ESWeek" grouping and promote cross-fertilization of efforts in the embedded area. The combination of conferences was a success, and *ESWeek* has been repeated ever since, with the 2014 version in New Delhi, India. In all, 80 complete submissions were received for review, of which 24 were accepted (for an acceptance rate of 30%). This compares with a cumulative acceptance rate of 33% over the history of the CASES conference (needs to be updated from 2013 data) The historical profile of CASES submitted vs. accepted papers shows that in 2014 the number of submissions went up again (as it did in 2013) after a general period of decline during 2007-2012.. This is viewed as an encouraging sign.

Location: New Delhi, India.

One of 3 Conferences in Embedded Systems Week: <http://www.esweek.org>

- **CASES**
- CODES+ISSS (Co-sponsored by ACM SIGDA and SIGBED)
- EMSOFT (Sponsored by ACM SIGBED)

Plus 2 other Symposia:

- ESTIMedia: IEEE Symposium on Embedded Systems for Real-Time Multimedia
- RSP: IEEE International Symposium on Rapid System Prototyping

Program Chairs:

- CASES: Anand Raghunathan, Purdue University
- CODES-ISSS: Radhu Marculescu, Carnegie-Mellon Univ and Gabriela Nicolescu, Polytechnique Montreal
- EMSOFT: Tuliika Mitra, National Univ. of Singapore, & Jan Reineke, Saarland Univ

Overall, the ESWEEK program in 2014 was spread across 6 days and included 3 conferences, 4 plenary keynotes, 2 symposia, 5 tutorials and 7 workshops.

Computing Frontiers 2015: May 18-21, 2015

<http://www.computingfrontiers.org/2015>

Computing Frontiers was held this year in Ischia, Italy. The conference saw an increased number of paper submissions (110), of which 96 were deemed to be valid ones, worthy of review. There were 36 regular papers accepted, for an acceptance rate of ~32%. In addition, 15 papers were accepted as poster presentations. The number of paid conference registrants increased to 77. There were 2 keynotes and 3 workshops offered. Student travel scholarships were provided by SIGMICRO. A total of 19 students applied and they were offered \$160 each.

Location: Ischia, Italy

General Chairs:

- Claudia Di Napoli, ICAR-CNR, Italy
- Valentina Salapura, IBM Research, USA

Program Co-Chairs:

- Hubertus Franke, IBM Research
- Rui Hou, Institute for Computing Technology, Chinese Academy of Sciences, China

Keynotes:

- Gianfranco Bilardi
- Pietro Leo

Best Paper Award:

- L. Fiorin, E. Vermij, J. Van Lunteren, R. Jongerius, C. Hagleitner, "An energy efficient custom architecture for the SKA1-Low central signal processor."

SIGMICRO FUTURE PLANS

We are working to improve the value of SIGMICRO to its members:

- Begun in 2008, SIGMICRO has been expanding the Micro Hall of Fame: <http://newsletter.sigmicro.org/micro-hof.txt/view>. The Micro Hall recognizes those authors with 8 or more papers since the conference inception in 1967. Since 2010, SIGMICRO has presented plaques at the conference to recipients. The Hall of Fame currently has 42 members, with two new members inducted in 2014: Margaret Martonosi and Mark Hill.
- In 2010, under the auspices of the larger ACM oral history project, the prior SIGMICRO chair Erik Altman oversaw the completion of the first round of the SIGMICRO Oral History Project. Yan Solihin of North Carolina State led the effort, working with historian Paul Edwards of the University of Michigan. Prof Edwards compiled excellent interviews with Bob Colwell and Edward Davidson. These interviews – both transcripts and oral recordings – are available on the SIGMICRO Newsletter site: <http://newsletter.sigmicro.org/sigmicro-oral-history-transcripts>. They contain a vast array of information from the personal (Bob Colwell growing up as one of six children of a milkman and Ed Davidson's fighting uncle to Intel's concern in the 1990s about the imminent demise of the x86 architecture in the face of the RISC onslaught and Ed Davidson's thoughts about advising graduate students.) Due to the unavailability of Yan Solihin, the SIGMICRO executive committee has been searching for a qualified and eager replacement. The goal is to continue this fine effort by adding on to the successful compilation already in place.
- The SIGMICRO Newsletter continues under the editorship of Russ Joseph, who is a member of the SIGMICRO Executive Committee.
- SIGMICRO has revamped its website, with continuous updates being provided by Jason Mars, who has been serving on the executive committee for the last couple of years.
- SIGMICRO has instituted a new Distinguished Service Award. The inaugural award was given out in 2014, at MICRO-47 in December 2014.
- With support from SIGMICRO, the MICRO conference steering committee has started up a Test of Time Award, with inaugural year awards given at MICRO-47 in December 2014. The current SIGMICRO chair, Pradip Bose, is part of the award committee, with Rich Belgard serving as chair.
- We have considered other ways to add value, some of which have been suggested by the prior term executive committee:
 - Increasing the allocation of surplus funds to provide for more student travel grants in SIGMICRO-sponsored conferences. The current executive committee has made a concerted effort to increase the level of student grants support for sponsored conferences.
 - Providing funded sponsorship of worthy forums that promote the participation of women and minorities in research areas of relevance to SIGMICRO. **For example, SIGMICRO was a sponsor of the CRA-W workshop in 2012, and it also supported the Career Workshop for Minorities and Women in Computer Architecture in 2014.**
 - Providing a simplified mechanism for ACM and SIGMICRO membership when registering for our flagship MICRO Conference.
 - Encouraging qualified members of SIGMICRO to become Senior and Distinguished ACM Members.
 - Providing a discount on SIGMICRO membership for members of other SIGs. Joint membership helps encourage cross-pollination of ideas and areas, which often leads to productive results.
 - Minimizing conflicts between conference dates.
 - Encouraging and developing SIGMICRO members to become ACM Distinguished Lecturers.
 - Reviving the effort to publish a few top SIGMICRO-affiliated papers in CACM or proposing a new mechanism for highlighting the topmost SIGMICRO-relevant conference papers through a special issue in a reputed journal or magazine.

LEADERSHIP

The leadership of SIGMICRO reflects the new executive committee that took over from the prior one chaired by Erik Altman; the committee was re-appointed for three additional years beyond the original elected period of three years.

Chair:

Pradip Bose (*IBM*)

Vice-Chair:

David Brooks (*Harvard*)

Secretary-Treasurer:

Vijayalakshmi Srinivasan (*IBM*)

Members-at-Large:

Michael Gschwind (*IBM*) – *Industry Issues Editor*

Russ Joseph (*Northwestern University*) – *Newsletter Editor*

Milos Prvulovic (*Georgia Tech*) – *Chief Technical Strategist*

Erik Altman (*IBM*) – *Past Chair and SGB Liaison*

Jason Mars (*U of Virginia*) – *Website Editor*

SIGMIS FY '15 Annual Report
July 2014 – June 2015
Submitted by: Janice C. Sipiior, Chair

Mission and Overview

SIGMIS is the Special Interest Group on Management Information Systems of the ACM. Members of SIGMIS are interested in information systems and technologies for management and the management of these systems and technologies. SIGMIS was founded in 1961 as the Special Interest Group on Business Data Processing and later was known as the Special Interest Group on Business Information Technology. SIGMIS publishes *The Data Base for Advances in Information Systems (Data Base, for short)* and holds the annual SIGMIS CPR conference dedicated to research addressing computers and people. SIGMIS also participates in the annual International Conference on Information Systems (ICIS) and the annual International Federation for Information Processing (IFIP) TC8 committee, as well as other conferences. SIGMIS promotes student achievement and partners with other organizations to provide services to members and to the profession.

Summary of Recent Accomplishments

During FY'15, some of the major events and accomplishments of SIGMIS include:

- Held the SIGMIS CPR Conference June 4-6, 2015 in Newport Beach, California USA
 - Awarded the "Magid Igbaria Outstanding Conference Paper of the Year Award"
 - Held the SIGMIS Computers and People Doctoral Consortium
 - Provided travel grants to Doctoral Consortium participants
 - Held an Industry Panel and a Development Panel
- At the International Conference on Information Systems (ICIS2014) in Auckland, New Zealand from December 14-17, 2014
 - Sponsored the Doctoral Dissertation Paper Award
 - Held the SIGMIS Networking Reception
- Continued to represent ACM as a member of a select group to develop model curriculum for education in IS, both at the undergraduate and graduate level
- Continued to fund a representative to the International Federation for Information Processing (IFIP)

1. Awards

Beginning with ICIS 1995, SIGMIS became the sponsor of the ICIS MIS Doctoral Dissertation Award. In 2014, the award was given to Kevin Yili Hong, Temple University, supervised by Paul Pavlou at Temple University, Philadelphia, PA, USA, for the dissertation entitled "Three Essays on Online Labor Markets."

Beginning at the 2004 SIGMIS CPR conference, SIGMIS initiated the "Magid Ibaria Outstanding Conference Paper of the Year Award." This year at the 2015 SIGMIS CPR Conference, the recipients were Tenace Setor, Nanyang Technological University, Damien Joseph, Nanyang Technological University, and Shirish C. Srivastava, HEC Paris, for their paper entitled "Professional Obsolescence in IT: The Relationships between the Threat of Professional Obsolescence."

2. Papers

SIGMIS held the SIGMIS CPR Conference June 4-6, 2015 in Newport Beach, California USA. The conference program is available from the SIGMIS CPR conference website at:

<http://sigmis.org/SIGCPR2015/> or directly at:
http://sigmis.org/CPR_2015_Program.pdf.

Additionally, SIGMIS publishes *The Data Base for Advances in Information Systems (Data Base, for short)*, a quarterly peer-reviewed publication devoted to communicating advances in research and best practice in MIS. Beginning in January 2012, the editorship transitioned to Co-Editors-in-Chief Andrew Schwarz, Louisiana State University, and David Salisbury, University of Dayton, who will complete their terms December 31, 2016. Corey Baham of Louisiana State University is the Managing Editor. For information about *Data Base*, please visit the SIGMIS website at: <http://sigmis.org/the-data-base/>.

3. Programs

Since 2006, SIGMIS has held the Computers and People Doctoral Consortium. This year's CPR Doctoral Consortium was held on Thursday, June 4, 2015 at the SIGMIS CPR Conference June 4-6, 2015 in Newport Beach, California USA. Beginning with the CPR 2011 conference, SIGMIS is providing travel grants to Doctoral Consortium participants.

Beginning at the 2012 SIGMIS CPR conference, SIGMIS initiated two CIO panels. In 2013 and 2014, these panels were transformed to an industry panel and a journal editor's panel. In 2015, the industry panel continued and a development panel was added.

4. Service to MIS Community

In conjunction with representatives of the Association for Information Systems (AIS), SIGMIS has been involved in the development of model curriculum for education in information systems both at the undergraduate and graduate levels. The latest version of the curriculum, IS 2010 Curriculum Guidelines for Undergraduate Degree Programs in Information Systems, was finalized. IS 2010 is available as a Communications of the Association for Information Systems (CAIS) article at <http://aisel.aisnet.org/cais/vol26/iss1/18>. On June 30, 2015, the first public deliverable of the Model Curriculum and Guidelines for Graduate Degree Programs in Information Systems 2016 was released for review and comments.

Additionally, the ACM and the IEEE Computing Society are founders of the International Federation for Information Processing (IFIP). IFIP acts on behalf of member societies in carrying out international cooperation to advance the information processing profession. SIGMIS continues to fund the attendance of the ACM's representative for one of the annual meetings of IFIP to promote involvement among the membership of SIGMIS and IFIP.

5. Key Issues

We are working to increase attendance at our annual CPR conference by getting the CFP together earlier and disseminating it. We need to retain and attract new members. This requires formulating initiatives which will be seen as reasons to become a member. We are preparing a process for research funding, available to SIGMIS members. We hope this may be a vehicle for attracting new members. Also, we need to seek a new editor(s) for *Data Base*, to commence January 1, 2017.

SIGMM FY15 Annual Report
July 1 2014 – June 30 2015
Submitted by: Shih-Fu Chang, Chair

(With input from SIGMM officers, conference chairs, TOMM EIC, local chapter chairs)

1. Awards

SIG-wide awards:

- (1) SIGMM Technical Achievement Award 2014**
- (2) SIGMM Best PhD Thesis Award 2014**
- (3) SIGMM Rising Star Award 2014**

SIGMM Journal awards:

- (1) TOMCCAP Best Paper Award 2014**
- (2) TOMCCAP Best Associate Editor Award 2014**

At the flagship conference ACM Multimedia held in November 2014 in Orlando Florida, the SIGMM community enthusiastically celebrated extraordinary achievements of a few colleagues receiving the prestigious SIGMM awards listed below.

SIGMM Technical Achievement Award 2014

Dr. Klara Nahrstedt was presented the 6th SIGMM Award for Outstanding Technical Contributions to Multimedia Computing, Communications and Applications (Technical Achievement Award for short). The award was presented in recognition of her pioneering and extraordinary contributions in quality of service for multimedia systems and networking and her visionary leadership of the computing community. Her pioneering work on QoS brokerage with QoS translation, QoS negotiation and QoS adaptation services set between application and transport layers to enable end-to-end QoS contract changed the way multimedia end-system architectures are designed and built. She has made seminal contributions to multimedia wireless networks and multimedia scheduling for mobile devices. She leads the 3D teleimmersive systems and networking field. She was the first one to develop a multi-view 3D video adaptation framework for bandwidth management and view-casting protocols for multi-view 3D video. She has developed new metrics for 3D immersive video and the first comprehensive framework based on sound theoretical underpinnings for Quality of Experience in Distributed Interactive Multimedia Environments. Her two textbooks *Multimedia Systems* (with R. Steinmetz, Springer-Verlag, 2004) and *Multimedia Computing, Communications and Applications* (with R. Steinmetz, Prentice Hall, 1995) are among the most widely used textbooks on multimedia technology. Prof. Nahrstedt's research leadership has translated into several awards including the 2009 Humboldt Fellow Research Award, the 2012 IEEE Computer Society Technical Achievement Award, the 2013 ACM Fellow recognition and the 2014 induction into the German National Academy of Sciences.

SIGMM Rising Star Award 2014

Starting 2014, ACM SIGMM presents a "Rising Star" Award annually, recognizing a young researcher - an individual either no older than 35 or within 7 years of PhD - who has made outstanding research contributions to the field of multimedia computing, communication and applications during this early part of his or her career. We are very pleased this year the inaugural award was presented to Dr. Meng Wang, who has made significant contributions in the areas of media tagging and tag processing as well as multimedia accessibility research. Dr. Meng Wang is a Professor at the Hefei University of Technology, China. He received his B.E. and Ph.D. degree in the Special Class for the Gifted Young and the Department of Electronic Engineering and Information Science from the University of Science and Technology of China (USTC), Hefei, China, in 2003 and 2008, respectively. He received the best paper awards successively from the 17th and 18th ACM International Conference on Multimedia and the best demo award from the 20th ACM International Conference on Multimedia. Dr. Wang has made a broad range of contributions, ranging from active learning, multi-graph learning to semisupervised learning in media tagging. In multimedia accessibility research, Dr. Wang developed a variety of innovative techniques, including image and video recoloring, search results filtering, and color indication, to help color-blind users access and understand color images and videos.

SIGMM Best PhD Thesis Award 2014

The 2014 SIGMM Best PhD Thesis Award went to Dr. Zhigang Ma, who received his Ph.D. degree from University of Trento, Italy, in 2013. The title of his thesis is "From Concepts to Events: A Progressive Process for Multimedia Content Analysis". He also received the best PhD thesis award from Gruppo Italiano Ricercatori in Pattern Recognition, Italy, in 2014. The award committee considered Dr. Ma's dissertation entitled "From Concepts to Events: A Progressive Process for Multimedia Content Analysis" worthy of the recognition as the proposed framework based on mathematical theories has great potential for developing real-world applications as well as addressing several technical challenges, including feature selection through subspace sparsity, semi-supervised learning, multimedia event detection, and knowledge adaptation.

TOMM Best Paper Award 2014

The EIC of TOMM, Ralf Steinmetz, announced the 3rd ACM TOMM Nicolas D. Georganas named award for Best Paper, published in the previous volume of the TOMM journal, to honor the memory and outstanding work of Prof. Nicolas Georganas, the founder and first EIC of TOMM (previously known as TOMCCAP), who passed away in July 2010. The award was given to the paper entitled "A framework for network aware caching for video on demand systems" (TOMM vol. 9, Issue 4) authored by Bogdan Carbutar, Rahul Potharaju, Michael Pearce, Venugopal Vasudevan and Michael Needham. In this paper the authors examine caching strategies for video-on-demand solutions using log traces collected from Motorola equipment deployed within several Comcast sites. The authors propose several fundamental metrics for characterizing video-on-demand CDN architectures and contribute several caching strategies based on observations extracted from real-world data. The superior performance of the proposed solutions make the work highly relevant for both video-on-demand providers (e.g., to improve caching strategies) and academics (e.g., designing realistic simulators using the characterizations outlined in the paper)

TOMM Best Associate Editor Award 2014

Our flagship journal, ACM Transactions on Multimedia Computing, Communications and Applications (TOMM) acknowledges the work of the associate editors and gives out the TOMM Best Associate Editor Award to an editor who provides most excellent services to authors and the community. In 2014, the award was given to Prof. Mohamed Hefeeda from the Simon Fraser University, Canada, for his outstanding dedication for the journal. At our SIGMM-sponsored conferences, we have given out numerous conference-specific awards to celebrate the outstanding research as follows:

1.1. ACM International Conference on Multimedia (ACM Multimedia) 2014

The 22nd ACM International Conference on Multimedia was held in Orlando, FL November 3-7, 2014.

(1) Best Paper Award

Amirhossein Habibian, Thomas Mensink and Cees G.M. Snoek (University of Amsterdam): VideoStory: A New Multimedia Embedding for Few-Example Recognition and Translation of Events

(2) Best Student Paper Award

Yelin Kim and Emily Mower Provost (University of Michigan): Say Cheese vs. Smile: Reducing Speech-related Variability for Facial Emotion Recognition

(3) Best Poster Award

Jiajun Wang, Yu-Gang Jiang, Qiang Wang, Kuiyuan Yang and Chong-Wah Ngo (City University of Hong Kong): Organizing Video Search Results to Adapted Semantic Hierarchies for Topic-based Browsing

(4) Grand Challenge 1st Place Award

Jan Zahálka, Stevan Rudinac, Marcel Worring (University of Amsterdam): New Yorker Melange: Interactive Brew of Personalized Venue Recommendations

(5) Grand Challenge 2nd Place Award

Shintami C. Hidayati, Kai-Lung Hua, Wen-Huang Cheng, Shih-Wei Sun (National Taiwan University of Science and Technology): What are the Fashion Trends in New York?

(6) Grand Challenge 3rd Place Award

Brandan Jou, Subhabrata Bhattacharya, Shih-Fu Chang (Columbia University): Predicting Viewer Perceived Emotions in Animated GIFs

(7) Grand Challenge Multimodal Prize

Yin-Hsi Kuo, Yan-Ying Chen, Bor-Chun Chen, Wen-Yu Lee, Chun-Che Wu, Chia-Hung Lin, Yu-Lin Hou, Wen-Feng Cheng, Yi-Chih Tsai, Chung-Yen Hung, Liang-Chi Hsieh, Winston Hsu (National Taiwan University): Discovering the City by Mining Diverse and Multimodal Data Streams

(8) Best Technical Demo Award

Mark Cartwright and Bryan Pardo (Northwestern University): SynthAssist: An Audio Synthesizer Programmed with Vocal Imitation

(9) Best Doctoral Symposium Paper

Mario Taschwer (University of Klagenfurt): Medical Case Retrieval

(10) Best Open Source Software Award

Yangqing Jia, Evan Shelhamer, Jeff Donahue, Sergey Karayev, Jonathan Long, Ross Girshick, Sergio Guadarrama, Trevor Darrell (Univ. of California Berkeley): Caffe: Convolutional Architecture for Fast Feature Embedding

1.2. ACM International Conference on Multimedia Retrieval (ICMR) 2015

The ICMR 2015 conference was a SIGMM-sponsored conference. This was the 5th conference after the merger of ACM CIVR (Conference on Image and Video Retrieval) conference and ACM MIR (Multimedia Information Retrieval).

- **The Best Paper Award** was received by *Lingxi Xie (Tsinghua University), Richang Hong (Hefei University of Technology), Bo Zhang (Tsinghua University), Qi Tian (University of Texas at San Antonio)* for the paper entitled "Image Classification and Retrieval are ONE."
- **The Best Student Paper Award** was received by *Ming Yan, Jitao Sang and Changsheng Xu* from the Chinese Academy of Sciences for the paper entitled "Unified YouTube Video Recommendation via Cross-network Collaboration".
- **The Best Demo Award** was received by *Shicheng Xu, Huan Li, Xiaojun Chang, Shou-I Yu, Xingzhong Du, Xuanchong Li, Lu Jiang, Zexi Mao, Zhenzhong Lan, Susanne Burger and Alexander Hauptmann* from Carnegie Mellon University for the work entitled "Incremental Multimodal Query Construction for Video Search".

1.3. ACM Multimedia Systems (MMSys) 2015

The MMSys 2015 conference was a SIGMM-sponsored conference. This was the 6th conference after MMSys was created as a follow-on conference to the now defunct MMCN (Multimedia Computing and Networking). MMCN was co-sponsored by SPIE/IS&T and ACM SIGMM. The MMSys 2015 was held in Portland, Oregon, USA, during March 18-20, 2015. MMSys had one special award this year:

The **best paper** award was received by the paper "Dynamic Configuration of Single Frequency Networks in Mobile Streaming Systems," by Saleh Almowuena and Mohamed Hefeeda from Simon Fraser University.

2. Significant Papers on New Areas That Were Published in Proceedings

The following paper published in ACM Multimedia 2014 was selected to receive the Best Paper Award.

Amirhossein Habibian, Thomas Mensink and Cees G.M. Snoek (University of Amsterdam): VideoStory: A New Multimedia Embedding for Few-Example Recognition and Translation of Events, In *Proceedings of the 22st ACM international conference on Multimedia*, pp. 17-26. ACM, 2014.

The paper proposes a new method for recognizing and translating events from a web video. It is designed to achieve event recognition and translation based on only few examples.

The following paper

Saleh Amowuena, Mohamed Hefeeda, "Dynamic Configuration of Single Frequency Networks in Mobile Streaming Systems," in Proceedings of the 6th ACM International Conference on Multimedia Systems, pp. 153-164. ACM. 2015. which received the best paper award at ACM MMSys'15, proposes to dynamically configure cells in wireless networks to form single frequency networks depending on the mobile media streaming demand. Their method allows serving of up to 40 times more users, compared to commonly used unicast method.

In ICMR15, the following paper addressed the problem of image classification and retrieval in a unified framework. The authors proposed an online nearest-neighbor estimation (ONE) algorithm that involves manual object definition, regional description and nearest neighbor search. They demonstrated state-of-the-art results on several popular benchmarks.

Lingxi Xie, Richang Hong, Bo Zhang, Qi Tian. "Image Classification and Retrieval are ONE."

3. Significant Programs That Provided a Springboard for Further Technical Efforts

Throughout the SIGMM-sponsored conferences we had several significant programs that provided a springboard for future technical efforts:

3.1. ACM Multimedia 2014

The 2014 program was built upon the best practices from previous editions of the conference, while incorporating several adjustments with the goal to define the set of submission areas to reflect the current and emerging research directions in the multimedia field and to improve the quality of the review process and the feedback provided to the authors. See section 4.1 for details.

- Multimedia Grand Challenges have been a very successful program at ACMMM conference. This year we continued the tradition and included 10 presentations addressing the emerging challenges identified by industry leaders:
 - o IBM - New York City 360
 - o Technicolor - Emotional Response to Multimedia Content
 - o Huawei - Machine Learning for Computational Photography
 - o MediaMixer/VideoLectures.NET – Temporal Segmentation and Annotation of Lecture Video
 - o Microsoft - MSR-Bing Image Retrieval Challenge
- Two keynote talks were presented
"Bing, the Fastest Growing Image Search Engine" by Dr. Harry Shum (Microsoft),
and
"Affective Media and Wearables" by Prof. Rosalind Picard (Massachusetts Institute of Technology).
- This year we have received 65 excellent technical demonstrations papers, from which 24 demos with a variety of topics related to multimedia were selected and shown to a large attendance group with very positive feedback.
- We had two research panels, each including a few visionaries sharing their views on the exciting research topics.
 - o "Looking for Emotional and Social Signals in Multimedia: Where Art Thou?" The panelists are Elisabeth Andre, Dick Bulterman, Alex Hauptmann, Rainer Lienhart, and Nicu Sebe.
 - o The Future of Audio Multimedia." The panelists are Paris Smaragdis, Gerald Friedland, Josh McDermott, Youngmoo Kim, and Dan Ellis.
- An industry panel on "Innovative Multimedia Technologies in Industrial Applications" was presented including a few industry leaders sharing their views on this inspiring topic. The panelists are Borkko Furt, Jan Bowen, Lynn Wilcox, David Jaramillo, and Yong Rui.
- A High Risk High Reward session includes papers that explored highly innovative ideas and/or paradigm shifts in conventional theory and practice of multimedia computing, communications. This year we had four presentations.
- Another successful tradition at ACMMM is the Open Software Competition, which was the 7th edition this year. The goal of this competition is to recognize the invaluable contribution of researchers and software developers who advance the field by providing the community with implementations of codecs, middleware, frameworks, toolkits, libraries, applications, and other multimedia software. This year we received 10 submissions; and after assigning three reviewers to each of them, we selected 6 for the competition.
- ACM Multimedia provided a rich **Multimedia Art Exhibition** to stimulate artists and researchers alike to meet and discover the frontiers of multimedia artistic communication. This year, we focused on works that provoke contemplation, address contemporary issues, and interactively engage viewers in discovery and stimulate intellectual adventure. The Art Exhibition has attracted significant work from a variety of digital artists collaborating with research institutions. We have endeavored to select exhibits based primarily on artistic merit and the potential to engage the conference audience. Digital arts installations included mixed-reality art, game-based art, sound-based installations, and those featuring mobile and social media.

3.2. ACM ICMR 2015

ICMR 2015 received a record-high number of 244 submissions to the main conference from 35 countries. After a rigorous review process by the technical program committee, 113 papers from 23 countries were accepted for presentation. The acceptance rate of the oral papers was 19.7%. Several highlights of the program:

- Four keynote talks:
 - “**Multimedia Retrieval: Are We Doing it Right?**” by Prof. Tat-Seng Chua (National University of Singapore)
 - “**Dense Models from Videos: Can YouTube be the Font of All Knowledge Bases?**” by Dr. Michael Witbrock (Cycorp, USA)
 - “**Is Real-World Visual Search Really Coming?**” by Xian-Sheng Hua (Alibaba Group, China)
 - “**Trends of Multimedia Research and Application in Tencent Social Network**” by Yongjian Wu (Tencent, China)
- We organized a half-day event in the main conference to highlight the MR-related industry in China. This includes the last two keynotes from Alibaba Group and Tencent Group, which are among the largest Internet companies in China. We also arranged two invited talks from relatively smaller but well-known companies: Yong Zhao (CTO of DeepGlint, “From Perception to Intelligence”) and Yang Chen (Chief Architect of iQIYI, “Frontier of iQIYI’s Big Data Practices”).
- A panel on “Video Search in Big Data Era” was organized with several active researchers sharing their views on this exciting topic. The panelists were Michael Witbrock, Alan Smeaton, Cees Snoek and Michele Merler, and the facilitator was Alex Hauptmann.
- In addition to the main conference, the program also includes two tutorials and one workshop:
 - Tutorial on “Social Multimedia Computing.”
 - Tutorial on “Multimedia Quality Modeling: Theories and Applications.”
 - Workshop on “Environmental Multimedia Retrieval.”

3.3. ACM MMSys 2015

ACM MMSys 2015 hosted three workshops: the ACM Workshop on Networks and Operating Systems Support for Digital Audio and Video (NOSSDAV), the ACM Workshop on Mobile Video (MoVid), and the ACM Workshop on Massively Multiuser Virtual Environments (MMVE).

- To promote sharing of datasets and reproducible research, MMSys organizes a dataset track since 2011. During MMSys’15, the track featured 9 datasets of images, sensors, videos, and their metadata, that are useful to researchers working in video coding, computer vision, media retrieval, image forensics, and other multimedia systems and applications. Each dataset is associated with a published paper that can be cited by their users. All published datasets are archived at University of Massachusetts, Amherst.
- MMSys’15 organized a special session on augmented reality system. The special session featured three papers on diverse systems issues that arise in augmented reality system, including maintenance, transport, and calibration.
- MMSys’15 is pleased to have Oscar Nestares from Intel Corp. as the keynote speaker for the conference. The keynote, titled “Changing the Paradigm of Imaging Through Immersive Media Experiences,” provided an overview of the challenges and opportunities in computational imaging. The talk explored the evolution of photography and personal media, highlighted new computational imaging technologies that have been incorporated into recent Intel products, and concluded with the new research opportunities offered by these technologies.
- The MMSys demonstration track provides a venue for systems researcher to showcase the applications, tools, and systems that they built with the community, and to promote closer interactions among researchers and attendees. Besides eight regular demonstrations, MMSys’15 had one invited demonstration, “Display Anywhere Interactive Data Visualization” presented by Carl S. Marshall, Selvakumar Panneer, Cindy Chung, Janet Tseng, Kathy Yuen, and Nico Galoppo, from Intel Labs. The demonstrated system can transform any surface into an interactive display.
- The open poster session at MMSys’15 aimed to promote further interactions among the attendees. During the open poster session, an attendee can put up a poster on any topic to interact with other attendees. Three posters were presented during the open poster session: one on a recently available dataset, and two on recently accepted/published papers (including one in ACM TOMM).
- NOSSDAV celebrated its 25th anniversary in 2015. To commemorate this milestone, NOSSDAV’15 organized a 25th Anniversary panel, where four distinguished researchers who have published in the first 10 years of NOSSDAV were invited to reflect on the areas that they were working on in the 1990s, how the area has evolved, and to share their thoughts on the future of NOSSDAV. The invited panelists were Kevin Almeroth from University of California Santa Barbara (on networking), Prashant Shenoy from University of Massachusetts (on operating systems), Ketan Mayer-Patel from University of North Carolina (on middleware and applications), and Wu-chi Feng from Portland State University (on streaming and coding).
- The MoVid’15 workshop featured a keynote speech by Vana Kalogeraki from Athens University of Economics and Business, whose talk, titled “Real-Time Reliable Crowdsourcing Techniques for the Mobile Urban Crowd,” explored the exciting opportunities of developing novel urban applications that utilize human (and their mobile phones) to sense, instrument, analyze, and store information about their lives.

3.4. ACM TOMCCAP Special Issues

ACM TOMM published a special issue in September 2014 on Multiple Sensorial Multimodal Media. The issue consists of eight articles which aim at fusing more than two types of media, addressing multiple human senses in parallel. Similar to previous special issues also a survey article on the overall topic of the special issue is included. This issue came together with the extended best paper candidates of ACM Multimedia 2013. In addition, TOMM published in February 2015 a special issue to highlight the extended Best Paper candidates selected from ACM MMSys 2014 and ACM NOSSDAV 2014.

4. Innovative Programs Which Provide Service to Some Part of Our Technical Community

Several SIGMM-sponsored conferences had innovative programs which provided service to technical community:

4.1. ACM Multimedia 2014

In attempt to continuously improve ACM Multimedia and ensure its vibrant role for the multimedia community, we have made a number of enhancements for this year's conference:

- Papers were submitted to 14 areas: Big and Broad Multimedia, Deep Learning for Multimedia, Emotional and Social Signals in Multimedia, Media Transport and Delivery, Multimedia and Society, Multimedia and the Crowd, Multimedia Art, Entertainment and Culture, Multimedia HCI and QoE, Multimedia Search and Recommendation, Multimedia Security, Privacy and Forensics, Multimedia Systems and Middleware, Multimodal Analysis and Description, Music, Speech and Audio Processing in Multimedia, and Social Media and Collective Online Presence. This set of areas resulted from revising and expanding the areas from previous years, and based on the discussion within the Technical Program Committee (TPC) that aimed at highlighting new and emerging research directions (e.g., big and broad multimedia, multimedia and society, QoE), promising new technical approaches not traditionally covered at ACM Multimedia (e.g., deep learning), and reaching out to related communities with complementary expertise (e.g., emotional and social signals). At the same time, some areas were discontinued, either due to the sub-standard number of submissions over the past several years (e.g. multimedia authoring and collaboration) or due to the fact that some technologies and platforms have become mainstream and need no special emphasis any more (e.g. mobile and multi-device).
- There was no pre-submission of abstracts. This led to a simplification of the submission process, and given the large number of submissions, we feel it did not negatively influence the paper submission process.
- Submission of full and short papers were separated from each other, with short papers being submitted only after the full paper submission had been closed. This improved the ease of managing different types of submissions, and allowed authors to more easily plan for both full and short papers, if desired. This may be a possible explanation for the noticeable increase in the number of submissions this year totaling 665 submissions. □ Compared to 2013, the full paper submission deadline was moved back to the end of March, while keeping the two-stage review process. Despite the significantly shortened review period, all full papers received at least three reviews on time (some as many as six!). We really appreciate the effort by our ACs and reviewers and thank them for the great job they did!
- We decided to keep a couple of **plenary sessions** which brought singular focus to conference activities: keynotes, Multimedia Grand Challenge competition, Best Paper session, and Technical Achievement Award sessions. The other technical sessions were held in parallel to allow pursuit of more specialized interests at the conference. We limited the number of parallel session to no more than three to minimize the risk of having overlapping interests.
- Even with the unusually low acceptance rate of 29.8%, 117 short papers were accepted for poster presentation. This is a good indicator that we achieved an important goal for this year's conference – increasing inclusiveness without sacrificing quality. To accommodate the large number of posters, we divided them into three groups. Each group was given an entire day to exhibit their poster. The all-day display for each poster group permits more flexibility and opportunity for conference attendees to plan their visits to see posters. Each day the respective authors were scheduled to be available to answer questions at their posters from 3:30 to 4pm.
- Workshops and Tutorials were held on separate days from the main conference to avoid conflict with the regular Technical Program. In particular, seven free tutorials were held before the main conference to prepare the attendees with the background to better understand the timely topics discussed at the main conference. We had 12 workshops this year. We selected the workshop proposals that would nurture and grow new and emerging research areas.
- The Multimedia Art Exhibition was open for the duration of the main conference. It was held at the conference venue to encourage attendance. Five separate rooms were used to ensure the proper environment for the highly interactive exhibits.
- With a total amount of \$25,000 available for student travel grants, \$15,000 from SIGMM and \$10,000 from NSF, we were able to support 30 students.
- Continuing the tradition, we hosted a very successful luncheon for women in multimedia, in which senior mentors met with the junior and student women members.
- We made the conference proceedings available to the world for one month starting the first day of the conference.

4.2. ACM MMSys 2015

MMSys 2015 continued with the gathering, advertising and disseminating of datasets that are useful to other multimedia researchers. These datasets are hosted by UMass and have established themselves as a valuable resource for researchers in the field.

MMSys'15 organized an Assistant Professors' Lunch during the conference, where young faculty members were invited to join a table of more experienced and tenured faculty members, who have been active in the community, for lunch. The lunch provided an informal setting for networking and conversation between the two generations of faculty members, on topics ranging from the tenure process, research communities, teaching, and research funding.

MMSys'15 provided a networking service to student attendees and the sponsors. During the registration process, students who were interested in internship positions or on the market for jobs have the option to upload their CVs. Seven CVs were uploaded and were shared with the five corporate sponsors before the conference. Representatives from the corporate sponsors and the matching students may then meet up for further discussion at the conference. To encourage students to attend MMSys'15, SIGMM sponsored USD 6000 of student travel grants (including USD 1000 specifically for female students). These grants were awarded to 12 students who attended MMSys'15, on a reimbursement basis (up to USD 500 per student).

4.3. ACM ICMR 2015

The 5th ACM international conference on Multimedia Retrieval took place in Shanghai during June 23-26, 2015. The workshop and tutorial day opened the conference with one half-day tutorial, one full-day tutorial and one half-day workshop. Overall, around 100 participants attended on the first day.

On the second day, the main conference sessions started with an inspiring keynote on issues related to multimedia retrieval by Dr. Tat-Seng Chua, a Chair Professor at the National University of Singapore. The oral sessions on this day highlighted the latest research progresses in image retrieval, person and object analysis, and concept-based image/video analysis. Short papers and demos were presented afterwards. The third day started with a keynote by Dr. Michael Witbrock (VP at Cypcorp) on dense models from videos. Dr. Witbrock emphasized that a "dense" model should support prediction, interpretation, causal reasoning, explanation, etc. An interesting **panel discussion on "Video Search in Big Data Era"** was organized in the afternoon, discussing several critical questions like "given the availability of many live, bigger quantity and higher variety of video data, how would this affect the ways we conduct research on video search?" and "what metadata is now available and can be used to improve the analysis and search?"

On the last day, June 26th, the morning session consists of two keynotes and two invited talks from Chinese companies. Dr. Xiansheng Hua from Alibaba shared with the participants their vision on visual search. He demonstrated the image-based product search function on Taobao, one of Alibaba's online shopping site. After that, Dr. Yongjian Wu at Tencent introduced several image and video related techniques that have been deployed in Tencent's social network products. Dr. Yong Zhao introduced RGB-D based visual surveillance products at DeepGlint, a startup company based in Beijing. Dr. Yang Chen introduced several techniques behind iQIYI, one of the most popular online video websites in China. This half-day program received many positive responses from the participants.

In the afternoon of the last conference day, we arranged an oral session and a full-paper poster session. Oral papers were also presented in this poster session. This was meant to offer the participants more time to interact with the authors with in-depth discussions.

5. Events or Programs That Broadened Participation

5.1. Local Chapter Activities

Our local chapter in Bay Area, chaired by Dr. Qiong Liu of FXPAL, continued to maintain an extremely vibrant level of activities. A highlight event is the SIGMM Bay Area Multimedia Forum (BAMMF). Besides the 4 successful events held last year, in the past year, we have organized another very successful event on November 20th, 2014 with 276 registered participants (room capacity). It featured 5 invited speakers from industry (Microsoft, Facebook, Google, Adobe, PARC) and academia. In May 2015, HP researcher also organized an informal augmented reality get-together in HP Executive Briefing Center. During the get-together, a startup CEO talked about his new startup idea and HP researchers also demonstrated their new product Sprout. The talks are recorded by professionals and posted on the website www.bammf.org so that people at other locations can watch them. Since more companies and events are distributed globally in recent years, we are organizing a BAMMF event in the area of Full Field Communication, Collaboration, and Sharing in the coming August. Our speakers for the event will be Zhengyou Zhang (Microsoft), Bo Begole (Huawei), Max Mühlhäuser (Technische Universität Darmstadt), and Susie Wee (Cisco).

The SIGMM China Local Chapter (currently 60+ members) organized its flagship conference, the Sixth International conference on Internet Multimedia Computing and Service (ICIMCS 2014) during July10-12, 2014 in Xiamen, China. ICIMCS 2014 is a forum for researchers from the academia and the industry, professionals, standard developers to exchange information on the state-of-art of internet multimedia information processing technologies and applications, as well as to identify the emerging research topics and define the future of multimedia information computing from internet. There are totally 21 oral, 48 poster, and 24 special session papers presented at the event. 100+ attendees from more than 10 countries attended. David Ayman Shamma (senior fellow of the American Academy of Yahoo) and Sun-Yuan Kung (IEEE fellow, professor of Princeton University) gave keynote speeches in the conference.

- **The Best Paper award** was received by Lina Liu, Xiaoqiang Lu, Yuan Yuan, Xuelong Li from Chinese Academy of Sciences for the paper entitled "Person Re-identification by Bidirectional Projection."
- **The Best Student Paper Award** was received by Xiaonan Song, Yahong Han, Jianmin Jiang, Adrian Hilton from Tianjin University for the paper entitled "Video Segmentation via Adaptive Higher-Order CRF with Windowed Dynamics".

6. Brief Summary for the Key Issues That the Memberships of SIGMM Will Have to Deal with in the Next 2 Years

- We continue to seek the best strategies for maintaining the leading position of SIGMM in terms of reputation, technical innovation, broad impacts, membership services, diversity, and education. We organized a retreat on November 6th 2014 to review the state of SIG and develop best strategies and execution plans. Recommendations from the retreat are outlined in the next section.

- We continue to find the best ways of attracting and nurturing young members. In the last year, we launched a new award for SIGMM Rising Star. Later this year, we will launch another major initiative – SIGMM Multimedia Frontier Workshop to highlight 10-12 rising star speakers. More information is listed in the next section.
- We have started the search for a new EiC for ACM Transactions on Multimedia Computing, Communications, and Applications (TOMM). The new EiC will play a key role in strengthening the journal as well as the relation between SIGMM conferences and the journal. A search committee chaired by Nicu Sebe (SIGMM Conference Director) has been organized and several renowned leading researchers in the MM community have been nominated for consideration. We are very pleased to see the broad responses and optimistic about further advancement of the impact of TOMM.
- We have formalized and documented the structures of various SIGMM committees for clarity to the community and to enforce regular changes of the members in the committees.
- We have started to explicitly emphasize sensor data as being part of multimedia and will continue to promote it.

7. Other Highlights in SIGMM Activities

- We organized a SIGMM-wide retreat on November 6th 2015 with aims to review state of SIGMM and develop strategic plans for enhancing SIGMM. We have active participation by 28 participants from academia, industry, and research organizations. Reports from the retreat can be found at http://sigmm.org/sites/all/files/editor/SIGMM_2014_retreat_output_summary.pptx

The discussion focused on a few key items and action plans, such as

- o Scope of SIGMM
- o Emerging technical frontiers and societal challenges
- o Best practices and policies for conferences and journals
- o Industry participation

Important conclusions are summarized below:

- o SIGMM should focus on depth as well as breadth.
- o SIGMM should develop a small set of core areas, such as multimedia integration, representation, user experience, multiple devices/contexts, and distributed multimedia computing.
- o SIGMM should continue to be an open forum for broad interaction among different technical disciplines. Papers contributing to “X and Multimedia” will continue be welcome.

SIGMOBILE FY'15 Annual Report
July 2014 – June 2015
Submitted by: Suman Banerjee, Chair

Introduction

SIGMOBILE is the ACM Special Interest Group on the Mobility of Systems, Users, Data, and Computing. Engaging with the mobile industry, academic, and government research communities, its scope includes all aspects of mobile computing and communications, such as mobile systems and applications, wireless networking protocols and algorithms, and mobile information access and management. In the past few years, mobile computing is a fast moving, topical, and exciting area of computer science and engineering. Supporting the mobile research community, SIGMOBILE sponsors many successful conferences and workshops that are well attended by its members, and generating high-quality and widely cited publications.

These are valuable services for SIGMOBILE's members and the community, resulting in a strong Special Interest Group, with about 700 members, and with positive income with continued fund increase in the last year.

SIGMOBILE's Executive Committee (EC) is listed below:

- Chair: Prof. Suman Banerjee (University of Wisconsin-Madison)
- Vice Chair: Prof. Lili Qiu (University of Texas at Austin, USA).
- Secretary: Dr. Alec Wolman (Microsoft Research, Redmond)
- Treasurer: Prof. Marco Gruteser (Rutgers University)

Following SIGMOBILE's bylaws, Roy Want (Google Inc.) remains on the Executive Committee as Past Chair.

Committee Appointed Positions

SIGMOBILE's leadership has four committee appointed positions:

- Editor-in-Chief (EIC) for SIGMOBILE's journal/newsletter for our members (Mobile Computing and Communications Review or MC2R), Prof. Eyal de Lara (Univ. of Toronto, Toronto, Ontario, Canada)
- Information Director: Dr. Sharad Agarwal (Microsoft Research) – This is a New Appointment. The SIG thanks Prof. Robert Steele (University of Sydney, Australia), the out-going Information Director who served in this role for 8 years.
- Digital Library Coordinator: Dr. Guanling Chen (University of Massachusetts Lowell, USA),
- Award Committee Chair: Edward W. Knightly (Rice University, USA)

SIGMOBILE Mobile Computing Research Fund (MCRC)

In January 2012 SIGMOBILE established the Mobile Computing Research Community (MCRC) fund to support research projects and activities that have wide benefit to the mobile research community. We solicit proposals for these awards based on the guidelines presented below:

Guidelines

MCRC proposals will typically support the following kinds of activity:

- Research data or benchmark archive. e.g. CRAWDDAD at Dartmouth
- New community software: e.g. CAD, mobile research tools
- Maintenance of software already used by the community
- Education support for mobile computing
- Student conference sponsorships
- Open collaborative research project funding

Call for Proposals

Submission Process

Using the format described here, proposals should be sent by email to the SIGMOBILE executive committee using the email address: sigmobile-mcrcfund@acm.org. All proposals must have an a priori established SIGMOBILE Executive Committee member who is prepared to champion the proposal during the selection process. The committee endeavors to review a proposal, and either accept or reject a proposal within 1 month of submission.

Funding Criteria:

- The proposal must be submitted by a SIGMOBILE member
- The project proposal must be judged to be of high-quality by the SIGMOBILE Executive Committee

- The project must be relevant to, and provide value for, a wide cross-section of the SIGMOBILE membership.
- An award should not exceed \$20k in a calendar year.
- A proposal must be for a specified period of time, but not exceed 3 years.
- For proposals longer than one year, a 2-page report must be generated each year summarizing its achievements. Continued funding will be conditional on a positive review of the annual report by the Executive Committee.
- The project must disseminate its results to SIGMOBILE members through either the sigmobile.org website, MC2R quarterly publication, or at one of SIGMOBILE's sponsored conferences or workshops.
- SIGMOBILE will not pay for hosting organization overhead fees, only for items that directly contribute to the project.

Proposals should include:

- Title: What is the project to be called?
- Subject matter: What is the purpose of this project?
- People: Who speaks for, and takes responsibility for this project? Who else is on the team? What are their qualifications, or track-record for carrying out this project?
- Requested Award: The total amount requested
- Duration: Will this project need on-going, continual funding? If so, how many years of seed money are being sought, and what is the plan for continuing funding?
- Schedule: When will it start and end?
- Prior work: What work has already been done in this area and how will this project build on it?
- Relevance: What SIGMOBILE membership is this project relevant to? Do they have similar projects already underway? How will they be involved?
- Potential value: What is the potential value of the proposed project to SIGMOBILE members?
- Deliverables: What will be the outcome of the project?
- Delivery vehicle: Who is the audience for this outcome? How will these people be informed of the outcome? Where applicable, how will they get access to it?
- Additional funding: Have you considered other sources of funding? Will someone match SIGMOBILE MCRC Funding?
- Dependency: What other things does the successful completion of this project depend upon?
- End-game: How will you know the project has succeeded?

Format

- Proposals should be 3 US-letter size pages typed in 10-pt Arial font. Additional supporting material such as CVs, resumes, figures or papers may be included in an appendix

ACM Mobility Tech Pack

ACM Tech Packs are "innovative learning packages by subject experts for serious computing professionals", basically an annotated reading list of the most useful papers for students or professionals wanting to enter the field or refresh their knowledge about the latest significant publications in the area. The Mobility Tech Pack was created by the SIGMOBILE EC and has been available on the ACM website since the beginning of 2012; it can be found at the link <http://techpack.acm.org/mobility/>. SIGMOBILE is committed to keeping the Tech Pack up to date as the subject evolves over time.

Sponsorship for the Mobile Computing Research Community

In 2014-2015, SIGMOBILE has provided sponsorship in the form of financial support for three programs in the mobile computing research community:

The Community Resource for Archiving Wireless Data At Dartmouth (CRAWDAD) continues to be a thriving resource for the SIGMOBILE community. As of July 6, 2015, it contains 102 databases, each containing one or more traces about wireless networks or mobile users, and 19 tools, many of which are designed to help researchers work with such datasets. There were 6 new datasets or tools released since the last report. There are now over 7337 users from 108 countries around the world – 7 new countries since last year's report! CRAWDAD continues to be popular, with more than 1,137 new users registering within the past year. Although the primary archive is at Dartmouth, the CRAWDAD site and data are mirrored on servers located in the UK and Australia to guarantee uninterrupted service, and fast downloads to users all around the world.

CRAWDAD data has supported over 1763 papers in the field, and continues to be the go-to place for authors wishing to share data they've collected, or to obtain data they can use for testing their system prototypes and algorithms. SIGMOBILE support makes it possible for the CRAWDAD project to retain a technical staff person (part time) to maintain the site. Our new "self-serve" website allows contributors to provide all the metadata needed to release a dataset, and we continue to streamline the process of releasing a new dataset. Furthermore, our rewritten website has a dramatically simpler underlying framework that will make it more robust, easier to maintain, and easier to set up mirror sites. We also moved CRAWDAD to a new server for speedier access.

Networking Networking Women (N² Women) is a discipline-specific community for researchers in the communications and networking research fields. The main goal of N² Women is to foster connections among the under-represented women in computer networking and related research fields. N² Women allows women to connect with other women who share the same research interests, who attend the same conferences, who face the same career hurdles, and who experience the same obstacles. To assist in our networking goals, N² Women has an email list for the group: N2Women@acm.org. There are currently 850 members of N² Women.

N² Women is an [ACM SIGMOBILE](#) program that has been financially supported by SIGMOBILE, [Microsoft Research](#), [HP Labs](#), Google, NSF, IEEE ComSoc, IEEE CS TCCC, and CRA-W. In the past year, funds from SIGMOBILE were requested for two purposes. First, we requested SIGMOBILE funds to continue our successful N² Women Student Fellowship program. A student applies for a Fellowship and, if selected, N² Women partially covers the student's travel cost (up to \$500) to a conference where an N² Women event will be held. In exchange, the student must help organize the N² Women meeting. The benefit of doing the organization, in addition to the travel funds, is for the student to connect with the organizers of the conference who are, typically, leaders in the research field. We arrange for a senior member of N² Women to assist/mentor the student in this task.

Since June 2014, there have been 13 N² Women Student Fellows who organized N² Women events at prestigious conferences, with five more planned in near future. The following list details the Student Fellows and the conferences where the N² Women meetings were held:

- SECON 2014: Aly Heba, Alexandria University, Egypt
- MobiHoc 2014: Jelena Marasevic, Columbia University
- IPCCC 2014: Yasaman Samei, UC Irvine
- MobiCom 2014: Hitnawi Anwar, ETH Zurich
- LCN 2014: Shitu Riyanat, City University London
- MSWiM 2014: Lin Trista, INRIA INSA Lyon
- SenSys 2014: Meghan Clark, University of Michigan
- MobiHoc 2015: Nan Cen, Northeastern University
- WoWMoM 2015: Jill Jermyn, Columbia University
- MobiSys 2015: Jessica Cauchard, Stanford University
- INFOCOM 2015: Dora Spenza, University of Rome La Sapienza
- ICC 2015: Bahar Partov, Hamilton Institute
- CPSWeek 2015: Lu Feng, University of Pennsylvania

Upcoming:

- MASCOTS 2015: Yu Han, Northeastern University
- SIGCOMM 2015: Chunyi Peng, The Ohio State University
- ICCCN 2015: Maryam Jalalitar, Georgia State University
- DySPAN 2015: Shweta Sagari, Rutgers University
- UbiComp 2015: Yanxia Zhang, Lancaster University

Second, SIGMOBILE funds were requested to help fund the 4th Networking Networking Women Workshop. This workshop was held in conjunction with SIGCOMM on August 17, 2014 in Chicago, Illinois, and had 77 people registered. The co-chairs of the event were Sami Rollins (University of San Francisco) and Katia Jaffrès-Runser (University of Toulouse). The workshop had two keynote speakers, two panels, a poster session, and a mentoring.

Survey results show that the 2014 N2Women Workshop was a roaring success (e.g., 76% rated the workshop as a whole as "excellent" and the other 24% rated it as "good").

In all N² Women announcements, SIGMOBILE (and other sponsors of N² Women) are thanked. Further details of N² Women are available at: <http://committees.comsoc.org/n2women/>

.ACM-W: In 2015, SIGMOBILE continues to sponsor ACM-W (ACM's Women in Computing organization). "ACM-W's mission is to celebrate, inform and support women in computing, and work with the ACM-W community of computer scientists, educators, employers and policy makers to improve working and learning environments for women." This is an organization that the Executive Committee (EC) whole-heartedly supports. Women in CS education can request sponsorship for SIGMOBILE conferences, and for eligible cases, the EC will provide sponsorship for travel and registration.

SIGMOBILE Conferences and Workshops

SIGMOBILE currently sponsors or co-sponsors five annual conferences, all recognized as the premier conferences and focus areas within the field:

- MobiCom: The Annual International Conference on Mobile Computing and Networking, covers all areas of mobile computing and mobile and wireless networking at the link layer and above. MobiCom has been held every year since 1995.
- MobiHoc: The ACM International Symposium on Mobile Ad Hoc Networking and Computing, addresses the challenges emerging from wireless ad hoc networking and computing, with the focus being on issues at and above the MAC layer. MobiHoc has been held every year since 2000.

- **MobiSys:** The International Conference on Mobile Systems, Applications, and Services, addresses broad systems research issues in mobile computing and mobile networking, particularly valuing the practical experience gained from designing, building, and using mobile systems, applications, and services. MobiSys has been held every year since 2003.
- **SenSys:** The ACM Conference on Embedded Networked Sensor Systems, focuses on systems issues in the emerging area of embedded, networked sensors, spanning multiple disciplines, including wireless communication, networking, operating systems, architecture, low-power circuits, distributed algorithms, data processing, scheduling, sensors, energy harvesting, and signal processing. SenSys has been held every year since 2003.
- **Ubicomp:** The International Conference on Ubiquitous Computing, addresses the interdisciplinary field of ubiquitous computing, which utilizes and integrates pervasive, wireless, embedded, wearable and/or mobile technologies to bridge the gap between the digital and physical worlds. Ubicomp has been held every year since 1999, and SIGMOBILE began sponsoring it in 2009.

MobiCom 2014, the 20th Annual International Conference on Mobile Computing and Networking, was held at Westin Maui Resort and Spa, Maui, HI. The General Chairs was Sung-Ju Lee, and the Program Co-Chairs are Ashutosh Sabharwal and Prasun Sinha.

The technical program featured four plenary speakers: Sanjit Biswas (CEO Meraki, VP/GM Cisco Cloud Networking Group) titled "From grad school, to startup, to acquisition", Jeff Gehlhaar (VP of Technology, Qualcomm Technologies, Inc.), titled "The Future of Mobile Computing", Leonard Kleinrock (Distinguished Professor of Computer Science at UCLA) for his outstanding contributions award talk. His keynote speech is titled "Some of My Simple Results". Kit Colbert (CTO of End-User Computing, VMware), titled "BYOzzzz: Focusing on the Unsolved Challenges of Mobility, An Industry Perspective".

The MobiCom 2014 program also included two days of workshops:

On Sunday, September 7:

- The 6th Wireless of Students, by Students, for Students Workshop (S3 2014)
- The 9th ACM International Workshop on Challenged Networks (CHANTS 2014)
- The 1st ACM Workshop on Visible Light Communication Systems (VLCS 2014)
- The 9th ACM International Workshop on Wireless Network Testbeds, Experimental evaluation and Characterization (WiNTECH 2014)

And on Thursday, September 11:

- The 9th ACM International Workshop on Mobility in the Evolving Internet Architecture (MobiArch 2013)
- ACM Workshop on Security and Privacy in Mobile Environments (SPME 2014)
- The 1st ACM Workshop on Hot Topics in Wireless (HotWireless 2014)

MobiCom 2015 will be held September 7-11th at Institut Pasteur, Paris, France. The General Co-Chairs are Serge Fdida and Giovanni Pau, and the Program Co-Chairs are Sneha Kumar Kasera (University of Utah) and Heather Zheng (University of California, Santa Barbara, CA)

MobiHoc 2014, the 15th International Symposium on Mobile Ad Hoc Networking, was held at Sheraton Philadelphia Society Hill Hotel, Philadelphia, PA, USA, August 11-14, 2014. The General Chair was Jie Wu (Temple University). The Technical Program Chairs will be Xiangyang Li (Illinois Institute of Technology) and Saswati Sarkar (University of Pennsylvania). Also, the MobiHoc 2015 conference will be held in July 2015 in Hangzhou, China.

MobiSys 2015, the 13th International Conference on Mobile Systems, Applications, and Services, was held May 18-22, 2015 at Fortezza da Basso, Florence, Italy. The General Co-Chairs were Gaetano Borriello (University of Washington) and Giovanni Pau (UPMC-LIP6, France/UCLA) and the Co-Program Chairs were Marco Gruteser (Rutgers University) and Jason Hong (CMU). The MobiSys program also featured 6 workshops and a PhD Forum on May 18 and 22.

- The ACM Workshop on Physical Analytics
- 2nd Workshop on Mobile Gaming (MobiGames)
- Workshop on Wearable Systems and Applications (WearSys)
- Future Mobile User Interfaces Workshop
- Workshop on Micro Aerial Vehicle Networks, Systems, and Applications for Civilian Use (DroNet)
- Workshop on IoT Challenges in Mobile and Industrial Systems (IoT-Sys)
- PhD Forum on Mobile Systems, Applications, and Services

SenSys 2014, the 12th ACM Conference on Embedded Networked Sensor Systems, was held November 3-6, 2014, in Memphis, TN. General Chair: Akos Ledecz (Vanderbilt) and Program Co-Chairs: Prabal Dutta (University of Michigan) and Chenyang Lu (Washington University in St. Louis).

There were two workshops and a Doctoral Colloquium on Thursday, Nov. 6, 2014:

- **ENSSys'14: The 2st Workshop on Energy Neutral Sensing Systems**
- **The 1st Workshop on Medical Applications**
- Doctoral Colloquium (Chaired by Luca Mottola and Anthony Rowe)

In 2014, ACM Ubicomp, the 15th International Conference on Ubiquitous Computing, merged with the long running independent Pervasive computing conference and became Ubicomp 2014. The conference was held 13th – 17th September, 2014, in Seattle,

WA. The General Chairs were AJ Brush (Microsoft Research) and Adrian Friday (Lancaster University, UK) and the Program Co-Chairs were Julie Kientz (University of Washington), James Scott (Microsoft Research, UK), Junehwa Song (KAIST, Korea) . UbiComp workshops were held on 13th and 14th of September:

- Collective Wearables
- Consent Workshop
- HASCA 2014: International Workshop on Human Activity Sensing Corpus and its Application
- MCSS 2014: [3rd Workshop on Mobile Systems for Computational Society Science](#)
- HomeSys 2014: Workshop on Design, Technology, Systems and Applications for the Home
- Workshop on Smart Garments: Sensing, Actuation, Interaction, and Applications in Garments
- Broadening Participation Workshop
- CEA 2014: Smart Technology for Cooking and Eating Activities
- Diasters in Personal Informatics: The Unpublished Stories of Failure and Lessons Learned
- SmartHealthSys 2014: Workshop on Smart Health Systems and Applications
- UPSIDE: Workshop on Usable Privacy & Security for Wearable and Domestic Ubiquitous Devices
- WearIA 2014: 3rd workshop on Wearable Systems for Industrial Augmented Reality Applications
- WAHM 2014: Workshop on Ubiquitous Technologies for Augmenting the Human Mind
- [AwareCast 2014: Second Workshop on Recent Advances in Behavior Prediction and Pro-active Pervasive Computing](#)
- Atelier of Smart Garments and Accessories
- [PETREI: 4th Workshop on Pervasive Eye Tracking and Mobile Eye-Based Interaction](#)
- [CoSDEO 2013: Device-Free Radio-Based recognition](#)
- [MCSS 2014: 3rd Workshop on Mobile Systems for Computational Social Science](#)
- UbiComp/ISWC 2014 Doctoral Schools
- UbiComp/ISWC 2014 Programming Competition

In addition to the conferences and co-located listed workshops above, SIGMOBILE also sponsors the HotMobile workshop (previously WMCSA) as a stand-alone event, not co-located with a conference. The HotMobile workshop series focuses on mobile applications, systems, and environments, as well as their underlying state-of-the-art technologies, in a small workshop format that makes it ideal for presenting and discussing new directions or controversial approaches. The Executive Committee encourages the MobiCom Program Committee meeting be collocated with HotMobile to ensure that a representative selection of senior researchers attend the event. This workshop was previously sponsored each year by the IEEE Computer Society, but has been sponsored only by ACM SIGMOBILE since HotMobile 2008.

HotMobile 2015, the 16th International Workshop on Mobile Computing Systems and Applications, was held February 12-13, 2015, in Santa Barbara, California, USA. The General Chair is Justin Manweiler (IBM Research) and the Program is Romit Roy Choudhury (UIUC).

Each year, SIGMOBILE is also "in-cooperation" with a number of events sponsored by other organizations. Events offered "in-cooperation with" SIGMOBILE allow its members to register at the same discounted rate as for members of other sponsoring organizations for the event, providing a significant savings to SIGMOBILE members. During this past year, SIGMOBILE was in-cooperation with the following events:

- The 7th International Conference on COMmunication Systems and NETworkS (COMSNETS 2015), Bangalore, India, 6-10 January, 2015
- Wireless Health Conference (Wireless Health 2014), Bethesda, MD, USA, 29-31 October, 2014
- IEEE Symposium on New Frontiers in Dynamic Spectrum Access Networks (DySPAN 2014), Mclean, VA, USA, 1-4 April, 2014
- The 14th International Conference on Human-Computer Interaction with Mobile Devices and Services (MobileHCI 2014), Toronto, Canada, Sept. 23-26, 2014
- MobileSoft 2014: First International Conference on Mobile Software Engineering and Systems, Hyderabad, India, June 2-3, 2014.
- MMSys 2015: ACM Multimedia Systems Conference, Portland, OR, March 18—20, 2015.
- WiSEC 2015: The 8th ACM Conference on Security and Privacy in Wireless and Mobile Networks, New York, NY, June 24-26, 2015.

SIGMOBILE continues to be fortunate to receive strong support for its conferences and workshops in the period July 2014-2015, from leading-edge companies and organizations from around the world. This last year, many organizations have contributed to SIGMOBILE conferences and workshops, helping to ensure their success. This include the following: NSF, Cisco, Meraki, Microsoft, Facebook, Google, IBM Research, INRIA, Qualcomm Research, HP, NEC, University of Memphis, MD2K, Institute for Software Integrated Systems, SIEMENS, Bell Labs Alcatel Lucent, YAHOO, ISTC PC, Intel Science and Technology Center for Pervasive Computing, CRA-W, University of Cambridge, University of Toronto, User-Centric Networking.

As always, SIGMOBILE is sincerely grateful for all contributions.

SIGMOBILE Publications

In addition to the proceedings for each of the conferences and workshops that SIGMOBILE sponsors, SIGMOBILE also publishes a quarterly newsletter for SIGMOBILE members. Under the direction of Editor-in-Chief Eyal de Lara, SIGMOBILE introduced this past year GetMobile, a complete redesign of its newsletter Mobile Computing and Communication Review. Non-members may also subscribe to GetMobile, and the publication is also available in the ACM Digital Library.

Each issue of GetMobile consists of a set of regular sections curated by a committed group of editors. Section articles address topics of broad interest and are meant to be accessible to the wider mobile research community. This format provides an attractive vehicle for mobile researchers to keep abreast of developments of interest to the broad community, and serve as an outlet for the publication of impactful contributions that may not be appropriate for conferences or archival journals.

GetMobile issues include the following regular sections:

- Article Highlights, edited by Shyamnath Gollakota (University of Washington) and Robin Kravets (UIUC). This section presents condensed versions of noteworthy papers recently published at mobility related conferences.
- Retrospectives, edited by Carla Ellis (Duke University). This section looks back at seminal contributions in the field and explores how they have withstood the test of time, as well as their effect on research and practice over the years.
- (Almost) Unpublishable Results, edited by Jacob Sorber (Clemson University) and Lin Zhong (Rice University). This section provides a venue for the dissemination of work whose value is broadly acknowledged by the mobile research community, but which nevertheless has traditionally been hard to publish in venues, such as conferences and journals.
- Experimental Methods, edited by Khai N. Truong (UNC Charlotte). This section addresses the growing importance that user-centered evaluation techniques have in mobile research by reviewing topics that every mobile researcher should know about before conducting user-centered experiments.
- Arm's Length, edited by Matthai Philipose (Microsoft Research). This section discusses developments in fields that fall outside of the traditional SIGMOBILE core, but which have applications in mobile systems and networks.
- Makers, edited by Prabal Dutta (University of Michigan) and Iqbal Mohamed (IBM Research). This section focuses on developments in the growing maker community.
- Mobile Platforms, edited by Sharad Agarwal (Microsoft Research) and Marco Gruteser (Rutgers University). This section discusses developments in mobile platforms and their use in research.
- Standards, edited by Michelle X. Gong (Google). This section provides an update on developments at standards bodies, such as the IETF and W3C.
- Education, edited by Nilanjan Banerjee (UMBC) and Sami Rollins (University of San Francisco). This section reports on developments in mobile and wireless education
- past→Future, edited by With Geoffrey Challen (University at Buffalo). This column highlights cutting-edge pre-publication research, as well as articles that reach back five to 10 years and re-examine previous work in mobile systems to help us better understand where we are now and where we might end up next.

The inaugural issue of GetMobile (vol. 18, no. 4) was mailed to the readership on January of 2015, and a second issue (vol 19. no. 1) was published on April of the same year. Three additional issues will be published by the end of this year.

Some examples of articles included in the first issue are: (1) an article by Mahadev Satyanarayanan, who reflects on the evolution of computation offloading over the last twenty years, (2) an article that showcases MIT App Inventor, a visual blocks programming language for developing applications for phones and tablets, and its use by beginners and non programmers in colleges and universities, as well as K-12 and afterschool programs, (3) an article that reports on early experiences with Google Glass as an enabler of mobile research, and (4) an article on efforts to improve wireless LAN throughput and efficiency in 802.11ac and 802.11ax.

Whereas most aspects of the magazine's operation are run by volunteers, GetMobile employs the services of a professional designer and a managing editor that help with the final assembly of each issue.

SIGMOBILE Email Newsletter

SIGMOBILE Information Director, Dr. Sharad Agarwal, has been sending out an email newsletter periodically since August 2013. The contents vary. Key deadlines for SIGMOBILE-sponsored events and awards are listed. Notable SIGMOBILE news may be included, such as winners of awards. A mini-editorial may be included that may comment on new hardware availability in the market, significant shifts in industry, accepted publications for SIGMOBILE events, or observations on technology trends. The email newsletter is formatted in HTML, and sometimes includes pictures.

SIGMOBILE Email Lists

SIGMOBILE continues to use two email lists to manage email announcements and discussions.

SIGMOBILE-MEMBERS@LISTSERV.ACM.ORG is used exclusively for email announcements for SIG members. This includes our periodic email newsletter. It may include announcements that are particularly relevant to the members. The Members List contains those who have active SIGMOBILE membership, plus those who fall within a 3-month grace period. New members will continue to be added and anyone who falls past the grace period will be trimmed off.

SIGMOBILE-INTEREST@LISTSERV.ACM.ORG is used to disseminate any relevant CFPs and support discussions amongst the community. Relevant CFPs include SIGMOBILE sponsored events as well as non-SIGMOBILE sponsored events that are related to mobility. Non SIG members are allowed to join via the MY ACM website. The Interest list is configured with an open subscription. It is our hope that the myriad of conference and workshop specific email lists will merge into this single SIGMOBILE-INTEREST mailing list.

SIGMOBILE Social Media

SIGMOBILE makes use of social media to support interactive communication with its community. It has groups on LinkedIn and Facebook and has a SIGMOBILE Twitter feed. The Facebook group is the most active, and often includes SIG announcements, photos from SIGMOBILE sponsored events and TPC meetings, and informal community polls.

ePub Format for SIGMOBILE Publications

While tablets and smartphones have taken over the world, our standard 2 column PDF publication format has not kept up. It is cumbersome to pinch and zoom and scroll through a publication on a phone or tablet. The ePub format bridges this gap. Unlike PDF, ePub does not dictate how content should be laid out on paper or a screen – that is left up to the software that displays the document. ePub readers are available on almost all mobile devices, and will scale documents to the size of the screen for ease of viewing. SIGMOBILE Information Director, Dr. Sharad Agarwal, worked with the organizing committees of multiple 2014 SIGMOBILE conferences and workshops to generate ePub files for all accepted papers, in addition to the traditional 2 column PDF files. Since existing conversion tools to ePub from either PDF or Latex are lacking in several features, we used an external company to do the conversion for a modest fee. The ePub files were made available to conference attendees via the ACM DL, thanks to the ACM DL team. Feedback from conference attendees was very positive and supportive. We then worked with April Moskus and others at ACM to setup a 2 year contract where all SIGMOBILE publications are converted to ePub and made available to both conference attendees and other ACM members through the ACM DL. This contract kicked in automatically for ACM MobiSys 2015 and ACM MobiHoc 2015, and the ePub files for both are available on the ACM DL. We will continue to provide these mobile friendly publications for all fully SIGMOBILE sponsored conferences and workshops.

SIGMOBILE Website

As an additional resource for our members and the community, SIGMOBILE maintains an extensive web site at <http://www.sigmobile.org>, including information about SIGMOBILE and its activities, information about our journal/newsletter MC2R GetMobile, and information about membership in SIGMOBILE. This web site also contains archived copies of most SIGMOBILE conference web sites, including all previous years of MobiCom, MobiHoc, and MobiSys. Unfortunately the website is in dire need of a design overhaul and needs to be hosted on top of a CMS (content management system). This will allow multiple SIG officers to update the website with ease, would allow for better management of content across different SIGMOBILE conferences and workshops, provide version histories, and allow for fine-grained access control. Funding for a website redesign is being finalized. Until then, website updates are being done only for urgent needs.

SIGMOBILE Membership

The SIG's membership was 650 on June 30th 2014, down 7% from the previous year. The membership has spanned the 650-800 range for last 7 years, and for all time has been in the 437-872 range. SIGMOBILE provides substantial benefits to our members, including:

- The quarterly journal and newsletter, now called GetMobile, serving both as a newsletter keeping SIGMOBILE members informed, and as a scientific journal publishing high-quality peer-reviewed research papers on mobile computing and wireless and mobile networking to be available in electronic form.
- A periodic e-mail SIGMOBILE newsletter, including SIGMOBILE announcements, pointers to relevant mainstream news articles of interest to SIGMOBILE members, a calendar of upcoming events of interest to our members, and pointers to developer news for active developers in the area of mobile computing and wireless networking.
- Announcements via the moderated, members-only email distribution list, keeping you informed of the latest happenings in our field, such as conference Calls for Papers.
- Qualify for the lowest registration rates at conferences and workshops sponsored by SIGMOBILE, and for the many events that are "in cooperation" with SIGMOBILE. SIGMOBILE sponsors five conferences each year (MobiCom, MobiHoc, MobiSys, SenSys, and Ubicomp).
- Opportunities to share ideas, learn of new results and practices, network with colleagues, and be active in a vibrant community of colleagues in all areas of mobility of systems, users, data, and computing.
- Through the Member Value Plus program, automatically receive access to full conference proceedings of SIGMOBILE's five conferences.

In addition, SIGMOBILE provides additional benefits to the broader community served by SIGMOBILE:

SIGMOBILE Community Benefits:

- Organization and sponsorship of five annual conferences (MobiCom, MobiHoc, MobiSys, SenSys, and Ubicomp).
- Promotion of emerging new areas through sponsorship of numerous workshops each year.
- An [ACM Mobility Tech Pack](#) edited by the SIGMOBILE officers, providing an annotated reading list of the definitive mobile research papers to date; thus enabling somebody new to the field to rapidly come up to speed.
- The SIGMOBILE [Outstanding Contribution Award](#), given to recognize an individual who has made a significant and lasting contribution to the research on mobile computing and communications and wireless networking.
- The SIGMOBILE [Distinguished Service Award](#), given to recognize an individual who has made exceptional contributions to ACM SIGMOBILE, its conferences, publications, or its local activities.
- The SIGMOBILE Test of Time awards, given to published papers that have had a sustained and significant impact in the SIGMOBILE community over at least a decade.
- Best paper awards are given at all five of our sponsored conferences and presented each year.
- Support for students at SIGMOBILE conferences and workshops, through reduced registration fees, student travel awards for some conferences (with NSF support), and student poster sessions.
- The [SIGMOBILE web site](#), including a wealth of information for the community such as complete information on SIGMOBILE conferences and workshops, a Ph.D. thesis collection, paper formatting instructions for authors, reviewer guidelines, and a feedback questionnaire.
- SIGMOBILE also provides financial support for mobile networking community programs such as [CRAWDAD](#) (Community Resource for Archiving Wireless Data At Dartmouth) and [N² Women](#) (Networking Networking Women).

SIGMOBILE Awards

Outstanding Contribution Award 2014

The highly prestigious SIGMOBILE Outstanding Contributions Award (OCA) was presented to Prof. Leonard Kleinrock (UCLA) for "pioneering contributions to the first multi-hop packet switched radio network which formed the foundation for modern wireless networks." at MobiCom 2014 in Maui, Hawaii, USA. He is the 15th recipient of the OCA since the SIGMOBILE was formed. The SIGMOBILE Outstanding Contribution Award is given for significant and lasting contributions to research on mobile computing and communications, and wireless networking.

Best Papers

The SIGMOBILE Best Paper Award for each conference is given to the authors of the best paper from among all papers submitted to the conference that year. Typically the conference Technical Program Committee forms the Selection Committee for this award; additional awards are at the discretion of the conference organizers.

MobiSys 2015, Best Paper Award

"Accelerating Mobile Applications through Flip-Flop Replication," Mark Gordon, David Ke Hong, Peter Chen, Jason Flinn, Scott Mahlke, Z. Morley Mao (University of Michigan)
"Outatime: Using Speculation to Enable Low-Latency Continuous Interaction for Mobile Cloud Gaming," Kyungmin Lee, David Chu, Eduardo Cuervo, Johannes Kopf, Yury Degtyarev, Sergey Grizan, Alec Wolman, Jason Flinn (University of Michigan, Microsoft Research, St. Petersburg Polytechnic University, Siberian Federal University)

MobiCom 2014, Best Paper Award

Tagoram: Real-Time Tracking of Mobile RFID Tags to High Precision Using COTS Devices: Lei Yang (Tsinghua University); Yekui Chen (Tsinghua University); Xiang-Yang Li (Tsinghua University, Illinois Institute of Technology); Chaowei Xiao (Tsinghua University); Mo Li (Nanyang Technological Univ.); Yunhao Liu (Tsinghua University)

Further, the following paper was considered a runners-up:

EkhoNet: High Speed Ultra Low-power Wireless for Next Generation Sensors: Pengyu Zhang (UMass); Pan Hu (UMass); Vijay Kumar P (UMass); Deepak Ganesan (UMass)

MobiHoc 2014, Best Paper Award

Modeling Data Dissemination in Online Social Networks: A Geographical Perspective on Bounding Network Traffic Load: Cheng Wang (Tongji University) Shaojie Tang (Temple University, USA) Lei Yang (School of Software, Tsinghua University, P.R. China) Yi Guo (Hongkong University of Science and Technology, P.R. China) Fan Li (Beijing Institute of Technology, Beijing, P.R. China) Changjun Jiang (Tongji University)

In addition, a runners-up to the best paper award was also announced as:

A Systematic Study of the Delayed Column Generation Method for Optimizing Wireless Networks: Yu Cheng (Illinois Institute of Technology, USA) Xianghui Cao (Illinois Institute of Technology, USA) Sherman Shen (University of Waterloo, Canada) Devu Manikantan Shila (Illinois Institute of Technology, USA) Hongkun Li (Interdigital, USA)

SenSys 2014, Best Paper Award

"Ekho: Realistic and Repeatable Experimentation for Tiny Energy-Harvesting Sensors
Josiah Hester, Timothy Scott, Jacob Sorber (Clemson University)

Ubicomp 2014, Best Paper Award(s)

[Secure Bootstrapping of Cloud-Managed Ubiquitous Displays](#): Mohit Sethi ([NomadicLab, Ericsson Research, Finland and Aalto University, Finland](#)), Elena Oat, Mario Di Francesco, Tuomas Aur (Aalto University, Finland)

[The architecture of innovation: Tracking face-to-face interactions with ubicomp technologies](#): Chloe Brown (1 University of Cambridge), Christos Efstratiou (University of Kent), Ilias Leontiadis (Telefonica Research), Daniele Quercia (Yahoo Labs), Cecilia Mascolo (University of Cambridge), James Scott, Peter Key (Microsoft Research)

[Money Walks: A Human-Centric Study on the Economics of Personal Mobile Data](#): Jacopo Staiano (University of Trento), Nuria Oliver (Telefonica Research), Bruno Lepri (Fondazione Bruno Kessler), Rodrigo de Oliveira (Telefonica Research), Michele Caraviello (Telecom Italia), Nicu Sebe (University of Trento)

[Intruders Versus Intrusiveness: Teens' and Parents' Perspectives on Home-Entryway Surveillance](#): Blase Ur (Carnegie Mellon University), Jaeyeon Jung, Stuart Schechter (Microsoft Research)

ACM Student Research Competition (SRC)

The SRC is an annual event sponsored by Microsoft Research at the MobiCom conference. The most recent event was in 2014, and had the following winners:

First place: Omid Abari (MIT); Clock Synchronization for Distributed Wireless Protocols at the Physical Layer

Second place: Robert LiKamWa (Rice University): Retrofitting Computer Vision Libraries for Concurrent Support on Mobile Devices

Third place: Tianxing Li, (Dartmouth College): HiLight: Hiding Bits in Pixel Translucency Changes

The new SIGMOBILE Test-of-Time Award

SIGMOBILE has just launched the new Test-of-Time award which recognize papers that have had a sustained and significant impact in the SIGMOBILE community over at least a decade. The award recognizes that a paper's influence is often not fully apparent at the time of publication, and it can be best judged with the perspective of time.

All papers published at least 10 years ago in a SIGMOBILE venue are eligible for this award. In addition, papers published at least 10 years ago in other venues are also eligible if they have had an exceptional influence on the SIGMOBILE community. The papers are judged by their influence since publication. The award includes a \$500 honorarium for each paper to be split amongst the authors and an award certificate of recognition for each author. A public citation for award papers will be placed on the SIGMOBILE website.

Prof. Andrew Campbell (Dartmouth College) has been appointed as the chair of this award committee. It is anticipated that the first award will be announced sometime in 2016.

SIGMOBILE Business Meeting & Executive Committee Planning

Each year SIGMOBILE holds its business meeting as part of the ACM MobiCom conference program, usually at the end of the first day. In addition to a general discussion about the status of the SIG, the following topics were discussed in the open meeting.

Conference co-locations

SIGMOBILE today sponsors five major conferences --- MobiCom, MobiHoc, MobiSys, SenSys, and UbiComp. Each conference has slightly different focus, has thrived over the years, and is considered a premier venue in the field. However, there was some discussion in the SIGMOBILE business meeting about whether occasional co-location of these conferences is useful to allow greater interaction between the attendees of these different venues. In the past, MobiCom and MobiHoc have been co-located in two individual instances with great success. The community continues to debate the merits and disadvantages of such conference co-location.

Institutional Review Board policies and the role of the Technical program committees

Many institutions, the world over, have strict policies in place that dictate how researchers should operate when human subjects are involved. For instance, the US academic institutions have Institutional Review Boards (or IRBs) that educate researchers about policies and ensure that the researchers follow them adequately. As research in the SIGMOBILE community begins to have interactions with human subjects, in form of data collected from mobile devices carried by such subjects, it is important that the community be educated about ethical practices around collection and use of such data. There was some discussion in the business meeting as to what role a Technical program committee of a conference should play in evaluating a submitted paper with regards to adherence to such ethical practices. Starting with the MobiSys 2014 conference, SIGMOBILE encourages all its sponsored conferences and workshops to adopt the policy that all submitted papers need to attest that they have adhered to their IRB (or equivalent) process before submitting their paper to the conference. This has already been adopted by multiple conferences and the community believes this raises greater awareness of ethical practices in research among participants.

Mobile Computing Community Research (MCRC) Fund

At the business meeting we discussed various ways the community could possibly use the recently created Mobile Computing Community Research (MCRC) fund. The fund has so far supported a long-running effort of maintaining a data repository for the community hosted in Dartmouth College, called CRAWDAD, and continues to seek other efforts that meet the proposed criterion outlined earlier in this document.

New Conferences for SIGMOBILE to Support

In 2013, SIGMOBILE sponsored a new conference --- "Pervasive Displays" (PerDis'13) which explores a new trend for mobile devices and fixed infrastructure to work together in support of ad hoc user interaction. PerDis has not been part of our list of annual sponsored conferences at this time, but given its successes in the first two years, the SIGMOBILE EC decided to sponsor it for a third year in 2015. If it continues to grow, it would be a future candidate for annual SIGMOBILE sponsorship. Finally, another conference that has received SIGMOBILE sponsorship in 2014 is the International Conference on Underwater Networks and Systems (WUWNet), focused on under-water networking. Its 2014 edition was held in Italy also with great success.

New industry engagement forum

In collaboration with SIGCOMM, SIGMOBILE is planning to start a new initiative to improve interactions with the industry in our field of work. Specifically, the SIGCOMM/SIGMOBILE Industry Day on Wireless Networking is a day-long event whose goal is to increase the opportunities for collaboration between industry and academia in the field of wireless networking. The first iteration of this event will be held on November 13 in Santa Clara, CA. The event will feature talks from senior industry leaders as well as leading academics from wireless and mobile networking. The day will be divided into sessions focusing on different areas of wireless networking, with each session hosting short talks from academia and industry and discussion sessions. The goal is to promote exchange of ideas, increase awareness in industry about the latest research and foster a collaborative community that spans academia and industry."

Summary

Mobile computing is one of the fastest growing fields within computer science and engineering, and as a result SIGMOBILE continues to be a strong, successful, well-supported organization. Membership is relatively stable at 650, and the SIG's conferences and workshops are well attended, creating a wealth of publications for the ACM digital library and the SIG's members. Furthermore, our financial situation has continued to strengthen in 2015 (with a positive trend for 7 years now) providing the organization with fiscal flexibility, and the option to support additional high-value research programs. To this end, we have established the MCRC fund to support SIGMOBILE community projects and promote new activities that will benefit the SIG.

SIGMOD FY'15 ANNUAL REPORT
July 2014 – June 2015
Submitted by: Donald Kossmann, Chair

Mission

ACM SIGMOD (Special Interest Group on Management of Data) is concerned with the principles, techniques, and applications of database management systems and data management technology:

"The goal of SIGMOD is to be the premier international organization devoted to research in data management systems. It serves the academic and industrial community and offers a platform for innovative sharing and dissemination of knowledge concerning the management of data, broadly defined to include all aspects of data issues, such as semantic and structural modeling and representation, storage and indexing, querying and updating, analysis, integration, distribution and parallelization, integrity and consistency, curation and provenance, and privacy and security."

Main Conferences and Newsletter

SIGMOD/PODS Conferences — These continue to be very successful and highly regarded events that bring together theoreticians & experimentalists presenting high-quality research and other results. In 2015 the conferences were held in Melbourne, Australia. The conferences' value was enhanced by an extensive collection of co-located workshops including the SIGMOD New Researcher Symposium and the SIGMOD/PODS Ph.D. Symposium.

The executive committee of SIGMOD includes a Conference Coordinator who provides continuity in the organization of the conferences from year-to-year. During the reporting period, Professor K. Selçuk Candan (Arizona State University, USA) has continued to play this role. He has been extremely helpful not only in the preparation of the SIGMOD/PODS 2015 conferences, but also in the planning of these conferences for 2016 (held in San Francisco, USA) and 2017 (Raleigh, USA). The planning of these conferences is well on track.

SIGMOD Record — SIGMOD Record continues to be a high-quality quarterly newsletter and its coverage has been growing. Over the past years, several columns were added (influential papers, database principles, systems and prototypes, and standards). Dr. Yanlei Diao (University of Massachusetts, Amherst) heads a team of twelve associate editors. We plan to have a special issue of SIGMOD Record in future, called "Research Highlights". The first instance of this special issue is expected to appear in 2016 with summaries of the best papers of SIGMOD 2015, PODS 2015, and VLDB 2015.

Awards

SIGMOD sponsors several awards each year that recognize excellence in the database community. In 2015, these awards were given to the following researchers:

SIGMOD Edgar F. Codd Innovations Award: Laura Haas (IBM, USA).

SIGMOD Systems Award: Larry Rowe (UC Berkeley, USA), Michael Stonebraker (MIT, USA).

SIGMOD Contributions Award: Curtis Dyreson (Utah State University, USA).

SIGMOD Jim Gray Doctoral Dissertation Award: Alexander Thomson (Yale University, USA).

SIGMOD Test-of-Time Award: "Robust and Fast Similarity Search for Moving Objects", Lei Chen, Tamer Özsu, and Vincent Oria.

ACM SIGMOD Conference, 2005.

SIGMOD 2015 Best Paper Award: "DBScan Revisited: Mis-Claim, Un-Flexibility, and Approximation", Yufei Tao and Junhao Gan.

PODS Alberto O. Mendelzon Test-of-Time Award: "XPath satisfiability in the presence of DTDs", Michael Benedikt, Wenfei Fan and Floris Geerts.

PODS 2015 Best Paper Award: "[Parallel-Correctness and Transferability for Conjunctive Queries](#)", Tom Ameloot, Gaetano Geck, Bas Ketsman, Frank Neven, and Thomas Schenktick.

Electronic Information

As of early 2011, the SIG website and all physical information products outlined below are managed by our Information Director, Prof. Curtis Dyreson (Utah State University) and his team of six Associate Information Directors.

SIGMOD Online — Our website (<http://www.sigmod.org/>) provides access to a wealth of content, including the proceedings of SIGMOD/PODS and other co-sponsored conferences, the newsletter issues, metadata for the ACM Collection on Digital Content (see below), and videos of interviews of distinguished database researchers. Improvement of the site's usefulness, readability, and searchability is an ongoing activity.

SIGMOD Blog — SIGMOD's official blog site, at <http://wp.sigmod.org>, came to life in early 2012 and is managed by Dr. Georgia Koutrika (HP Labs, USA). Its purpose is to catch the heartbeat of our community on exciting and controversial topics that are of interest to the community, and facilitate discussions among researchers on such topics. Blog posts by notable researchers and teachers in the database community appear regularly and have covered topics such as publication practices, historical perspectives, and entrepreneurship, in addition to more technical topics. The most popular was "Are we publishing too much?", which explored the issue of publication counts versus quality.

SIGMOD Social Media Presence — In addition to the blog, SIGMOD also uses social media to inform and build the database community. SIGMOD has a Facebook group, a Facebook page, and a Google+ community. Furthermore, as of last 2012, Twitter is being used during the SIGMOD/PODS conferences for both conference-wide and paper-specific discussions.

DBJobs — The revived dbjobs service, at <http://www.dbjobs.org>, is a searchable collection of database jobs offered for free to the database community by SIGMOD. It is intended for use by job seekers that have a background in databases. Job postings are moderated, so they are guaranteed to be database-related. Job postings are automatically scraped and pulled in from DBWorld and other resources, so job seekers need only check dbjobs.

ACM Collection on Digital Content (SIGMOD Digital Collection) — Working with Wayne Graves of the ACM, we have created a collection of all material in the ACM Digital Library that is considered relevant to the SIGMOD community, whole journal volumes and conference proceedings but also individual papers. The ACM Collection on Digital Content is available at <http://dl.acm.org/collection.cfm?id=C6>.

SIGMOD is committed to continue to support and expand these services.

Membership

Professional SIGMOD membership is distinguished between online (at \$15 per year, with benefits such as conference registration discounts and web access to significant content, e.g., quarterly SIGMOD Record issues and Anthology & DiSC metadata, being now expanded to the ACM Collection on Digital Content, linking to the ACM DL) and print (at \$35 per year, which includes the additional benefit of print copies of the SIGMOD Record issues). Finally, student SIGMOD membership (at \$10 per year for online and \$30 per year for print), has the same benefits as the professional membership.

SIGMOD membership has been dropping slightly over the past several years. Most SIGMOD members are also ACM members, some with life-time memberships. All SIGMOD resources are open to ACM members (e.g., the newsletter). As a result, there is little incentive for members of the SIGMOD community to become SIGMOD members in addition to their ACM membership. Because of the life-time ACM membership, some members of the SIGMOD community forget to renew their SIGMOD membership and may not even be aware that they are not SIGMOD members. We are trying to advertise SIGMOD membership whenever possible, but we are not prioritizing these activities given the current situation.

Initiatives

Experiment repeatability — After its launch in the 2008 SIGMOD conference, the program of evaluating the “repeatability” of experimental results reported in SIGMOD papers entered a trial period during which authors of accepted papers are extended the option of having the experimental aspects of their work validated by a separate SIGMOD-sponsored experimental program committee. This is de-coupled from the conference reviewing, both in terms of the program committees and timelines. Validated papers are listed in a SIGMOD Record article and can make reference to this, as an incentive for authors to participate in this effort to improve the standards of experimentation in the database field. The trial has been quite successful and participation has been stable in terms of number of submissions through the years. The community has learned several lessons from this activity, including the fact that we are still far from the vision of “executable papers”. The initiative will soon be thoroughly evaluated and the results of this activity will determine its future.

Undergraduate and Graduate Scholarship Program — As part of its educational mission, SIGMOD continued to subsidize the student registration fees for the conference for all students. In addition, SIGMOD supported undergraduate students from various institutions around the world to attend the 2013 SIGMOD/PODS conferences and present posters on their research work. It did the same for all students presenting their work at the PhD symposium, and also for a large number of graduate students who might otherwise not have been able to attend (applications for these travel grants were solicited through an open call and decided by a separate committee). In particular, a total of 66 students have been directly supported by SIGMOD to attend the 2013 SIGMOD/PODS Conference. In addition to SIGMOD’s own funds (\$45K), a \$20,000 student travel grant from NSF helped support part of the costs for some of the students, along with an extra \$3,000, which came out of Google’s conference sponsorship, at their request.

Traveling Speakers Program and Database Summer Schools — Both are in collaboration with VLDB and are under development. The former will organize multi-day visits to major campuses in a chosen country by a pair of senior database researchers (plans for Romania are under way) while the latter will promote education in databases in developing countries.

Open Access — SIGMOD has joined the great majority of SIGs and decided to participate in the 3-year experiment of ACM on Open Access. We decided to make the proceedings of our conferences freely available via the ACM DL for up to one month around the events, under the control of the particular conference leaders, as well as to maintain tables-of-content of the most recent conference in a series with ACM Authorizer links leading to the final versions of the papers in the ACM DL freely. The support from the entire community, including the SIGMOD Advisory Board, in doing this was overwhelming.

Other — SIGMOD has several additional ongoing or new initiatives that benefit the database community. These include support for DBLP (<http://www.informatik.uni-trier.de/~ley/db/>), a book donation program from SIGMOD/PODS attendees to research institutions in needy countries, and the PubZone non-profit discussion forum for publications in the database community (in cooperation with ETH Zurich).

Collaborations and Collaborative Activities

We continue to be in close collaboration with our sister societies, such as VLDB Endowment, IEEE TCDE, EDBT Association, and ICDT Council. Especially with VLDB, we have a series of joint activities, i.e., the Summer Schools and the Traveling Speakers Program, the inclusion of VLDB material in the ACM DL, and others. We are also carefully observing the PVLDB journal initiative, where VLDB conference presentations are associated with PVLDB journal papers published during the preceding year and are not chosen by a special program committee.

We are also cooperating closely with several other ACM SIGs on various activities, primarily conference co-sponsorship. Examples include SIGKDD for the KDD Conference, SIGSOFT for the Distributed Event-Based Systems Conference (DEBS), and SIGKDD, SIGIR, and SIGWEB for the Web Search and Data Mining Conference (WSDM). A very successful relatively recent example is our collaboration with SIGOPS for the Symposium on Cloud Computing (SOCC), where both SIGs were instrumental in creating what promises to become an important annual conference.

Finances

SIGMOD is a thriving, very active SIG with healthy finances in spite of the economic downturn. This is largely thanks to the efforts of our corporate-sponsorship chairs of the last few years, who have been able to secure sponsorship funds for the SIGMOD conference in excess of \$150,000 every year and sometimes over \$200,000, ensuring profitability of the individual conferences as well as financial security of the SIG overall. Given this financial flexibility, SIGMOD has subsidized student registrations heavily in recent SIGMOD/PODS conferences and provided a substantial number of travel grants to undergraduate and graduate students, enabling them to attend the SIGMOD/PODS conferences.

Current Status and Future Outlook

SIGMOD continues to be a thriving, healthy, and very active SIG. There are certainly areas where it can improve even further, but we feel that SIGMOD is a strong organization and have every expectation of it continuing to provide useful benefits to its members, and thereby, continuing to grow.

SIGPLAN FY '15 Annual Report
July 2014 – June 2015
Submitted by: Jan Vitek, Past Chair

1. Awards that were given out:

Programming Languages Achievement Award

Luca Cardelli

Citation:

Luca Cardelli has made exceptional contributions to the field of programming languages. He has a remarkable ability to re-invent himself every decade or so and yet continue to make true innovations. His contributions span many areas: software; language design, including experimental languages; programming language foundations; and the interaction of programming languages and biology.

He is a leading language designer. He was one of the designers of Modula-3, which played a major role in popularising the notion of type-safe programming, and was a key influence on Java and C#. Thus, his work helped lay the foundations for today's near-universal industrial acceptance of type-safe programming languages. He also designed several important experimental languages, including Obliq, a distributed higher-order scripting language, and Polyphonic C#, a distributed extension of C#. He implemented the first compiler for ML.

He is a leading and hugely influential computer scientist. His most sustained research activity has been in establishing the semantic and type-theoretic foundations of programming languages. Two of his most prominent works are his 1985 paper "On understanding types, data abstraction, and polymorphism" (with Wegner) and his 1996 book "A Theory of Objects" (with Abadi). Other important works of his concern the semantics of multiple inheritance in object-oriented languages and explicit substitutions in the lambda-calculus.

More recently, he has focused on modeling global and mobile computation, via the Ambient Calculus and spatial logics. His work pioneered an influential way of describing, programming, and reasoning about global and mobile computation, in terms of formal calculi and language constructs. It also connected with an important line of work on semi-structured data, and led, indirectly, to his current interest in biology and stochastic systems.

In both his own work and his great scientific influence Cardelli has made lasting contributions to the field of programming languages.

Distinguished Service Award

Dan Grossman

Citation:

Dan Grossman has made significant contributions to programming languages education. Roughly once a decade, the ACM and IEEE Computer Society publish revised curriculum recommendations for undergraduate-level computer science education. The 2001 Curriculum Recommendations included very little PL content, mostly material suitable for a CS1 course. As a member of the 2013 ACM/IEEE-CS Computing Curriculum Steering Committee, Dan was largely responsible for the revisions to the PL curriculum that reintroduced substantial up-to-date PL topics into the curriculum. This effort included convincing the steering committee and soliciting input from many members of the PL community. As part of these efforts, Dan also served as the chair of the SIGPLAN Education Board during his term as Member-at-Large on the SIGPLAN Executive Committee. Serving currently on the ACM Education Board, he continues to be an effective advocate for excellence in programming languages education.

Programming Languages Software Award

2015 Z3 Theorem Prover

Citation:

Z3 has changed the way SIGPLAN members tackle problems of static analysis and program synthesis. Such problems, which form a significant part of programming languages research and development, had long been tackled using various automated decision procedures. But in the 2000s, Z3 enabled qualitative and quantitative leaps, in both the difficulty and the size of problems that could be solved. Today, Z3 is a standard tool, not only because of its inherent qualities, such as heuristics that militate in favor of short proofs and short refutations, but because its developers have continually improved it through close engagement with their users. Such users include many researchers in program analysis and synthesis, and improvements made on behalf of one user often help many others working in the same domain. In the domain of decision procedures that support program analysis and synthesis, after many years of accumulated improvements, Z3 is now the unquestioned leader.

John C. Reynolds Doctoral Dissertation Award

2015 Mark Batty, University of Cambridge

The C11 and C++11 Concurrency Model

Advisor: Peter Sewell

Citation:

Mark Batty's dissertation makes significant contributions to the understanding of memory models for C and C++. The ISO C++ committee proposed a design for C and C++ concurrency that was not up to the task of capturing a realistic relaxed-memory concurrency model. Batty's work uncovered a number of subtle and serious flaws in the design, and produced an improved design in completely rigorous and machine-checked mathematics. Using software tools to explore the consequences of the design, derived directly from the mathematics, it showed that it has the desired behavior on many examples, and developed mechanized proofs that the design meets some of the original goals, showing that for programs in various subsets of the language one can reason in simpler models. The standards committee have adopted this work in their C11, C++11, and C++14 standards. The members of the award committee were impressed with the quality of the work, the impact it has had on the standardization process for C++, and the clarity of the presentation.

2. Significant papers on new areas that were published in proceedings

Nothing to report.

3. Significant programs that provided a springboard for further technical efforts

We did not start any new programs this year.

4. Innovative programs which provide service to some part of our technical community

5. Events or programs that broadened participation either geographically, or among under-represented members of our community and;

The Programming Language Mentoring Workshop or PLMW is being broadened to include the following conferences ICFP and SPLASH. This is an opportunity to bring more students into our community.

PLMW was run at POPL in Mumbai with great participation.

6. A very brief summary of the key issues that SIG membership will have to deal with in the next 2-3 years.

Open access and the relationship between journals and conferences are the key issues facing the PL community.

**SIGSAC FY' 15 Annual Report
July 2014- June 2015
Submitted by: Trent Jaeger, Chair**

1. SIGSAC CONFERENCES AND WORKSHOPS

SIGSAC's mission is to develop the information security profession by sponsoring high quality research conferences and workshops. SIGSAC's first sponsored event was the ACM Conference on Computer and Communications Security (CCS) in 1993. Since then, it has been held twice in Fairfax, Virginia (1993, 1994), and once each in New Delhi, India (1996), Zurich, Switzerland (1997), San Francisco (1998), Singapore (1999), Athens, Greece (2000) and Philadelphia (2001). In the period 2002-2008, CCS was held in the Washington, DC metropolitan area (i.e., in Alexandria, VA). In 2009, 2010, and 2011 CCS was held in Chicago; these editions saw a major increase in attendance (with CCS 2011 having more than 540 attendees). The 2011 edition of CCS featured, in addition to the research paper program, a successful poster and demo program. The 2012 edition of CCS was held in Raleigh (NC); the conference received 439 submissions of which 81 were accepted - an increase over the number of papers accepted to the 2011 edition - and the conference was well attended. The 2013 edition was held in Berlin (Germany); this edition received more than 560 submissions – the highest number of submissions ever received by a CCS edition. Also, over 700 attendees participated in the conference, justifying the decision to hold CCS in Europe. The 2014 CCS edition was held in Phoenix (AZ).

The 2015 CCS edition will be held in Denver (CO) on October 12-16, 2015. Once again, a new record number of submissions have been received (around 700 submissions). This early conference date was necessary to reduce the risks of inclement weather during the conference, but presented challenges with the submission dates for the CCS workshops, which had to be prior to the notification date for CCS submissions, reducing the number of submissions. The 2016 CCS edition will be held in Vienna, Austria, again returning CCS to Europe; Edgar Weippl will serve as general chair and Christopher Kruegel will return as the senior program co-chair (junior co-chair TBD). We had concerns in the last report about a potentially significant deficit from the last CCS in Europe (2013), but the final deficit was manageable. A search is ongoing for a venue for CCS 2017.

From its inception, CCS has established itself as among the very best research conferences in security. This reputation continues to grow and is reflected in the high quality and prestige of the program. In 2014, the CCS acceptance rate was 19%. Undoubtedly, CCS remains one of the most competitive conferences in the area. Three papers were selected as “best student papers” at CCS 2014.

- **Alexey Reznichenko and Paul Francis**, Private-by-Design Advertising Meets the Real World
- **Johannes Dahse, Nikolai Krein and Thorsten Holz**, Code Reuse Attacks in PHP: Automated POP Chain Generation
- **Florian Bergsma, Benjamin Dowling, Florian Kohlar, Jörg Schwenk and Douglas Stebila**, Multi-ciphersuite security of the Secure Shell (SSH) protocol

In addition, the CCS PC Co-Chairs have nominated the following paper as highlights from SIGSAC in 2015.

- **Drew Springall, Travis Finkenauer, Zakir Durumeric, Jason Kitcat, Harri Hursti, Margaret MacAlpine and J. Alex Halderman**, Security Analysis of the Estonian Internet Voting System
<http://dl.acm.org/citation.cfm?id=2660315>
- **Tom Van Goethem, Frank Piessens, Wouter Joosen and Nick Nikiforakis**, Clubbing Seals: Exploring the Ecosystem of Third-party Security Seals
<http://dl.acm.org/citation.cfm?id=2660279>
- **Martin Emms, Budi Arief, Leo Freitas, Joseph Hannon and Aad Van Moorsel**, Harvesting high value foreign currency transactions from EMV contactless credit cards without the PIN
<http://dl.acm.org/citation.cfm?id=2660312>
- **Frederik Armknecht, Jens-Matthias Bohli, Ghassan Karame, Zongren Liu and Christian A. Reuter**, Outsourced Proofs of Retrievability
<http://dl.acm.org/citation.cfm?id=2660310>

As in previous years, the program of CCS includes several co-located workshops. We expect that the CCS submission rate and attendance to remain high in future years.

Starting in 2001, SIGSAC launched a second major annual conference called the ACM Symposium on Access Control Models and Technologies (SACMAT). The first three meetings were held in Chantilly, Virginia; Monterey, California; and Como, Italy. From 2002, SACMAT meetings have been co-located with the IEEE International Workshop on Policies for Distributed Systems and Networks. The 2006 SACMAT was held in Lake Tahoe, California, in 2007 in Nice – Sophia Antipolis, France, in 2008 in Estes Park, Colorado, in 2009 in Stresa, Italy, in 2010 in Pittsburgh, Pennsylvania, in 2011 in Innsbruck, Austria, in 2012 in Newark, New Jersey, in 2013 in Amsterdam, The Netherlands, and in 2014 in London, Ontario, Canada. While the submission and acceptance rates were similar to 2013 edition, the 2014 edition saw a significantly smaller attendance than previous years (low 30s), although the conference submission rate roughly held steady (58 submissions). The attendance for SACMAT 2014 was down, however, from previous years (low 30s). SACMAT 2015 was held in Vienna, Austria, where 59 papers were submitted and 17 accepted, and the attendance returned to 55 attendees. The demo session, originated at SACMAT 2012, was also held once again, and we expect it

to continue. In SACMAT 2015, we held a PhD Consortium for first time, which encourages PhD students to obtain feedback about their expected research. Four students' proposals were selected for presentation, and each was able to attend SACMAT for free. We plan to explore this again in 2016.

In 2014, SIGSAC held the seventh instance of its third major conference, namely ACM Symposium on Information, Computer and Communications Security (ASIACCS), in Kyoto, Japan on June 4-6, 2014. The first ASIACCS was held in Taipei, Taiwan on March 21-23, 2006, the second was held in Singapore on March 22-24, 2007, the third in Tokyo, Japan on March 18-20, 2008, the fourth in Sydney, Australia on March 10-12, 2009, the fifth in Beijing, China on April 13-16, 2010, the sixth in Hong Kong on March 22-24, 2011, the seventh in Seoul, South Korea on May 2-4, 2012, and the eighth in Hangzhou, China on May 8-10, 2013. The 2014 edition of the conference received 255 submissions (a record) and accepted 42 regular papers and 8 short papers yielding an acceptance rate of 20%. The increased number of submissions suggests that there is a sustained interest in the information security area outside North America. ASIACCS 2015 was held in Singapore with Gail-Joon Ahn and Jianying Zhou serving as PC Co-Chairs. There were 48 full papers, 14 short papers and 7 posters selected from the new record of 269 submissions. The ASIACCS 2016 edition will be held in Xi'an, China with XiaoFeng Wang and Xinyi Huang serving as PC Co-Chairs. The timing of this edition will be coordinated with ACM SACMAT as described above. The ASIACCS 2017 edition will be held in Melbourne, Australia with Xun Yi being the PC co-chair from Asia and the other co-chair is TBD.

The Wireless Network Security Conference (WISEC) was started in Alexandria, Virginia, on March 31-April 2, 2008. This conference merged two successful ACM workshops, namely WiSec (held in conjunction with Mobicom) and SASN (held in conjunction with CCS) in the US, and a successful European workshop (ESAS) held in conjunction with ESORICS in Europe. In 2009, WISEC was held in Zurich, Switzerland. In 2010 the conference was held in Hoboken, New Jersey on March 22-24, 2010. In 2012 the conference was held in Hamburg, Germany on June 14-17, 2011. In 2012 the conference was held Tucson, Arizona, USA on April 16-18. Starting from 2012 the conference has been renamed Conference on Security and Privacy in Wireless and Mobile Networks (WiSec). In 2013 the conference was held in Budapest, Hungary on April 17-19, 2013, the 2014 conference was held in Oxford, UK on July 23-25, 2014, and the 2015 conference was held in New York City, NY, USA on June 24-26, 2015. In the 2015 conference, 16 regular papers (and 9 short papers) were accepted out of 83 submissions for a 19% acceptance rate.

SIGSAC launched its fifth major conference in February 2011. This new conference focuses data and applications security and privacy. The inaugural edition of the ACM Conference on Data and Applications Security and Privacy (CODASPY 2011) was held February 21-23, 2011 in Hilton Palacio Del Rio, San Antonio, Texas. The second edition of CODASPY has also been held in San Antonio, Texas, in February 2012. The 2013 edition of CODASPY was also held in San Antonio, Texas, in February 28-20, 2013 and has been expanded to include posters. The 2014 and 2015 editions of the conference were also held in San Antonio. In 2015, 19 full papers and 8 short papers were accepted for the conference out of submissions, and the 2015 edition also continued the practice of holding a poster session. The 2016 edition of the conference will be the first to be held in a location other than San Antonio – moving to New Orleans. The PC Chair will be Alexander Preschner.

2. SIGSAC PUBLICATION INITIATIVES

ACM Transactions on Information and Systems Security (TISSEC) remains our major journal venue for research publications. Interest in the area of privacy has motivated extension of this journal to include the area of privacy as well, resulting in a change in the name of the journal to *ACM Transactions on Privacy and Security* (TOPS). Dr. Gene Tsudik's term as EIC of TISSEC has expired and a search is ongoing for a new EIC. We do not expect to sponsor another journal for the foreseeable future.

3. SIGSAC SPECIAL PROJECTS

The establishment of the SIGSAC Doctoral Dissertation Award for Outstanding PhD Thesis in Computer and Information Security has been completed; this project started in 2010. This annual award by SIGSAC will recognize excellent research by doctoral candidates in the field of computer and information security. The SIGSAC Doctoral Dissertation Award winner and up to two runners-up will be recognized at the ACM CCS conference. The award winner will receive a plaque, a \$1,500 honorarium and a complimentary registration to the current year's ACM CCS Conference. The runners-up each will receive a plaque. The first edition of the award was presented at CCS 2014. The chair of the SIGSAC Doctoral Dissertation Award committee, Paul Syverson, and the committee received six nominated PhD theses, of which the following were chosen as winner and two runners-up.

- **Winner: Marek Jawurek**, *University of Erlangen-Nürnberg*, Privacy in Smart Grids
- **Runner-Up: Sadia Afroz**, *Drexel University*, Deception in Authorship Attribution
- **Runner-Up: Christian Wachsmann**, *Technische Universität Darmstadt*, Trusted and Privacy-Preserving Embedded Systems

For the 2015 version of this award again six PhD theses have been nominated. This year's committee is being chaired by Florian Kerschbaum who was a significant collaborator of the 2014 winner.

4. AWARDS

The two SIGSAC awards started in 2005. The 2005 Outstanding Innovation Award was given to Dr. Whitfield Diffie of SUN Microsystems, and the Outstanding Contribution Award was given to Dr. Peter G. Neumann of SRI International. In 2006, the Outstanding Innovation Award was given to Dr. Michael Schroeder of Microsoft Research and the Outstanding Contribution Award was given to Dr. Eugene Spafford of Purdue University. The 2007 Outstanding Innovation Award was given to Dr. Martin Abadi of the University of California, Santa Cruz (and Microsoft Research) and the Outstanding Contribution Award was given to Professor

Sushil Jajodia of George Mason University. The 2008 Outstanding Innovation Award was given to Professor Dorothy Denning of Naval Postgraduate School and the Outstanding Contribution Award was given to Professor Ravi Sandhu of the University of Texas at San Antonio. The 2009 Outstanding Innovation Award was given to Dr. Jonathan Millen of The MITRE Corporation, and the Outstanding Contribution Award was given to Dr. Carl Landwehr of the University of Maryland. The 2010 Outstanding Innovation Award was given to Dr. Jan Camenisch of IBM Research, Zurich, and the Outstanding Contribution Award was given to Professor Bhavani Thuraisingham of The University of Texas at Dallas. The 2011 Outstanding Innovation Award was given to Professor Virgil Gligor of Carnegie Mellon, and the Outstanding Contribution Award was given to Professor Ravishankar Iyer of The University of Illinois at Urbana-Champaign. The 2012 Outstanding Innovation Award was given to Professor Ravi Sandhu of University of Texas at San Antonio, and the Outstanding Contribution Award was given to Dr. Robert Herklotz of the Airforce Office for Scientific Research. The 2013 Outstanding Innovation Award was given to Professor Adrian Perrig of Carnegie-Mellon University and ETH Zurich, and the Outstanding Contribution Award was given to Professor Karl Levitt of UC Davis. The 2014 Outstanding Innovation Award was given to Dr. Moti Yung of Google and Columbia University, and the Outstanding Contribution Award was given to Professor Elisa Bertino of Purdue University.

5. ACM DIGITAL LIBRARY

The ACM Digital Library has become an important source of revenue for all SIGs. With the addition of several workshop proceedings, SIGSAC received a healthy share of the total revenue. SIGSAC will seek new ways to add to the library's content (such as collecting speakers' slides and videos of conference invited talks, tutorials, and paper presentations) to strengthen and broaden its appeal to all subscribers. To increase awareness of SIGSAC and access to the digital library among the security community, SIGSAC plans to include SIGSAC membership with the registration for ACM CCS 2014 (opt-out is permitted, but default is opt-in). Over 150 participants opted-in for membership, but with the extension of Open-TOC to persist for more than one year from the conference, as approved by the ACM Pubs Board, SIGSAC simply plans to host its content for all SIGSAC conferences via Open-TOC in the future. We will have to examine the impact of Open-TOC on SIGSAC's DL revenue and alternatives for content. However, the security community in general strongly advocates open access for its publications.

6. ELECTIONS AND EXECUTIVE COMMITTEE

Following the elections held in 2013, the following officers started their terms on July 1, 2013: Professor Trent Jaeger of Pennsylvania State University (Chair), Professor Ninghui Li of Purdue University (Vice-Chair), and Professor Barbara Carminati of University of Insubria, Italy (Treasurer).

According to the bylaws of SIGSAC, the executive committee starting from July 2013 consists of the elected officers and the previous SIGSAC Chair, Professor Elisa Bertino. The chair of the executive committee is Professor Trent Jaeger.

7. POLICIES

SIGSAC has put in place a policy concerning simultaneous submissions of manuscripts to conferences, symposia, and workshops sponsored by SIGSAC. Under this policy (posted at the SIGSAC web site: <http://www.sigsac.org/submissions.html>), the authors of manuscripts violating the simultaneous submission policy will be banned for two years from submitting manuscripts to any conference, symposium and workshop sponsored by SIGSAC.

8. SUMMARY

SIGSAC is in excellent shape both in terms of successful technical activities and financially. We expect that, in the coming years, SIGSAC will continue to sustain and build on existing activities.

SIGSAM FY '15 Annual Report
July 1 2014 – June 2015
Prepared by: Ilias S. Kotsireas, Chair

During the second year of my tenure as SIGSAM Chair I was able to make headway in a number of initiatives and SIGSAM activities and projects:

- (1) The major overhaul of the www.sigsam.org webpage was completed, largely due to the tenacious efforts of the new SIGSAM Information Director that I appointed, Dr. Matthew England, from the University of Coventry in the UK.
- (2) I was able to successfully nominate for the second time a candidate for the ACM-W Athena Award.
- (3) The ACM Communications in Computer Algebra is being published on time so far and I believe this will continue to be the case due to the tireless efforts of the new Editor that I appointed, Dr. Eugene Zima, from Wilfrid Laurier University in Canada. The CCA is published quarterly; however, only two double-issues are printed and mailed per year, with the four electronic issues appearing through the digital library and the SIGSAM website.
- (4) SIGSAM established a presence on Twitter, via the Twitter account [@acm_sigsam](https://twitter.com/acm_sigsam). This Twitter account will tweet SIGSAM news and announcements; and retweet stories, events and announcements of interest to SIGSAM members and to the Symbolic Computation community in general. The Chief SIGSAM Tweeter is Dr. Alexander Kononov from The University of St Andrews, UK.
- (5) There are some new SIGSAM members since July 2014.
- (6) The SIGSAM membership increase campaign has been initiated by distributing a letter I wrote to the participants of ISSAC 2015 held in Bath and ACA 2015 held in Kalamata. I plan to continue the distribution of the letter to the participants of other upcoming conferences such as the MACIS 2015 conference that will be held in Berlin. I also plan to mail copies of the letter to individual researchers.

ECCAD conference series (East Coast Computer Algebra Day)

I would also like to report that the ECCAD conference series has decided to place itself under the aegis of SIGSAM from now on. This means that the central repository for the ECCAD conference series will be permanently hosted on the SIGSAM webpage. In addition, the SIGSAM Chair will be an ex-officio member of the ECCAD Steering Committee, along with several previous ECCAD organizers.

Fields Institute Thematic Program in Computer Algebra

Several SIGSAM members (including myself) are actively involved with the Fields Institute Thematic Program in Computer Algebra <https://www.fields.utoronto.ca/programs/scientific/15-16/computeralgebra/>

The thematic program focuses on current and emerging areas of importance in computer algebra: symbolic linear algebra, algorithms for algebraic and semi-algebraic geometry, hybrid symbolic-numeric computing, algorithms for differential algebra and symbolic combinatorics, and the area of computer-enhanced mathematical collaboration and certified algorithms. The thematic program includes 3 workshops, a Coxeter Lecture by Victor Shoup (NYU), a graduate course in Computer Algebra and welcomes long term visitors such as PhD students, postdoctoral fellows and faculty.

Awards that were given out

ISSAC 2015 was held in Bath, England <http://www.issac-symposium.org/2015/> and two SIGSAM awards were given out:

ISSAC 2015 Distinguished paper award:

Jean-Guillaume Dumas, Clément Pernet and Ziad Sultan - Computing the rank profile matrix

Citation:

This paper studies forms of elimination that reveal the dependence structure of matrix rows, columns, or both simultaneously, significantly extending previous work. The authors categorize the forms of elimination including the permutation properties needed in pivot selection and placement to preserve the rank profile properties under various iterative and block approaches. In the course of this, a new strategy emerges to serve as a base case and substantially speed up rank profile preserving tiled elimination. The work is of particular significance because Gaussian elimination and the associated matrix factorization lie at the heart of a great deal of linear algebra, particularly in Computer Algebra.

ISSAC 2015 Distinguished Student Author award:

Sébastien Maulat - Formulas for Continued Fractions: An Automated Guess and Prove Approach (with Bruno Salvy)

Citation:

The results of this paper are symbolic computation at its best, showing new ways for computers to discover and prove mathematical formulas, studied before for centuries. The paper gives a new algorithmic understanding of a classical problem, finding formulas for the continued fraction expansions of special functions. It is a completely new approach, and it turns insights from experimentation into algorithms, partially heuristic, but with algorithmic proof of correctness. This paper may be a start for a line of new research.

SIGSIM FY '15 ANNUAL REPORT
July 2014 – June 2015
Submitted By: Paul Fishwick, Chair

1. Awards

NOTE: no ACM Distinguished Contributions Award given (committee convened and reviewed candidates).

ACM SIGSIM Best PhD Student Paper Award 2015, London, June 2015.

9 Travel Awards to PhD students to attend WSC @ \$1K each as available based on receipts provided by students to ACM HQ. An amount up to \$1K was provided.

5 Travel Awards to PhD students to attend the 3rd ACM SIGSIM-PADS Conference in London, UK (June 2015) – similar to WSC payment (up to \$1K each based on expenses).

SIGSIM Awards are documented here:

<http://www.acm-sigsim-mskr.org/awards.htm>

2. Significant Papers

The Best Paper student paper award given at the 2014 Winter Simulation Conference co-sponsored by ACM SIGSIM:

<http://www.acm-sigsim-mskr.org/bestPhDpaperAwardRecipients.htm>

3. Significant Programs

- Increasing student travel awards for SIGSIM-PADS and WSC conferences
- Continued expansion of MSKR: www.sigsim.org (Balci, Editor in Chief)

4. Innovative Programs

- SIGSIM Digest started 08/14: www.modelingforeveryone.com (Fishwick, Chair). Current Subscribers: 57
- Twitter feed started 02/15 (Loper, Vice Chair), Current Followers: 204

5. Events or programs that broadened participation either geographically, or among under-represented members of your community

None added during performance period.

6. Key issues

- a) Improving benefits to becoming a SIGSIM member

We are shifting the Simulation Digest Blog to be “member only” by changing the hosting from modelingforeveryone.com to an ACM hosting machine.

- b) Increasing the registration for the annual SIGSIM-PADS conference

SIGSIM-PADS conference running in the black from a fiscal perspective. A new strategy to start for SIGSIM-PADS 2016 is to provide free one year SIGSIM membership for everyone who attends the conference. We hope this will help to increase the number of registrants.

SIGSOFT FY '15 Annual Report
July 2014 – June 2015
Submitted by: Will Tracz, Past Chair

ACM's Special Interest Group on Software Engineering (SIGSOFT) had another excellent year, both technically and financially in 2014-15. This report provides a summary of key SIGSOFT activities over the past year.

AWARDS THAT WERE GIVEN OUT

SIGSOFT has a large awards program that recognizes the many achievements of the software engineering community (see our home page for the most recent awardees <http://www.sigsoft.org/>).

Our prestigious service, research and education awards were presented again this year at the International Conference on Software Engineering (ICSE) 2015 in Florence, Italy. The recipients are as follows:

- The **ACM SIGSOFT Distinguished Service Award** was presented to: Bashar Nuseibeh from The Open University and Lero – The Irish Software Research Centre, “For promoting and expanding the field of software engineering through visionary leadership of the Impact Project and for bringing the community to China, and China into the community, by organizing ICSE 2006 in Shanghai, as well as sustained editorial, program, and award committee service.”
- The **ACM SIGSOFT Outstanding Research Award** was presented to Carlo Ghezzi from DEIB, Politecnico di Milano, “For key service contributions to the software engineering community, including major editorial responsibilities in top journals and successful chairing of major technical events.”
- The **ACM SIGSOFT Influential Educator Award** was presented to Barbara Ryder from the Virginia Tech “For significant contributions in software engineering education, graduate student and faculty mentoring and efforts to improve the representation of women.”
- At ICSE 2015 we also recognized new ACM Senior Members, ACM Distinguished Members and ACM Fellows for 2015 from the SIGSOFT community.
 - The new **ACM Senior Members** are Eduardo Almeida, Manoel Gomes Mendonca, and Travis D. Breaux
 - **Distinguished Members:** Robyn Lutz was recognized as new ACM Distinguished Scientist. Jeff Gray and Judith Bishop were recognized as a Distinguished Educator.
 - This year there was only one SIGSOFT member who was named an **ACM Fellow** - Michael Ernst from the University of Washington “For contributions to software analysis, testing, and verification.”

The **SIGSOFT Impact Paper Award** recognizes a paper published in a SIGSOFT conference at least 10 years earlier that has had exceptional impact on research or practice. The 2015 SIGSOFT Impact Paper Award committee, led by Darko Marinov, selected the paper: “*Visualization of Test Information to Assist Fault Localization*” by James A. Jones, Mary Jean Harrold, John Stasko, from the Proceedings of the 24th International Conference on Software Engineering (ICSE '02).

This is the third year for the **ACM SIGSOFT Outstanding Doctoral Dissertation Award**, for the outstanding PhD dissertations in the field of software engineering. This year's award will be presented at ESEC/FSE 2015 to Muath Alkhalaf for his dissertation “Automatic Detection and Repair of Input Validation and Sanitization Bugs.” Alkhalaf completed his Ph.D. at the University of California, Santa Barbara, advised by Professor Tevfik Bultan.

Many of our sponsored meetings this year also presented ACM SIGSOFT Distinguished Paper Awards to the authors of a select number of their accepted papers. The awardees are listed in next section.

SIGNIFICANT PAPERS ON NEW AREAS THAT WERE PUBLISHED IN PROCEEDINGS

The problems and topics addressed in the papers presented at SIGSOFT meetings remain varied and timely. Software engineering researchers are increasing their application of techniques borrowed from other areas of computer science, particularly virtualization, mobile computing, and human/computer interaction. The acceptance rates have been around the 20-25% range with SIGSOFT Distinguished paper awards ratio being up to 1 award for every 10 accepted papers. The Foundations of Software Engineering (FSE 2014) was held November 16 - 21, 2014 in Hong Kong, China. It had 272 submissions with 74 papers accepted (27%) resulting in 6 Distinguished Paper Awards, of which the following provided innovative insights:

1. Klaus-Benedikt Schultis, Christoph Elsner, and Daniel Lohmann, **Architecture Challenges for Internal Software Ecosystems: A Large-Scale Industry Case Study**
2. Annie T.T. Ying and Martin P. Robillard, **Selection and Presentation Practices for Code Example Summarization**
3. Miltiadis Allamanis, Earl T. Barr, Christian Bird, and Charles Sutton, **Learning Natural Coding Conventions**
4. Mingxing Zhang, Yongwei Wu, Shan Lu, Shanxiang Qi, Jinglei Ren, and Weimin Zheng, **AI: A Lightweight System for Tolerating Concurrency Bugs**

The International Conference on Software Engineering (ICSE 2015) was held May 16 - 24, 2015 in Florence, Italy had 452 submissions from more than 1200 authors and 37 countries with 84 papers selected for presentation (18.5%). The following papers were recipients of the Distinguished Paper Awards:

1. Janet Siegmund, Norbert Siegmund, and Sven Apel: **Views on Internal and External Validity in Empirical Software Engineering**

2. Michael Waterman, James Noble, and George Allan: **How Much Up-Front? A Grounded theory of Agile Architecture**
3. Michele Tufano, Fabio Palomba, Gabriele Bavota, Rocco Oliveto, Massimiliano Di Penta, Andrea De Lucia, and Denys Poshyvanyk: **When and Why Your Code Starts to Smell Bad**
4. Aleksandar Milicevic, Joseph P. Near, Eunsuk Kang, and Daniel Jackson: **Alloy: A General-Purpose Higher-Order Relational Constraint Solver**
5. Mathieu Lavallee and Pierre N. Robillard: **Why Good Developers Write Bad Code: An Observational Case Study of the Impacts of Organizational Factors on Software Quality**
6. Adrian Nistor, Po-Chun Chang, Cosmin Radoi, and Shan Lu: **CAMEL: Detecting and Fixing Performance Problems That Have Non-Intrusive Fixes**

The International Symposium on Software Testing and Analysis (ISSTA 2014) was held July 21-25, 2014, San Jose, California had the following three Distinguished Paper Awards based on 128 submissions of which 36 were accepted (28%).

1. Omer Tripp, Pietro Ferrara, and Marco Pistoia, **Hybrid Security Analysis of Web JavaScript Code via Dynamic Partial Evaluation**
2. Rongxin Wu, Hongyu Zhang, Shing-Chi Cheung, and Sunghun Kim, **CrashLocator: Locating Crashing Faults Based on Crash Stacks**
3. René Just, Michael D. Ernst, and Gordon Fraser, **Efficient Mutation Analysis by Propagating and Partitioning Infected Execution States**

SIGNIFICANT PROGRAMS THAT PROVIDED A SPRINGBOARD FOR FURTHER TECHNICAL EFFORTS

SIGSOFT has two software engineering education programs – one targeted toward students and the second focused on educators. Students receive discounted membership rates and registration fees at all SIGSOFT-sponsored conferences and workshops. In addition, our two flagship conferences: ICSE and ESEC/FSE (as well as ISSTA) offer a Doctoral Symposium where students are mentored by experienced Software Engineering professors. Also, SIGSOFT provides travel support to SIGSOFT sponsored or co-sponsored conferences or workshops for graduate and undergraduate students who are SIGSOFT members through the Conference Aid Program for Students (CAPS) – <http://www.sigsoft.org/CAPS/>. Attendance at conferences and workshops to present papers and to interact with researchers and practitioners in software engineering is an important component of students' education and professional development. Moreover, students' presence at conferences and workshops enriches and broadens conference and workshop activities. Conferences and workshops are also a good way to introduce students to the services of SIGSOFT. In FY 2015 over \$705K of grants were given to 71 graduate and 6 undergraduate students (out of 131 requests).

- At ICSE 2015 we are able to fund 56 out of 59 applications.
- 16 from Europe
- 11 from Canada
- 19 from US
- 2 from Brazil
- 6 from Asia (China, Japan, India)
- One from New Zealand and from Australia

SIGSOFT holds Software Engineering Educators Symposium (SEES) in non ESEC/FSE years. It consists of two half-day tutorials covering approaches for teaching programming and software engineering to undergraduates. Symposium participants are provided access to instructional materials, receive practical tips on how to successfully apply the approaches, and learned about tools that support hands-on instruction and active learning. ACM SIGSOFT provided funding for this year's FSE in Hong Kong bringing together Asian software engineering educators.

INNOVATIVE PROGRAMS WHICH PROVIDE SERVICE TO SOME PART OF THE TECHNICAL COMMUNITY

To better serve the Software Engineering technical community, SIGSOFT extended the resources it provides to its members by:

- 1) Creating an Early Career Award that recognizes individuals whose last computer-related educational degree (i.e., baccalaureate, masters, or doctorate degree) was awarded no earlier than 7 years ago at the time of nomination.
- 2) Funding the establishment of a CAPS Application Web Site to streamline the processing of applications. This included providing for room sharing options that could increase the effectiveness of CAPS student funding.
- 3) Starting the SIGSOFT Webinar Series in June with three webinars that had over 1000 registrants. The webinars are archived and open to the general software engineering community. The webinars are based on the Future of Software Engineering Track at ICSE 2014 as well as recent keynote addresses and workshop summaries.
- 4) Creating a web page (<http://www.sigsoft.org/resources/opentoc.html>) accessible through the SIGSOFT home page with the table of contents and ACM Authorizer links to over 80 ACM conferences. This provides free access to the proceeding's papers maintained in the ACM DL for a one year period from the conference start date.
- 5) Funding the establishment of a series of Symposia in collaboration with local research communities and targeted at South American students and young researchers in order to have a record number of South American submissions, acceptances, and attendance to all ICSE 2017 tracks. These events are organized in conjunction with, amongst others, CibSE - the Ibero-American Conference on Software Engineering, the Brazilian Symposium on Software Engineering, the Argentinian Symposium on Software Engineering, and the annual meeting of the Chilean Computer Society.

BROADENING PARTICIPATION EVENTS/PROGRAM

In order to increase participation in SIGSOFT-sponsored events and increase/retain membership, we:

- Offered free online student memberships to students attending FSE 2014. A total of 31 students took advantage of this offer
- Established a SIGSOFT Chapter in India (iSoft) and created a liaison position on the SIGSOFT EC. In addition we offered free online access to the iSoft members to the SIGSOFT Newsletter and created a distribution list for its members to receive SIGSOFT announcements.
- Added two \$10K projects to the 2015 budget to support yet to be determined projects.
- Planned for the first SIGSOFT Town Hall meeting at ISSTA (Town Hall meetings previously had been held only at ICSE and ESEC/FSE)
- Started laying the foundation for creating a SIGSOFT Chapter in China.

BRIEF SUMMARY OF KEY ISSUES FACING THE SIGSOFT MEMBERSHIP

Challenges for the years to come include:

- Increasing the number of award nominations
- Reducing conference/workshop registration fees
- Providing more resources to practitioners
- Increasing use of social media
- Finding more Webinar Speakers and Topics.
- Establishing a working relationship with Chinese and South American software engineering Researches.

SIGSPATIAL FY'15 Annual Report
July 2014 – June 2015
Submitted by: Mohamed F. Mokbel, Chair

1. SIGSPATIAL CONFERENCES AND WORKSHOPS

SIGSPATIAL's mission is to address issues related to the acquisition, management, and processing of spatially-related information with a focus on algorithmic, geometric, visual, and systems considerations. The scope includes, but is not limited to, geographic information systems (GIS). These issues have become increasingly important in terms of public awareness with the growing interest and use of online mapping systems such as Microsoft Virtual Earth and Google Maps and Google Earth as well as the integration of GPS into applications and devices such as, but not limited to, the iPhone and Android. Presently, SIGSPATIAL is fulfilling this mission by sponsoring high quality research conferences and workshops. As indicated by its mission, SIGSPATIAL's domain is much more than just geographic information systems and with this in mind it tries to differentiate its conferences and workshops from others by focusing on the computer science aspects of the field rather than on the available commercial products. In addition, a major concern and focus of the SIGSPATIAL leadership is keeping its flagship conference, the ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL GIS), affordable so that it can continue to be of good value to its attendees and be competitive price-wise with related conferences. SIGSPATIAL has been able to achieve this goal by being very active in soliciting sponsor contributions as well as being vigilant at minimizing SIGSPATIAL's financial exposure in terms of contractual obligations when planning the conference by building reserves that can be used in years when the financial climate is not so healthy.

2014 was the sixth year of SIGSPATIAL and its main activity was its flagship conference (ACM SIGSPATIAL GIS) that was held in Dallas, Texas, (November, 4-7, 2014). ACM SIGSPATIAL GIS 2014 was the twenty second event of an annual series of symposia and workshops with the mission to bring together researchers, developers, users, and practitioners carrying out research and development in novel systems based on geo-spatial data and knowledge. The conference fosters interdisciplinary discussions and research in all aspects of spatial systems including but not limited to Geographic Information Systems and Science (GIS) and provides a forum for original research contributions covering all conceptual, design, and implementation aspects of GIS and ranging from applications, user interface considerations, and visualization to storage management, indexing, and algorithmic issues.

This was the seventh time that the conference was held under the auspices of the new ACM Special Interest Group on Spatial Information (SIGSPATIAL). The conference program attracted 307 attendees (including 130 students). The technical program lasted for two and half days, and based on the feedback of the participants, we can conclude that the conference was very successful in terms of new ideas presented and level of interaction provided.

The call for papers led to 216 paper submissions over three tracks: research, PhD showcases, and demos. The research paper track attracted 184 research paper submissions, of which 39 were accepted as full papers, 36 were accepted as poster papers. The Ph.D. Showcase track received three submissions, of which none is accepted, while the demonstrations track received 29 submissions, of which 18 were accepted. The submissions were reviewed by a program committee of 120 members, including three chairs, 16 meta-reviewers, and 101 members. Each paper was reviewed by at least three reviewers. The meta-reviewers receive the reviews from program committee members, and lead a discussion among the members to reach to a decision for each paper. The chairs oversee the whole process and reach to a conclusive decision for each paper in consultancy with the meta-reviewers. These numbers of submissions and program committee members indicate the continued health, interest, and growth of the research field of spatial information systems, and the need to bring its researchers, students, and industrial practitioners together.

The conference program featured two outstanding invited speakers:

1. Luc Vincent, Google, for a talk titled "Mapping the World with Street View".
2. Dinesh Manocha, University of North Carolina at Chapel Hill, for a talk titled "Interactive Crowd Simulation for Spatial Analysis of Indoor and Outdoor Environments".

The conference was run in a single track with one of the highlights being a fast forward poster session in the first afternoon where each poster author was given two minutes to present the highlights of their work to the audience. This was followed by a poster and Demo reception in the evening where the conference participants had an opportunity to interact with the poster authors. Poster paper authors were encouraged to do a good job by having two awards: one for best fast forward presentation and one for the actual poster. Demo paper authors were awarded a best demo award for a running prototype that the authors demonstrate. The poster and demo components of the conference proved to be very popular with both the conference audience and the poster and demo authors.

The conference also included a business meeting for SIGSPATIAL which was open to all SIGSPATIAL members as well as to all conference attendees. The meeting included a discussion of budgetary issues, plans for next year's conference, a discussion of some initiatives such as establishing a new track for vision papers, and soliciting feedback from members.

The conference was preceded by a workshop day with the following twelve workshops:

1. BIGSPATIAL 2014: The Third ACM SIGSPATIAL International Workshop on Analytics for Big Geospatial Data
General Chairs: Varun Chandola (University at Buffalo, USA), Ranga Raju Vatsavai (North Carolina State University, USA)

2. GeoCrowd 2014: The Third ACM SIGSPATIAL International Workshop on Crowdsourced and Volunteered Geographic Information
General Chairs: Rolf A. de By (University of Twente, Netherlands) and Carola Wenk (Tulane University, USA)
- 3- GeoPrivacy 2014: The First ACM SIGSPATIAL International Workshop on Privacy in Geographic Information Collection and Analysis
General Chairs: Carsten Kessler (City University of New York, USA), Grant D. McKenzie (University of California, Santa Barbara, USA), and Lars Kulik (University of Melbourne, Australia)
- 4- GIR 2014: The Eighth International Workshop on Geographic Information Retrieval
General Chairs: Ross Purves (University of Zurich) and Chris Jones (Cardiff University)
5. HealthGIS 2014: The Third ACM SIGSPATIAL International Workshop on the Use of GIS in Public Health
General Chairs: Daniel W. Goldberg (Texas A&M University, USA), Ori Gudes (Curtin University, Australia), and Yaron Kanza (Cornell Tech, USA)
6. ISA 2014: The Sixth ACM SIGSPATIAL International Workshop on Indoor Spatial Awareness
General Chairs: Sisi Zlatanova (TU Delft, Netherlands), Christophe Claramunt (Naval Academy, France), and Ki-Joune Li (Pusan National University, South Korea)
7. IWCTS 2014: The Seventh ACM SIGSPATIAL International Workshop on Computational Transportation Science
General Chair: Xin Chen (HERE/Nokia, USA)
8. IWGS 2014: The Fifth ACM SIGSPATIAL International Workshop on GeoStreaming
General Chairs: Farnoush Banaei-kashani (University of Colorado Denver, USA), Chengyang Zhang (Teradata, USA), and Abdeltawab Hendawi (University of Washington Tacoma, SA)
9. LBSN 2014: The Seventh ACM SIGSPATIAL International Workshop on Location-Based Social Networks
General Chair: Alexei Pozdnoukhov (UC Berkeley, USA) and Sen Xu (Twitter, USA)
10. MapInteract 2014: The Second ACM SIGSPATIAL International Workshop on Interacting with Maps
General Chairs: Falko Schmid (GuidingPeople, OpenScienceMap.org), Chris Kray (University of Münster, Germany), and Holger Fritze (University of Münster, Germany)
11. MobiGIS 2014: The Third ACM SIGSPATIAL International Workshop on Mobile Geographic Information Systems
General Chairs: Chi-Yin Chow (City University of Hong Kong, Hong Kong), Maria Luisa Damiani (University of Milan, Italy), and Shashi Shekhar (University of Minnesota, USA)
12. SIGSPATIAL PhD 2014: The First ACM SIGSPATIAL PhD Symposium
General Chairs: Ugur Demiryurek (University of Southern California, USA) and Mohamed Sarwat (Arizona State University, USA)

This year's conference was generously co-sponsored by NSF, ESRI, Google, Microsoft, Oracle, Facebook, NVIDEA, and Yandex, whose participation and generosity demonstrated what can be accomplished by a successful partnership between academia and industry. Some of the sponsors held a recruiting table for potential students during one day of the conference.

The SIGSPATIAL leadership is currently planning for the 2015 ACM SIGSPATIAL GIS Conference that will be held in Settle, WA on November 3-6, 2015 with as many as 13 workshops on November 3. It has already secured sponsorship from ESRI, Microsoft, and Google. SIGSPATIAL has also applied for support from the National Science Foundation (NSF) in the amount of around \$25K and plan to use these funds to offer 25-30 student travel grants.

2. SIGSPATIAL PUBLICATION INITIATIVES

In 2014, we have revamped the structure of the SIGSPATIAL Special Newsletter and have appointed a new editor, Chi-Yin Chow (City University of Hong Kong, Hong Kong). The newsletter appears three times a year in March, July, and November. Starting from July 2014, each issue has become a special issue concerned with one evolving topic of interest to the research community. The newsletter editor recruits prominent associate editors for each issue. The associate editor invites selected articles to the topic of interest for the special issue.

In 2013 the ACM Transactions on Spatial Algorithms and Systems (ACM TSAS) started to review submissions for publication. This is a slow process as TSAS must decide whether the submissions fit its scope which at times is not an easy task. A number of articles have already been accepted for publication but more are needed so as to establish a backlog. We are also attempting to identify some top papers that appeared in the SIGSPATIAL Conference in past years whose authors will be invited to submit expanded versions for consideration for publication in a special "best conference papers" issue should a sufficient number be identified and accepted after undergoing a review. It is hoped to start publication sometime in 2015.

3. AWARDS

In 2014, SIGSPATIAL continued to offer a Best Paper Award. The ad hoc 2013 ACM SIGSPATIAL GIS Best Paper Award committee consisting of the program committee chairs and several additional members selected the following paper for the best paper award:

Path-based Queries on Trajectory Data

Benjamin Krogh (Aalborg University, Denmark), Nikos Pelekis (University of Piraeus, Greece), Yannis Theodoridis (University of Piraeus, Greece), Kristian Torp (Aalborg University, Denmark)

Awards were also made at the conference by ad hoc committees for the best demo presentation, the best poster paper presentation, and the best fast forward poster presentation.

Best Demo Paper Presentation:

Routing Service With Real World Severe Weather

Abdeltawab Hendawi (University of Washington, Tacoma, USA), Yiru Li (University of Washington, Tacoma, USA), Sarah George (University of Washington, Tacoma, USA), Craig Apfelbeck (University of Washington, Tacoma, USA), Mohamed Ali (Microsoft Corporation, USA), David Hazel (University of Washington, Tacoma, USA), Ankur Teredesai (University of Washington, Tacoma, USA)

Best Demo Presentation Runner-up:

A GIS-based Serious Game Interface for Therapy Monitoring

Ahmad Qamar (College of Computer and Information Systems, Umm Al-Qura University, Makkah, Saudi Arabia), Imad Afyouni (KACST GIS Technology Innovation Center, Umm Al-Qura University, Makkah, Saudi Arabia), Mohamed Abdur Rahman (College of Computer and Information Systems, Umm Al-Qura University, Makkah, Saudi Arabia), Faizan Ur Rehman (Department of Computer Science, LIG, University of Grenoble Alpes, France), Delwar Hossain (KACST GIS Technology Innovation Center, Umm Al-Qura University, Makkah, Saudi Arabia), Saleh Basalamah (Umm Alqura University, Saudi Arabia), Ahmed Lbath (Department of Computer Science, LIG, University of Grenoble Alpes, France)

Best Poster Paper Presentation:

Electric and Conventional Vehicle Driving Patterns

Benjamin Krogh (Aalborg University, Denmark), Ove Andersen (Aalborg University, Denmark), Kristian Torp (Aalborg University, Denmark)

Best Poster Presentation Runner-up:

BioenergyKDF: Enabling Spatiotemporal Data Synthesis and Research Collaboration

Aaron Myers (Oak Ridge National Laboratory, USA), Sunil Movva (Cerner Corporation, USA), Rajasekar Karthik (Oak Ridge National Laboratory, USA), Budhendra Bhaduri (Oak Ridge National Laboratory, USA), Devin White (Oak Ridge National Laboratory, USA), Neil Thomas (Oak Ridge National Laboratory, USA), Adrian Chase (Arizona State University, USA)

Best Fast Forward Poster Paper Presentation:

Towards Knowledge-Enriched Path Computation

Georgios Skoumas (National Technical University of Athens, Greece), Klaus Arthur Schmid (Ludwig-Maximilians-Universität München, Germany), Gregor Jossé (Ludwig-Maximilians-Universität München, Germany), Andreas Züfle (Ludwig-Maximilians-Universität München, Germany), Mario Nascimento (University of Alberta, Canada), Matthias Renz (Ludwig-Maximilians-Universität München, Germany), Dieter Pfoser (George Mason University, USA)

Best Fast Forward Poster Paper Presentation Runner-up:

A data driven approach to mapping urban neighborhoods

Paul Brindley (The University of Nottingham, UK), James Goulding (The University of Nottingham, UK), Max L. Wilson (The University of Nottingham, UK)

4. ACM DIGITAL LIBRARY

SIGSPATIAL plans to expand its presence in the ACM Digital Library by soliciting workshop proposals both in its role as a sponsor and on an in cooperation status. This can be seen by the increased number of workshops that it sponsored in 2014. In 2015, SIGSPATIAL was proactive in soliciting workshop proposals and designated its Treasurer, Egemen Tannin, as the Workshops Chair. He successfully created a uniform framework for them with a program of 13 concurrent workshops.

5. SIGSPATIAL CHAPTERS

SIGSPATIAL has four Chapters: SIGSPATIAL Australia, SIGSPATIAL China, SIGSPATIAL Korea, and SIGSPATIAL Taiwan. These chapters are representative of the amount in interest in SIGSPATIAL from members in these regions and are reflected by their participation in the flagship conference as authors and attendees.

6. PLANS FOR THE 2015 FISCAL YEAR

SIGSPATIAL is working hard to fulfill its mission of sponsoring high quality research conferences and workshops. It will continue to be more proactive in soliciting workshops in emerging areas, e.g., we had 12 successful workshops in 2014, two of them were new ones addressing new emerging issues.

We will continue to seek out more sponsors and try to devise activities that will increase its attractiveness to the potential sponsors. We are planning to continue the company recruiting event which was very successful in the last two years. We will continue to enrich the sponsors program to make it attractive to industrial partners. We strive to continue to maintain, as well as build on, the momentum of its first seven years of existence.

7. ELECTIONS and OFFICERS

SIGSPATIAL held its elections for officers in Summer 2014. The elected officers for the three year term running from July 1, 2014 through June 30, 2017 were:

Chair: Mohamed F. Mokbel, University of Minnesota
Vice-Chair: Shawn Newsam, University of California Merced
Secretary: Roger Zimmermann, National University of Singapore
Treasurer: Egemen Tanin, University of Melbourne

According to the SIGSPATIAL bylaws, the past SIGSPATIAL chair is also a member of the EC.
Past Chair: Walid G. Aref, Purdue University

The SIGSPATIAL EC has appointed the following two more officers:

Newsletter Editor: Chi-Yin Chow (City University of Hong Kong, Hong Kong)
Webmaster: Ibrahim Sabek (University of Minnesota)

SIGUCCS FY'15 Annual Report
July 2014 – June 2015
Submitted by: Mathew Felthousen, Chair

For more than 50 years SIGUCCS (Special Interest Group for University and College Computing Services) has been an "association of professionals who support and manage the diverse aspects of information technology services in higher education institutions" (SIGUCCS Bylaws, Article 1). For more than 40 years SIGUCCS has held at least one conference per year, which currently consists of the Management Symposium and the Service & Support conference being held consecutively. After the third year of this format, we began to evaluate the success of this conference model, and starting with the fourth year began implementing changes to the format and content. With 2015 we have rearranged the order of proceedings to make for a more natural progression of content, and for 2016 we will fully integrate the two portions of the conference.

The Executive Committee members for 2014-2015 (Chair, Mat Felthousen; Vice Chair/ Conference Liaison, Melissa Bauer; Secretary, Beth Rugg; Treasurer, Allan Chen; Information Director, Laurie Fox; and Past Chair Kelly Wainwright) began their three-year term of office. Beth Rugg retained her appointed role as Professional Development Coordinator from the previous Board. Trevor Murphy completed his appointment as Communication Awards Chair with the Fall 2014 conference, and Lisa Brown has been appointed for the 2015-2017 term. The appointed role of Chair of the Marketing Committee remains incorporated into the Information Director role, and is held by Laurie Fox.

Other volunteers, too numerous to name here, individually contribute their energy and ideas to the organization through their service on Conference and Program committees, on the Awards Committee, on the Membership and Marketing Committees, the Newsletter Committee, the Mentor/Mentee program, delivering webinars and as judges for the Communication Awards. Many of these individuals are listed in appropriate pages on the SIGUCCS web site (<http://www.siguccs.org>).

Awards and Grants

The SIGUCCS Awards Programs have been in place for nearly two decades. On January 1, 2015, Greg Hanek became Chair of the SIGUCCS Awards Selection Committee and Mike Yohe became Past Chair, following the rotation of the committee's membership as described at http://www.siguccs.org/awards_committee.shtml. Two new members, Jeanne Kellogg and Elizabeth Wagnon, replaced Tim Foley and Richard Nelson, who completed their service to the committee at the end of 2014. For descriptions of the awards programs, please go to: <http://www.siguccs.org/awards.shtml>.

Penny Crane Award for Distinguished Service – The Penny Crane Award for Distinguished Service was first awarded in 2000, and recognizes an individual's significant and/or multiple contributions to SIGUCCS, the IT profession, and/or higher education, over an extended period of time. Cindy Dooling was the recipient for 2014. For more information please go to: <http://www.siguccs.org/cindy-dooling.shtml>

Hall of Fame – The Hall of Fame awards were first awarded in 2000, and recognize nominated individuals who have contributed their time and energies to benefit SIGUCCS. Four individuals were inducted into the Hall of Fame in 2014: Robert Haring-Smith, Karen McRitchie, Parrish Nnambi, and Elizabeth Wagnon. For more information please go to: <http://www.siguccs.org/halloffame2014.shtml>

Conference attendance grants – The SIGUCCS Grant Program has been in place since the Fall 2008 conference, and provides partial support annually for individuals at institutions of higher education to participate in the SIGUCCS Conference. This support is funded by SIGUCCS, and consists of a full registration to the grantee's choice of either the Management Symposium or the Service and Support Conference; registration for one half-day workshop or executive seminar associated with the chosen portion of the conference; and three nights' accommodation at the conference hotel. In selecting grant recipients, we favor applicants from institutions that have not been represented at recent SIGUCCS conferences. This approach is intended to make the conferences more widely known, and to build future attendance. For more information please go to: <http://www.siguccs.org/grants.shtml>

The program completed its seventh year in 2014. The three awardees of this grant for the SIGUCCS 2014 Annual Conference were:

Andy Hogan, Keuka College
Barbara Long, WVNET
Eric Lemmons, Abilene Christian

Communications Awards - As has been the case since 1996, we held the Communications Awards competition in conjunction with our Conference. A description of these awards and the 2014 winners can be found at: <http://www.siguccs.org/Conference/2014/awards.shtml>. Trevor Murphy led judging for this competition, as the sitting Communications Awards Chair. The Communications Awards Committee is formed each year from the previous year's top award

winners in each category. Responsibility for the Communication Awards was turned over to Lisa Brown, who will chair the committee for 2015-2017.

As can be seen from the listing on the website, there need not be an award made in a category, even if there are submissions. Each year the categories in the competition are reviewed to ensure that they appropriately represent the range of communications currently used in higher education.

Conferences

The 4th SIGUCCS Annual Conference (<http://www.siguccs.org/Conference/2014/>) was comprised of a Management Symposium and the Service and Support Conference, and was held November 2-7, 2014 in Salt Lake City, Utah. The theme was "Building Your Own Destiny". The conferences occurred consecutively, giving attendees the opportunity to register for either, or both, parts of the conference. For the complete program, see <http://www.siguccs.org/Conference/2014/program.shtml>

The keynote speakers were:

- Management Symposium: Keith McIntosh, Associate Vice President for Information Technology Services (ITS) and Chief Information Officer (AVP/CIO), Ithaca College
- Joint Plenary for both Management Symposium and Service & Support Conference: Scott Christopher, Vice President of Speaking and Training, The Culture Works
- Service & Support Closing Plenary: [Phil Gerbyshak](#), Social Media Trainer

We were excited to present a motivational speaker collaboration of:

- Kirk Weisler (Chief Morale Officer)
- Brad Barton (NCAA academic and athletic All-American and the oldest man to break the 4:20 mile barrier)
- Jeff Civillico (a Las Vegas Headliner & Producer)
- Chad Hymas (inspirational speaker)

Preparations are currently underway for our fifth combined conference, which will happen November 9-13, 2015 at the Hilton St. Petersburg Bayfront in St. Petersburg, FL. The conference committee has chosen a theme of "Make Your Sun Shine" to inspire attendees to learn, grow and shine for their institution as well as themselves. See <http://www.siguccs.org/Conference/2015/> for more information.

Planning has begun for our 2016 Annual Conference, which will be held November 6-9 at the Embassy Suites in downtown Denver, CO. We have chosen the core committee.

Pre/Post Conference Workshops

We continue to offer pre- and post- conference workshops as part of the Annual Conference. These 2.5-hour interactive workshops focus on a variety of topics for an extended amount of time. In 2014, 2 Executive seminars and 3 Service and Support workshops were offered; 47 people attended these additional professional development opportunities.

Executive Seminars held prior to the Management Symposium:

- A Practical Approach to Service Catalog Management (Rae Ann Bruno, President, Business Solutions Training, Inc.)
- Facing a Decade of Profound Changes – Preparing our IT Organizations for Success (Justin Sipher, Vice President of Library and Information Technology, St. Lawrence University and Gene Spencer, CIO, Ursinus College)

Service & Support Workshops:

- The Kitchen Nightmare Approach to Continual Service Improvement (Rae Ann Bruno, President, Business Solutions Training, Inc.)
- Discovering Your Secret Sauce for Building and Implementing a Successful Strategy (Fred Damiano, Vice President of Strategic Initiatives and Chief Information Officer at Hobart and William Smith Colleges)
- Mastering the Art of Having Difficult Conversations (Tom Bachmann, Master Leadership Trainer, Paychex)

Webinars

SIGUCCS continued our offering of professional development webinars under the leadership of Professional Development Coordinator Beth Rugg. We have offered webinars that will help participants better understand the SIGUCCS organization, and on topics discussing current issues. From July 2014 - July 2015, we held 6 different webinars, each typically having an attendance of between 20-40 people, with over 150 total participants. Recordings of past webinars are available on the SIGUCCS web site at <http://www.siguccs.org/webinar.shtml>

We continue to use GoToMeeting's webinar service, which is also used for Board meetings and provides a versatile medium for SIGUCCS services and operations. In addition to webinars and board meetings it is used extensively for committee meetings, pre-conference orientation sessions for first-time attendees at the SIGUCCS Conference, and other on-line volunteer gatherings.

SIGUCCS Mentoring

As a way to expand our professional development opportunities for our membership, SIGUCCS established a mentoring program in 2013; we are now working with our third cohort of mentors and mentees. Applications for participation either as a mentor or a mentee are taken from SIGUCCS members in November; the advisory board reviews all requests in December and pairs mentees with mentors. The official "pairing" lasts from January through November culminating with a celebration at the annual conference.

For this session, we have 34 participants in the program, for a total of 17 pairings and 7 volunteers who serve on the mentoring advisory team.

The mentoring relationship officially lasts for 10 months, from January until November, although many pairs continue to maintain a relationship after the official end of the program. Throughout the program, peer support is offered to both the mentors and mentees through regular online hangouts. This program is actively monitored and evaluated and continues to be highly valued by participants, SIGUCCS membership and the Board. This program was also the inspiration for a similar program being established at American University.

SIGUCCS Marketing

The Marketing Committee exists to advance the SIGUCCS organization. This includes: assisting conference committees in promotion activities, assisting in the promotion of programming, such as webinars, and developing and advancing the SIGUCCS brand. The committee's responsibilities also include oversight and coordination of communications sent to the website, social media, newsletter, and mailing lists.

Projects of the committee this year included consolidating several email lists into one master list (SIGUCCS-L) hosted by ACM, creating a new volunteers page and survey to gather information from our members interested in participating in more SIGUCCS activities, creating an attendee profile for the annual conference, and refining the publicity log used by conference committees.

Our social network communities have all grown this year.

- Twitter: (<http://twitter.com/siguccs>) 284 followers (up from 184)
- Facebook Page: (<http://facebook.com/siguccs>) 129 page likes (not tracked in last year's report)
- Facebook Group: (<https://www.facebook.com/groups/siguccsfolks/>) 164 members (up from 63)
- LinkedIn Group: (<https://www.linkedin.com/grp/home?gid=1675517>) 4,737 members (up from 2223)

Local Chapters

A second local chapter was established this year, in Tokyo Japan. The first local chapter had previously been formalized in New York a few years ago, after having existed as an offshoot of SIGUCCS and meeting a few times a year for more than a decade.

One of the ongoing discussions for the past and current Executive Committees is how to foster the creation of additional local chapters, in order to increase the size of our community and provide options to schools that cannot otherwise attend the annual conference due to funding.

SIGUCCS Newsletter

The SIGUCCS newsletter was transformed into an online blog format using WordPress. This allows the SIG to publish timely articles more frequently. The digital stories will be archived annually into the library. The newsletter is available at <http://www.siguccs.org/wp/>

Special Projects; Viability Review, and Response

After the SIGUCCS Viability Review two years ago, at which time the SGB EC recommended, and the SGB approved, a two-year conditional approval, the previous and current SIGUCCS Executive Committees spent considerable time discussing and evaluating a response to the SGB.

In direct response to the SGB recommendation, SIGUCCS is evaluating our mission and processes. We have been working to better identify our membership and articulate their needs and the purpose of our SIG. Two significant changes have been set into motion; a reallocation of roles and responsibilities on the part of SIGUCCS leadership, and a restructuring of the conference format to better address the needs of attendees.

Roles and responsibilities

The election of a new Board, comprised of individuals with different strengths and backgrounds, allowed for a reallocation of appointed responsibilities. The responsibilities of the appointed Marketing Chair need to be closely coordinated with the efforts of the Information Director, an elected position. Laurie Fox currently holds both roles, and we will evaluate in the future whether this is a sustainable model.

The role of 'vendor chair' had shifted from the Executive Committee to the Conference Committee level over many years. With increased financial pressures there is a greater emphasis on larger, multi-year partnerships with exhibitors, making it important that the primary responsibility for exhibitor relations be handled at the Executive Committee level. First, Conference Committees by their nature are concerned with the matters directly related to the conference, and not always the long-term sustainability of relationships over multiple conferences. Second, negotiations for larger contributions requires a longer timespan than is available to a conference committee, as most companies have committed to their budgets before a Conference Committee is in place. Because exhibitor contributions are directly related to the financial health of the organization, Allan Chen, the Board Treasurer, now handles the role of vendor chair.

The appointed role of Professional Development Coordinator continues to be held by Beth Rugg, our Treasurer. We will evaluate whether this structure is sustainable with a different makeup of the Board in the future.

Finally, we intend to examine the role of awards in the organization. Historically the Awards Committee and Communication Awards Chair operated as separate entities; there is an opportunity to integrate the activities of the two, which would require a change to the bylaws. As such any change would be likely to take effect for the next Board term. Furthermore, there is a discussion about changing the categories for the Communication Awards to include more electronic formats, as opposed to the current emphasis on printed material.

Conference format

The restructuring of conference format has been a significant investment of time on the part of the Board, with discussions spanning more than a year. Over the course of the past 4 conferences, the SIGUCCS Executive Committee has monitored the success of 2 separate conferences held consecutively. We have interviewed previous conference committees, attendees, conducted a survey, and invited feedback during an open Board meeting during the 2014 conference. The survey of attendees from the past few years indicated that the majority of the attendees have a supervisory role at their institution. The responses from the attendees also indicated several other factors that led the Board to consider making changes to the conference format:

- Time away from home and the office was a deterrent; attending the full length of the conference required at least 6 days
- Expenses to attendees for the conference, including registration fees and lodging; reducing the length of the conference reduces travel costs
- Overlap of content between the Symposium and Conference; integrating the two would allow for a program that is targeted to IT professionals in Higher Education who are interested in topics on professional development and advancing on a career path

For 2015, we reversed the order of the conferences, allowing the larger majority of attendees to attend at the beginning of the week and thus address the concerns that many attendees articulated about arriving to a conference already underway. After continued discussions with the community, the decision was made to fully integrate the two conferences into a single format for 2016. We will address the needs of both groups of attendees with carefully selected tracks designed to focus on support topics as well as management.

Issues

We continue to address the feedback expressed by the SGB EC two years ago. They expressed concerns about our high paper acceptance rate and asked that we also re-evaluate our mission as a SIG. In subsequent discussions with members of the SGB, it became apparent that another issue was the need for SIGUCCS to better articulate to the SGB the nature of our membership and the nature of our SIG being one more of professional development than the more traditional academic research SIG. To this end, we have spent much time and energy exploring how we can meet the needs and requests of the SGB without harming the integrity of the SIGUCCS community. That response is outlined in more detail in a formal document that will be provided to the SGB EC prior to this fall's viability review.

SIGUCCS is continually evaluating whether we are meeting the needs of our constituency. With the drop in attendance at our conferences starting in 2009 after the economic downturn, we continue to explore ways to reach IT organizations in more than 4500 institutions of higher education. The Executive Committee has endeavored to make SIGUCCS a yearlong experience, with frequent webinars, the yearlong mentor/mentee program, and expanding use of communications through social media.

SIGWEB FY'15 Annual Report
July, 2014 – June, 2015
Submitted by: Simon Harper, Past Chair

We can characterise the SIG as exhibiting increasing impact and influence, while showing increasing membership.

While the conferences we run and the research we publish are increasingly relevant to the community (seen by increasing conference attendance and therefore revenue, and increasing digital library downloads, again increasing revenue) we can also see an increase in membership.

In short SIGWEB has successfully expanded its range of conference sponsorships, is working hard on membership and volunteer development and benefits, and is financially healthy with a solid leadership. The last year has been an exciting one for SIGWEB. From the sponsorship of six Web conferences, to that of Cooperating Conferences; from the increase in student travel sponsorship (to \$42,000pa), to our increasing volunteer effort; the SIG has been at work at all levels of our domain. We have forged links with multiple (~20) conferences and workshops across our field, focusing on new contribution awards and broadening participation of the SIG - including the first outing of supporting childcare at Hypertext 2014, while still maintaining our low membership dues. In short, it has been an active and productive year.

We have increasing membership numbers (of 652). And, we have an increasing funds balance (to \$840,000), and are still increasing the amount we have to spend on each member, from \$800 last year to \$1100 this year; with member benefits of: Reduced rates at SIGWEB sponsored, co-sponsored, and co-operating events; Free access to ACM DL content of events sponsored by SIGWEB; Reduced subscription rates to New Review of Hypermedia and Multimedia; Free subscription to the SIGWEB members email list, with calls, advance and final event programs; and news of interest to the community posted regularly; we still have an excellent membership offering.

SIGWEB represents a unique interdisciplinary research community centred on the technical and human issues that arise from systems of linked information. This idea of explicitly linking pieces of information gave birth to a rich well of research trying to augment the human intellect, a vision articulated by the legendary computing pioneer Douglas Engelbart nearly half a century ago. Engelbart, Ted Nelson, and other early researchers realised this vision through hypermedia systems, which are still of interest to the SIGWEB community today, including the World Wide Web, the largest hypermedia system ever built.

Modern researchers have found a host of other realisations of this vision, ranging from digital libraries to knowledge management systems. SIGWEB includes more than just computer researchers and professionals, though. From cognitive psychologists to ethnographers to anthropologists to hypertext writers, SIGWEB embraces those researchers and practitioners that address how people use computers, so that better tools for augmenting the human intellect can be built. SIGWEB also balances the findings of the research world with the experiences of the practical world, in which our ideas and theories are tested daily. SIGWEB (originally SIGLINK) was founded 22 years ago to provide a home for the hypertext community and the ACM Hypertext conference. Over the years, SIGWEB has changed its name and has begun to sponsor a wide range of conferences encompassing hypertext, Web science, document engineering, digital libraries, knowledge management and Web search.

OFFICERS, EXECUTIVE COMMITTEE, & VOLUNTEERISM

The Incoming Elected Officers are:

1. Dick Bulterman (Chair)
2. David Millard (Vice-Chair)
3. Yeliz Yesilada (Secretary/Treasurer)

The Outgoing Officers are:

1. Simon Harper (Chair & Hypertext)
2. Dick Bulterman (Vice-Chair & CIKM)
3. Maria de Graca C. Pimentel (Secretary/Treasurer & DocEng)

The Appointed Executive Committee are:

- Simon Harper (Past Chair)
- Ethan Munson (WebSci)
- **Awaiting** (Information Director)
- Jessica Rubart (Newsletter Editor)
- Bebo White (SIG History)
- Cathy Marshall (JC DL)

- Charles Nicholas (CIKM)
- Brian D. Davison (WSDM)
- Peter Brusilovsky (at-Large)
- Claus Atzenbeck (at-Large)

Additional Members are:

- Hamman W. Samuel (Webmaster)
- Caroline Jay (Broadening Participation / Full Inclusion)
- Andrew Brown (Senior and Junior SIGWEB Awards)

Volunteer development has historically been a challenge for SIGWEB. We have new volunteers handling regular columns in the newsletter, and increasing numbers of people working around the publicity/social media area. We are always on the lookout for newsletter contributors and we are still looking for a Membership Coordinator to chase lapsed memberships and promote the SIG into getting more.

RECENT INITIATIVES

The SIG has put into place some recent initiatives over the last year or so: the Web Science Conference has now transferred to SIGWEB; Hypertext, DocEng, JCDL, CIKM, WSDM, and Web Science Student awards raised to \$7000 each pa; and Working Group Awards enacted upto \$5,000 over 3 years (please apply). We have now submitted a number of SIGWEB members for central ACM awards such as the ACM-W Athena Lecturer Award. We are further implementing the ACM full-inclusion directives with HT2014 as the first SIGWEB conference where attendees can apply for childcare support. Finally, we continue with open access to our conference proceeding. Any SIGWEB conference can request Open Access for 1 full year, we will also be offering a license to publish without copyright transfer; and we will be offering Gold and Hybrid open access pay options.

FY 2015 TECHNICAL MEETINGS AND AWARDS

The technical meetings sponsored by SIGWEB were:

1. ACM Symposium on Document Engineering (DocEng) 2014.
2. ACM Conference on Information and Knowledge Management (CIKM 2014)
3. ACM International Conference on Web Search and Data Mining (WSDM 2015)
4. ACM/IEEE Joint Conference on Digital Libraries (JCDL 2014)
5. ACM Conference on Hypertext and Hypermedia (HT 2014)
6. ACM International Web Science Conference (WebSci 2015)

The awards presented by SIGWEB in FY 2015 were:

- The Douglas C. Engelbart Best Paper Award for 2014 (HT 2014) Georges Gouriten, Silviu Maniu, and Pierre Senellart. Scalable, Generic, and Adaptive Systems for Focused Crawling.
- The Theodor Holm Nelson Newcomer Award for 2014 (HT 2014) Janette Lehmann, Claudia Muller-Birn, David Laniado, Mounia Lalmas, and Andreas Kaltenbrunner. Readers Preferences and Behavior on Wikipedia.
- The DocEng Best Paper Award for 2014 (DocEng 2014) Joshua Hailpern, Niranjan Damera-Venkata and Marina Danilevsky. Truncation: All the News that Fits We'll Print.
- The Vannevar Bush Award for 2015 (JCDL 2015) Pertti Vakkari and Janna Pntinen. Result List Actions in Fiction Search.
- The Vannevar Bush Award for 2014 (JCDL 2014) Chuck Cartledge and Michael Nelson. When Should I Make Preservation Copies of Myself?

Partnerships

SIGWEB shares sponsorship of three conferences: JCDL is co-sponsored with SIGIR and the IEEE TCDL; CIKM is co-sponsored with SIGIR; and WSDM is co-sponsored with SIGIR, SIGKDD, and SIGMOD.

Finances

SIGWEB's finances are stable and strong (some figures are projected as this report was prepared before the end of the ACM financial year). The SIG's fund balance stands at over \$840,000. This is a \$50,000 increase from the preceding year, and we now have funds, which are substantially higher than several years ago. The fund balance is more than adequate to support SIGWEB's planned activities under ACM's formula. Indeed, SIGWEB's conferences have generally been making profits and in some cases have made large profits. However, in the past year some very small losses were made. SIGWEB runs a surplus on its basic operational expenses, largely due to Digital Library income. In the last four years, the SIG has initiated a system of student travel awards, paid out of the operational budget (or the fund balance, depending on your viewpoint) and this substantial new expense has reduced the operational surplus.

Members

In June 2015, SIGWEB had around 652 members (however, we don't yet have accurate figures as some memberships were inadvertently not included in the figures). This is an increase on June 2014. Previous membership totals were: June 2014, 506; June 2013, 561; June 2012, 520; June 2011, 555; June 2010, 666; June 2009, 699; June 2008, 644; June 2007, 534.

Clearly, membership is back to the levels of June 2008. The current best guess is that the SIG has been efficient in processing the free memberships given to attendees of 100%-sponsored events as we were in 2008 and 2009.

It is worth mentioning SIGWEB's system of free memberships for conference attendees, because it is a topic of some controversy in ACM SIG circles. Clearly, giving away memberships can increase membership totals. However, the additional members are less 'sticky' because they haven't decided to join on their own. As a result, membership totals can be more variable. SIGWEB chooses to offer free memberships because it appears to us to be a meaningful benefit to our community. Much of SIGWEB's active conference attendance comes from Europe. European academics, in general, are not allowed to pay for society memberships from university funds, even when doing so would reduce the total cost of attending a conference.

One argument is that attending a SIGWEB conference MEANS that attendees are de-facto SIGWEB Members – so let's acknowledge this with a membership; the contrary argument is that we lose direct funding. If no one paid we would lose \$15,000 pa. We are still discussing the ideas of: No conference memberships; memberships free to conference attendees; Additional conference class' (ACM Member Early-Bird + ACM Membership) but this could be dangerous as we may then not get any Non-ACM Members (which make the conference more money); or Attendees, paying Non-Member fees, get the membership included after they have paid.

So, the SIGWEB Exec Comm believes that the SIG can support its natural members by giving them memberships automatically when they attend conferences that only SIGWEB sponsors, but there is still some discussion to be had around how this is accomplished. This said we can see that member retention has decreased in 1 year at 24.9%, and slightly for 2+ years at 79.21%, the total being 58.6%. This suggests that giving free memberships doesn't negatively affect one year retention.

Community

SIGWEB sponsors or co-sponsors the ACM Hypertext Conference (HT), ACM Symposium on Document Engineering (DocEng), ACM/IEEE Joint Conference on Digital Libraries (JCDL), ACM Conference on Information and Knowledge Management (CIKM), and ACM International Conference on Web Search and Data Mining (WSDM). We also hold in-cooperation and sponsorship agreements and provide other support for several related conferences, symposia, and workshops (including a five year agreement with the Web4All conference). Finally we sponsor or co-sponsor the Douglas C. Engelbart Best Paper Award, Theodore H. Nelson Newcomer Award, Vannevar Bush Best Paper Award, and the SIGWEB DocEng Best Paper Award.

By supporting the community, SIGWEB feels it is performing a vital role in encouraging up and coming research areas and agendas, which may well be beneficial to both SIGWEB and the wider community in the future. Indeed, we also have a program to confer small grants to new conference and workshop initiatives - the first being the Social Network Working Group.

These community benefits are really the key to SIGWEB, and your membership not only guarantees you get into our conferences at the cheapest rate available, but is an altruistic philanthropic gesture which supports all SIGWEB members in achieving their professional and training goals.

Conclusion

SIGWEB has a cross-disciplinary (inter disciplinary) stable of conferences. We see a plateau in membership. We see a high funds increase. However, we also see the beginnings of an expected bounce back in membership this year. This means that SIGWEB has successfully expanded its range of conference sponsorships. SIGWEB is also working hard on membership and volunteer development. SIGWEB is financially healthy and has solid leadership. Looking ahead we wish to: strengthen the organisation; monitor the first year that Web Science will be part of SIGWEB; enact more member services, but sustainable ones; create new volunteer opportunities; and keep good relationships with other SIGs and the ACM especially SIGDOC and SIGIR.

The main thing the SIG needs to consider for the upcoming year is that of membership and particularly retention beyond the first year. We will be addressing this in 4 key ways:

1. Firstly, we will be offering complimentary membership to SIGWEB conference attendees;
2. We will also be offering complimentary membership to long term members with over 4 years with the SIG;
3. Our membership structure will be changing to reflect the central ACM structure with lower rates for those taking a career break, and retired professionals; and finally,
4. We will be looking to support better links with citizen scientists and makers with specific conference discounts for these people.

Acknowledgements

As this will be my last Chairs Report I'd like to thank everyone at the ACM for making the job so straightforward. I'd especially like to thank Irene Frawley for all her help. I'd also like to thank my co-officers and the executive committee for all their continuing hard work. Finally, I'd like to welcome the new Executive Officers and trust that they will have as good a time as I have. Onwards and upwards for SIGWEB!