

Annual Report of the SIG Governing Board

For the period: 1-July-2022 through 30-June-2023

Submitted by: Jens Palsberg

Date: October 26, 2023

The SIG Governing Board (SGB)

The SGB is comprised of the chief executive officer or designee of each regular SIG. The SGB is charged with forming SIGs, with managing them and setting policies for their management, and with recommending their dissolution. The SGB elects a Chair, Executive Committee and 3 additional representatives to Council.

The SGB EC

The SGB elects a Chair and an Executive Committee, which has full authority to act on behalf of the SGB between its meetings. The SGB EC is bound by the SGB's actions and the SGB may override any decision of the SGB EC. The SGB EC is made up of the following positions which were approved following the review and approval of the restructuring task force recommendations:

SGB Chair - Serves as SGB EC Chair, one of the four SIG Representatives on ACM Council, and as the SIG Representative on the ACM Executive Committee. Also responsible for SIG financial and budgetary issues and overseeing SGB committees and task forces.

SGB EC Vice Chair for Operations – Presides over SGB and SGB EC Meetings, including SGB EC conference calls. Oversees SIG Liaisons to ACM Committees and Boards.

SIG Development Advisor –. Identifies emerging technical areas and works with individuals and groups interested in forming SIGs.

SGB Conference Advisor – Oversees developing conference activity to be sponsored by the SGB.

New SIG Advisor – Acts as liaison for newly chartered SIGs and helps to nurture and support new SIG leadership as they develop programs and activities.

SIG Viability Advisor – Oversees transitional SIGs and works with SIGS scheduled for program reviews. Also acts as the SIG election liaison.

SIG Awards Advisor -. Acts as liaison for SIG leaders and Awards Committee and helps SIG leadership with proposals and approval process.

Publications Advisor – Acts as liaison between SGB and Publications Board and oversees issues related to publications as directed by the SGB

SGB Past Chair- Provides guidance and advice to the SGB EC and chairs the SGB EC nominating committee.

Director of SIG Services – Staff liaison

During FY'23 the following individuals held the positions indicated:

Name	Position	Term End
Jens Palsberg	Chair	June 30, 2024
Jeff Jortner	Past Chair	June 30, 2024
Adrienne M Decker	SIG Viability Advisor	June 30, 2023
Brad Lawrence	SIG Development Advisor	June 30, 2024
Sanmay Das	Conference Advisor	June 30, 2023
Natalie Enright-Jerger	SGB EC Vice Chair for Operations	June 30, 2024
Ben Carterette	SIG Awards Advisor	June 30, 2023
Lisa Brown	New SIG Advisor	June 30, 2024
Jonathan Aldrich	Publications Advisor	June 30, 2024
Donna Cappo	Staff Liaison	

Council Representatives

The SGB elects 3 representatives to the ACM council for two-year terms. During FY'23 the following individuals held the ACM Council positions indicated:

Name	Position	Term End
Thomas Zimmermann	SGB Council Representative	June 30, 2025
Vivek Sarkar	SGB Council Representative	June 30, 2025
Jeanna Matthews	SGB Council Representative	June 30, 2024

Standing Committees

The SGB is responsible for the oversight of the Federated Computing Research Conference Steering Committee now being Chaired by Timothy Pinkston with Vivek Sarkar as Past Chair. The conference was held this year from June 16-23, 2023 in Orlando, Florida. It was Chaired by Timothy Pinkston, University of Southern California. Dilma Da Silva, Texas A&M was the Plenary Speakers Chair.

Keynote Speakers:

Kunle Olukotun, Stanford University
Computing in the Foundation Model Era

Margaret Martonosi, US National Science Foundation
Taking on the World's Challenges: The Role of Computing Research and Innovation

Shafi Goldwasser, University of California Berkeley
Constructing and Deconstructing Trust: Employing Cryptographic Recipe in the ML Domain

Don Towsley, University of Massachusetts
The Quantum Internet: Recent Advances and Challenges

Torsten Hoefler, ETH Zurich
Scalable and Efficient AI: From Supercomputers to Smartphones

SIGs sponsored events from SIGACT, SIGARCH, SIGBED, SIGEnergy, SIGOPS, SIGPLAN and SIGSIM were held. FCRC'23 conferences included: CHASE, e-Energy, HPDC, ICS, ISCA, IWQoS, PADS, PLDI, PODC, SIGMETRICS, SPAA and STOC along with more than 100 workshops and tutorials.

There were 2,567 attendees.

Significant Issues Faced by SGB Leadership

We encourage you to review the individual SIG Annual Reports in Appendix D for more detailed information regarding conference activity.

SGB Meetings

Virtual SGB meetings were held on 10/21/22 and 3/10/23

Emerging Interest Groups

The Emerging Interest Group on Smart Cities is no longer active
The Emerging Interest Group on Reproducibility and Independent Verification remains active.

Miscellaneous Appointments

SIG leaders appointed as committee liaisons:

Name	Position	Term End
Jonathan Aldrich	Publications Board Liaison	June 30, 2024
Timothy Pinkston	FCRC Steering Comm. Chair	June 30, 2027
Kim Tracy	History Committee Liaison	June 30, 2024
Jeanna Matthews	ACM Technology Policy Council	June 30, 2024
Michel Beaudouin-Lafon	ACM Technology Policy Council	June 30, 2024

SGB Nominating Committee

The SGB Nominating Committee nominates candidates for the SGB EC, in addition to nominating candidates for SGB Chair and SGB Representatives to ACM Council. It was led by Jeanna Mathews in FY'23.

SIG Membership

Appendix A summarizes basic SIG Statistics for FY'23. Included are member and subscriber totals and conference activities.

Membership Counts by class of membership:

	FY'23
ACM/SIG Members	25,087
SIG Only Members	8,337
Subscribers	113
Total SIG Members/Subs	33,536
Total ACM Members	99,615

The SIGs overall member/subscriber count is 33,536 as compared to 32,544 in FY'22.

SIG Program Reviews and Annual Reports

Program Reviews and annual reports are the reporting mechanism for individual SIGs to the SGB.

Program Reviews

The following SIGs were found viable to continue their status for the next 4 years: SIGACCESS, SIGCSE, SIGSOFT, SIGWEB.

Annual Reports

Annual reports were received by the submission deadline from: SIGACCESS, SIGACT, SIGAPP, SIGARCH, SIGBED, SIGCOMM, SIGecom, SIGEVO, SIGHPC, SIGMETRICS, SIGSAC, SIGSIM, and SIGUCCS. These reports can be found in Appendix D.

Annual reports were received following the submission deadline from: SIGAda, SIGAI, SIGCAS, SIGCSE, SIGDA, SIGDOC, SIGEnergy, SIGMICRO, SIGMIS, SIGMM, SIGMOBILE, SIGMOD, SIGPLAN, SIGSAM, SIGSOFT, SIGSPATIAL, and SIGWEB. These reports have been added to Appendix D.

Annual reports were not received from: SIGBio, SIGCHI, SIGGRAPH, SIGIR, SIGITE, SIGKDD, SIGLOG, and SIGOPS. This will be noted in their viability reviews.

Highlights from Appendix D – SIG Annual Reports

Diversity, Equity, and Inclusion

In 2023, SIGBED initiated the ACM SIGBED Undergraduate Scholar Program, which sponsors outstanding undergraduate students who are broadly interested in embedded systems to attend leading conferences in the field. Six students across Asia, Europe, and North America have been selected with four being female. They are provided full financial support to attend ESWEEK 2023. SIGBED will continue to improve the representation and engagement of women and other minorities.

SIGSAC announces the policy against harassment. SIGSAC promoted the climate survey at CCS'22. SIGSAC sponsored women's networking reception at all its sponsored conferences. One of last year's SIGSAC outstanding innovation awardees is Dr. Radia Perlman, an outstanding woman researcher.

SIGUCCS - We strive to have volunteers and members in leadership positions that represent diverse populations. We recently updated our website to have a more inclusive language. Virtual platforms have been enhanced to include accessible tools. We incorporated a DEI book choice, *Belonging at Work* by Rhodes Perry into our Book Club in early 2023. Several presentations and panel sessions related to DEI were highly attended at the conference: *Making Accessibility Accessible (Quick Tips for Making Inclusive Content)*, *Out in Tech (An Open Discussion About Inclusive Workspaces)*, and *Neurodiversity in the IT Workplace*. Our members have indicated that they have learned from these activities and shared what they have learned with their campus communities.

Awards

In 2023, the SIGAPP Distinguished Service Award was presented to Dr. Tei-Wei Kuo from National Taiwan University in recognition and honor of his significant contributions as the Vice Chair of SIGAPP. He has played a crucial role in establishing the SIGAPP China Chapter and SIGAPP Taiwan Chapter. His dedication and efforts in promoting the major sponsored conferences of SIGAPP, namely SAC and RACS, in various Asian countries, including Taiwan and China, have been exceptional.

SIGARCH - ACM/IEEE Eckert-Mauchly award: This is the most prestigious award in our community given for contributions to computer and digital systems architecture. The 2022 recipient was Mark Horowitz for "contributions to microprocessor memory systems." The 2023 recipient was Kunle Olukotun for "contributions and leadership in the development of parallel systems, especially multicore and multithreaded processors."

This year, SIGecom issued two new career awards. The SIGecom Lifetime Achievement Award recognizes an outstanding individual who has made significant and long-lasting contributions to the field of economics and computation, influencing and setting direction for decades of research. The inaugural 2023 Lifetime Achievement Award was issued to: Noam Nisan (Hebrew University) and Christos H. Papadimitriou (Columbia University) for seminal and groundbreaking work that inspired a vast community and led to the creation of the field of economics and computation. The SIGecom MidCareer Award recognizes outstanding individuals whose contributions have had great impact in the field of economics and computation and whose employment as a faculty member or full-time industrial researcher started within the past 15 years (or equivalent duration in case of career interruption). The inaugural 2023 MidCareer Award was issued to: Michal Feldman (Hebrew University) and Robert D. Kleinberg (Cornell University) for contributions to algorithmic mechanism design, algorithmic contract design, and

combinatorial allocation problems; and for advancing our understanding of on-line learning and decision problems and their application to mechanism design, respectively.

SIGEVO- The most prominent competition at GECCO is the Humies Award for the best human-competitive application of Evolutionary Computation methods published in the last year. 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. Eight were selected as finalists, and presented during GECCO. Three of them were awarded.

Significant Papers and Publications

SIGACCESS - Jonggi Hong, Jaina Gandhi, Ernest Essuah Mensah, Farnaz Zamiri Zeraati, Ebrima Jarjue, Kyungjun Lee, and Hernisa Kacorri. 2022. Blind Users Accessing Their Training Images in Teachable Object Recognizers. In Proceedings of the 24th International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS '22). Association for Computing Machinery, New York, NY, USA, Article 14, 1–18. <https://doi.org/10.1145/3517428.3544824>

SIGMETRICS - Best paper award: "Mean-field Analysis for Load Balancing on Spatial Graphs" by Daan Rutten and Debankur Mukherjee of Georgia Institute of Technology. The paper investigates the analysis of large-scale, parallel-server load balancing systems that has relied heavily on mean-field analysis. An emerging line of research on this problem considers load balancing algorithms on bipartite graphs where vertices in the two partitions represent the task types and servers, respectively, and an edge represents the server's ability to process the corresponding task type. In this paper, the authors consider the power-of-d choices algorithm and develop a novel coupling-based approach to establish mean-field approximation for a large class of graphs that includes spatial graphs.

SIGSAC – Significant papers on new areas that were published in proceedings: **Victory by KO: Attacking OpenPGP Using Key Overwriting**, Kenny Paterson, Lara Bruseghini, Daniel Huigens.

SIGSIM – Significant papers on new areas that were published in proceedings: "Workload Interference Prevention with Intelligent Routing and Flexible Job Placement on Dragonfly," by Yao Kang, Xin Wang, and Zhiling Lan, published in the PADS'23 Proceedings.

International Activities

SIGAPP Chapter - Especially in Far East Asian countries, such as Korea, China, Taiwan, and Hong Kong, there is notable government-level support to applied and convergent computing. As a result, we have established new SIGAPP chapters in these countries, which has led to a significant increase in the number of SIGAPP members through these local chapters. Looking ahead, we are planning to establish SIGAPP Japan to host various academic events in collaboration with the existing six SIGAPP Chapters. Additionally, SIGAPP aims to facilitate joint seminars and small workshops between neighboring SIGAPP chapters (e.g., SIGAPP Korea, SIGAPP China, SIGAPP Taiwan, and SIGAPP Hong Kong), which can provide researchers with opportunities to share their research works locally and across regions.

SIGCOMM - We have also supported the 17th Asian Internet Engineering Conference (AINTEC 2022), which was held in Hiroshima, Japan in December 2022. The conference featured 23 papers and posters that were mostly from the Asia-Pacific region and touched upon issues of regional and global interests. Motivated by the impressive growth in the Southeastern Asian community, we are partnering with them on four initiatives. First, we are organizing three remote pods in Indonesia, Thailand and Vietnam to allow the community members to follow and participate in SIGCOMM 2023. Second, we have committed to support the upcoming AINTEC 2023, which will be held in Vietnam, with 15 travel grants to seed further

the growth of the local community. Third, we are helping the local community launching a regional forum akin to the Networking Channel. Finally, AINTEC 2024 will be held in conjunction with SIGCOMM 2024 in Sydney where we have committed to provide 15 student travel grants as well as supporting five of the organizers. We believe that these efforts will help create both a vibrant regional community and include the largely under-represented Southeast Asian community.

SIGHPC - A new chapter with South and Latin American leadership was also formed this year. SIGHPC Computing Continuum: Focusing on efforts from edge to cloud computing that are happening in Latin America. Membership is not restricted to Latin America but the chapter will provide a platform to converge on major ongoing efforts.

Collaboration

SIGACT - The following conferences were put on “in cooperation” with SIGACT: PODC 2023, SPAA 2023, HIPC 2023, and SODA 2023. PODC remains relatively stable except for this past year at FCRC where again there was a drop in submissions. SODA is co-sponsored with SIAM and occurred in Florence, Italy. There were 446 participants, comparable to the last time it was held in Europe (Barcelona 2017) but significantly higher than the attendance in US cities in the previous years. There were double-blind submissions and a rebuttal phase. The PC produced a study of double blind submissions which points out some of the costs. SODA colocates with related conferences and workshops like ALENEX and SOSA. SPAA 2023 was held at FCRC in Orlando. SPAA has co-located on alternate years with PODC or FCRC, which tends to give a slight boost in attendance.

SIGBED started a new initiative, called SIGBED Croo-Sig Activities. It aims to collaborate with closely related ACM SIGs to organize events that will benefit the members of SIGBEDs and other SIGs. In this way, we can promote interdisciplinary collaborations, knowledge sharing, and transfer, and spark new ideas. We are happy to launch the first cross-sig event, i.e. SIGBED x SIGDA Workshop on Emerging Techniques in System Design and Design Automation for Embedded Systems, which was co-located with ESWeek’22. It was co-organized by Dr. Chenren Xu, the Cross-SIG Activities Director of ACM SIGBED. The event has four talks and a panel covering EDA tools, ML in EDA, and cross-layer embedded design. There were 100+ audience (hybrid).

SIGMETRICS also partners with SIGSOFT and SPEC as technical sponsors of the ICPE conference, and together with IEEE in IWQoS, as well as with SIGCOMM and other SIGs in cosponsoring IMC and SenSys.

Programs and conferences

SIGACCESS - This year, we helped to grow and diversify the field of accessibility through the ACM Student Research Competition, the ASSETS Doctoral Consortium, a mentoring program for new authors, and the previously mentioned diversity awards. ASSETS 2022 also featured a keynote presentation from Clayton Lewis (our SIGACCESS Award for Outstanding Contributions to Computing and Accessibility recipient), as well as an opening keynote presentation from Haben Girma, the first Deafblind person to graduate from Harvard Law School. Haben is a human rights lawyer advancing disability justice. President Obama named her a White House Champion of Change. She received the Helen Keller Achievement Award, a spot on the Forbes 30 Under 30 list, and TIME100 Talks. President Bill Clinton, Prime Minister Justin Trudeau, and Chancellor Angela Merkel have all honored Haben. Her keynote presentation discussed how she believes disability is an opportunity for innovation, and she teaches organizations the importance of choosing inclusion. The New York Times, Oprah Magazine, and TODAY Show featured her memoir, Haben: The Deafblind Woman Who Conquered Harvard Law.

SIGEVO - GECCO 2023 (July 2023)

- This was a hybrid event in Lisboa. We allowed online presentation and participation.
- High number of submissions (575)
- Very high number of participants: around 1,000 (630 onsite and 350 online)
- Positive experience on running the event hybrid. Future GECCOs will also be hybrid.
- Whova well accepted by attendees.

SIGSIM will return in 2023 to holding one members/business meeting every year at the Winter Simulation Conference, open to all its members. This meeting will have a virtual component, which will be recorded. Information about all recent meetings and associated slides are available here: ACM SIGSIM Meetings (<https://sigsim.acm.org/meetings>)

Volunteer Development

To Increase Diversity and Equity of SIGAPP Officers and Organizing Committee members and to foster a sense of community among SIGAPP Officers and Organizing Committee members, SIGAPP tried to recruit volunteers without discrimination against various races and countries. As a result of these efforts, compared to 20–30 years ago where authors of SAC mainly from EU, and USA, we have lots of authors from Asian and African countries now.

SIGecom's volunteer development is extremely strong. Many dozens of people serve across a wide range of roles: in the conference organization committee; organizing committees for workshops and tutorials; award committees; SIGecom Exchanges editors; SIG executive; and a wide variety of ad hoc committees and special-topic volunteer roles. We are extremely conscious of diversity—particularly, but not limited to, diversity across research areas, gender, and countries of origin—and have been very successful in ensuring that our volunteer leaders are diverse, reflective of the community at large, and top-caliber researchers without exception.