**Annual Report of the SIG Governing Board**

**For the period**

**1-July-16 through 30-June-17**

**Submitted by:**

**Jeanna Matthews**

**September 8, 2017**

1. **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’17 the following individuals held the positions indicated:**

**Name Position Term End**

Jeanna Matthews Chair July 1, 2018

Patrick Madden Past Chair July 1, 2018

Will Tracz SIG Viability Advisor July 1, 2017

Simon Harper SIG Development Advisor July 1, 2017

Sarita Adve New SIG Advisor July 1, 2018

Renee McCauley SGB EC Vice Chair for Operations July 1, 2017

Suman Banerjee SGB Conference Advisor July 1, 2018

Insup Lee SIG Awards Advisor July 1, 2018

Yannis Ioannidis Publications Advisor January 1, 2020

Donna Cappo Staff Liaison

**Council Representatives**

The SGB elects 3 representatives to the ACM council for two-year terms.

During FY’17 the following individuals held the ACM Council positions indicated:

Name Position Term End

Jeanna Matthews SGB Chair July 1, 2018

Paul Beame SGB Representative July 1, 2018

Barbara Boucher Owens SGB Representative July 1, 2017

Loren Terveen SGB Representative July 1, 2018

**Standing Committees**

The SGB is responsible for the oversight of the Federated Computing Research Conference Steering Committee currently chaired by Rajiv Gupta. Past Chairs Dean Tullsen and Barbara Ryder and Donna Cappo, Director of SIG Services are members of the committee. Vivek Sarkar was named Chair for FCRC 2019.

**Significant SGB actions**

**Emerging Interest Groups**

The SGB announced the process for the establishment of Emerging Interest Groups. Proposals for Emerging Interest Groups will be announced to all SIGs with direct consultation of those SIGs identified as overlapping. The rules of operation were outlined and queries from several areas of interest were received.

**Program Reviews**

The new review process begins with ACM HQ coordinators sending the SIG; leaders activity reports outlining details regarding membership, conferences, leadership, finances and past viability reviews. In addition, a reach report is sent outlining downloads citations and other information regarding the community being reached. They also provide the leaders with the mission’s statement and description of the SIG that ACM has on file.

**Impact of travel on Climate Change**

SIGPLAN began thinking about their conference activity - 17 with 4 or 5 flagships moving all over the world. The leadership realized that a culture that has more and more meetings all over is a contributor to climate change. Air travel is a big problem now and in foreseeable future. The SGB decided to consider what they could do about this and decided to develop a carbon calculator to determine the carbon footprint for attending a conference. With this information, they can consider carbon offset and activity to counteract.

**Miscellaneous Appointments**

SIG leaders appointed as committee liaisons:

Name Position Term End

Yannis Ioannidis Publications Board Liaison July 1, 2020

Rajiv Gupta FCRC Steering Comm. Chair July 1, 2019

Tao Xie History Committee Liaison July 1, 2017

Flo Appel USACM Liaison July 1, 2017

Jeanna Matthews USACM Liaison July 1, 2017

Pradip Bose Distinguished Speaker Comm Liaison July 1, 2017

**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. The nominating committee:

Name Position Term End

Patrick Madden Past SGB Chair July 1, 2018

Jeanna Matthews SGB Chair July 1, 2018

Donna Cappo Staff Liaison

1. **SIG Membership**

Appendix A summarizes basic SIG Statistics for FY’17. Included are member and subscriber totals and conference activities.

**Membership Counts by class of membership:**

 **FY’15 FY’16 FY’17**

ACM/SIG Members 29,641 26,355 25,142

SIG Only Members 8,672 10,670 11,407

Subscribers 626 623 394

Total SIG Memb/Subs 38,313 37,648 36,943

Total ACM Members 113,046 93,776 97,667

The SIGs overall member/subscriber count is 36,943 as compared to 37,648 in FY’16.

1. **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:

SIGAda, SIGDOC, SIGecom, SIGEVO, SIGGRAPH, SIGHPC, SIGKDD, SIGMICRO, SIGMM, SIGMOD, SIGSAC, SIGSIM

The following SIGs were found viable to continue their status for the next 2 years:

SIGAI, SIGCAS

The following SIGs were found viable to continue their status for the next year:

SIGMIS, SIGSAM

**Annual Reports**

Annual reports were received from all SIGs by the requested deadline except for SIGACT, SIGARCH, SIGKDD, SIGMICRO, SIGSAC and SIGWEB. The leadership was informed that if they submitted their report, it would be appended.

Highlights from Appendix D – SIG Annual Reports

**International Activities**

**SIGCHI -** Significant and continued emphasis on international development. Our goals are to help develop HCI communities around the world, and to integrate regional HCI communities into the worldwide network of HCI researchers and innovators. We have sponsored a number of events in eastern Asia, including in Thailand, Indonesia, and Japan. bringing together researchers and practitioners from around the region. This has resulted in groups in Malaysia, Thailand, Brunei, Vietnam, and the Philippines taking steps to form SIGCHI local chapters. We also are in advanced stages of identifying a location in Japan for the CHI 2021 conference. In addition, we have greatly expanded our efforts in “developing” countries. For example, we funded an event at CHI 2017 that brought together dozens of researchers, practitioners, and students from many African, South American, and Asian countries. The people who were able to attend were very enthusiastic about the opportunity, and many have become catalysts for our field and SIG in their own regions.

**SIGCOMM -** Our flagship conference, continuing our policy of rotation among regions on a 3-year cycle, was held in Florianopolis, Brazil (the wildcard location in the rotation) in August 2016. We substantially increased our travel grant support for students to attend this more remote location. The conference had an attendance of about 325 participants. This was less than half of our usual attendance, due entirely to the Zika scare on social media that kept many participants away, despite the facts on the ground. Florianopolis is in southern Brazil, with cool winter weather during August, so there were no mosquitos and no Zika. Nevertheless, many participants were unwilling to travel through Rio and Sao Paolo. To deal with this, we made arrangements for some talks to be presented as pre-recorded videos, followed by questions on the phone. This turned out to be quite good, overall, with some participants saying that the experience was even better than an in-person presentation!

**SIGDA -** Latin America: School on Physical Design Automation in Brazil: This event offers a set of tutorials covering the state-of-art methodologies for physical design. The lectures are given by the top researchers from both academic and industry in the field.

India: Design Contest in India: This event is co-located with the International Conference on VLSI Design. Students will be given the opportunity to work on several problems in the area of EDA, analog/digital design and embedded systems.

China: Future Chip Workshop in China: This event attracts both domestic and international researchers to discuss the recent advances and future challenges for design automation. Students are also invited to the event to learn about the state-of-the-art development in EDA.

**SIGEcom** **-** The 17th ACM Conference on Electronic Commerce (EC'16) was held July 24-28, 2016 in Mastricht, Netherlands, along with the 5th World Congress of the Game Theory Society. As with the last time this conference was held outside North America (2012), there was about 75% of the registration they usually have. The leadership made up for this by co-locating with a large game theory conference. The local arrangements were excellent, and there was free cross-attendance between the conferences. Thus, overall, the event was a great success, particularly from the perspective of increasing participation by both economists and Europeans.

**SIGEVO** - GECCO will take place for the first time in GECCO history in Asia, more precisely Kyoto. Prof. Keiki Takadama is General Chair, and Prof. Hernan Aguirre is Editor in Chief. The venue is already decided, and everything is in good shape.

**SIGLOG** - SIGLOG’s flagship conference the ACM-IEEE Symposium on Logic in Computer Science was held in June 2017 in Reykjavik, Iceland.

**SIGMIS** - SIGMIS held the SIGMIS CPR Conference June 21-23, 2017 in Bengaluru, India. The conference program is available from the SIGMIS CPR conference website at: http://sigmis.org/sigcpr2017/ or directly at: http://sigmis.org/CPR2017Program.pdf. Authors of the 31 papers and 11 posters totaled 87, representing 11 countries.

**SIGSIM** - Held 2017 SIGSIM PADS conference in Singapore

**SIGSOFT** - To broaden SIGSOFT’s reach and membership, SIGSOFT has established national chapters in India (ISoft) and China (CSoft). Each chapter has a liaison on the SIGSOFT EC, in addition to our long-standing International Liaison. As part of the support for these two communities specifically, SIGSOFT sponsors travel for a total of four SIGSOFT Distinguished Paper Award winning authors to present their work at ISoft’s and CSoft’s flagship national events (two at each event). The success of this program is reflected in this year’s decision by the organizers of ISEC 2017, ISoft’s premier event, to fund the attendance and presentation of two additional SIGSOFT Distinguished Paper Award winners.

**SIGSPATIAL** - 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.

**Collaboration**

**SIGACCESS -** SIGACCESS serves both the accessibility research community and the broader ACM community by maintaining a set of resources to support improved accessibility in academic publications and events. This year, we added guidance on giving accessible presentations, and worked with SIGCHI’s accessibility interest group to update and broaden the guidelines for running an accessible conference. We developed a template for an ‘Accessibility FAQ’ for conference websites that is already in use within ASSETS, SIGCHI conferences, and other external conferences.

**SIGAI** - ACM SIGAI has an agreement with the Association for the Advancement of AI (AAAI) to jointly organize the annual joint job fair at the AAAI conference, where attendees can find out about job and internship opportunities from representatives from industry, universities and other organizations. This event was held at AAAI 2017 as planned.

**SIGMM** - This year’s ACM Multimedia was co-located with the European Conference on Computer Vision (ECCV) with joint workshops and tutorials in the weekend before the main conference. This joint initiative with ECCV has created a lot of positive synergy. ACM Multimedia 2016 also featured the 2nd SIGMM Rising Stars Symposium, promoting vision and achievements of 6 rising stars including 4 women researchers in multimedia.

**SIGMOBILE** - SIGMOBILE, in partnership with SIGCOMM, introduced a new event this year, called the Wireless Industry Days, with the goal of allowing greater engagement with our related industry. It was organized as a workshop and was held in the Bay area (co-located with a large industry-focused event) with the goal of allowing leading researchers to present their results to participants from industry. This was an interesting experiment of reaching out in new ways beyond the confines of our core conferences and workshops.

**New programs and conferences**

**SIGACCESS -** One of the key issues facing the accessibility research community over the next 2-3 years is to encourage research work on machine learning techniques for accessibility challenges. One barrier is the lack of agreed benchmarks or standard datasets for objective comparison of solutions. To encourage progress, SIGACCESS is planning to launch a call for data contributions, with a view to building such datasets. Examples could be sign language video with translations, scientific images with text descriptions, or a corpus of conversations held through AAC (augmentative & alternative communication) devices.

**SIGAda** - As security issues become more and more urgent in the software industry, there has been increased attention on formal methods as a way to reduce security vulnerabilities within system software. The contract-based programming features of Ada 2012 have emerged as a very successful addition to the safety- and security-oriented features of Ada, allowing Ada to remain on the vanguard of technologies to address the growing security challenge. Over the next 2-3 years, SIGAda will continue to work with Ada tool vendors and other Ada-oriented organizations such as the Ada Resource Association, Ada-Europe, and the International Ada Real-Time Workshop (IRTAW) to increase the awareness of Ada and its value to the industrial community, which is facing growing security threats. SIGAda and Ada-Europe in particular have been discussing additional ways to coordinate our activities and share content across our user publications, to ensure efficient and effective connections to the industrial and academic computer science and information technology communities.

**SIGAI -** ACM SIGAI held the ACM SIGAI Student Essay Contest on the Responsible Use of AI Technologies (run by one of the ethics officers), where students could win five cash prizes of US$500 or skype conversations with five very senior AI researchers from academia or industry if their essay provided good answers to the following two questions:

* What do you see as the 1-2 most pressing ethical, social or regulatory issues with respect to AI technologies?
* What position or steps can governments, industries or organizations (including ACM SIGAI) take to address these issues or shape the discussions on them?

The winning essays will be published in the ACM SIGAI newsletter.

SIGAPP - 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.

**SIGBED** - SIGBED continues to sponsor two major federated conferences, CPSWEEK (comprised of HSCC, ICCPS, IPSN, and RTAS) in the spring and ESWEEK (comprised of CASES, CODES+ISSS, and EMSOFT) in the fall, as well as several other leading conferences in the embedded systems community. Sponsorships approved this year include SenSys 2017, BuildSys 2017, MEMOCODE 2017, NOCS 2017, LCTES 2017, CHASE 2017. “In cooperation” status was approved for DAC 2018, ASPLOS 2018, EWSN 2018, FPGAworld 2017, ICDSC 2017.

**SIGBIO -** SIGBIO was awarded a National Science Foundation grant to support the ACM BCB conference. The funds primarily supported a distinguished female keynote speaker, and travel support for 25 U.S. based students and postdocs with high priority for female, minority, and young professionals to participate in the conference.

**SIGCAS -** The first SIGCAS sponsored Computing for Social Good conference is tentatively scheduled for early 2018.

**SIGCOMM -** Three years ago, 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

**SIGEcom –** Leadership is considering a system in which excellent papers that have recently appeared in other publication venues will be actively solicited for presentation at the conference by a dedicated committee. They see this as a way of preventing fragmentation, drawing in underrepresented communities, and maintaining EC as a “one-stop shop” for cutting edge research at the boundary between economics and computer science.

**SIGMETRICS -** Last year the Sigmetrics executive board decided to explore moving the flagship conference to a journal/conference hybrid model. We submitted a proposal to ACM and got selected as the first conference to publish our proceedings as part of the Proceedings of the ACM series. The first conference under the new model was held this year.

**Volunteer Development**

**SIGCSE -** SIGCSE's volunteers are recruited at conferences, on the SIGCSE listserv, and through annual articles in the SIGCSE Bulletin. Board members all attend the annual SIGCSE Symposium and encourage attendees to consider volunteering in some way. At sigcse.org there is a volunteer signup page with a list of possible SIGCSE positions, and whenever possible new volunteers are chosen from this list. Volunteers for a particular role are trained by the person previously in that role. Many of our positions are overlapping rotating positions such as for the SIGCSE Bulletin where two people work together, one experienced and one new. The SIGCSE Board is also piloting a repository for keeping important documents for organizational memory.

**SIGIR** - Created a new volunteer position, *Industry Liaison*. We have appointed a chair, with whom we are working to recruit the inaugural class of liaisons to work with the SIGIR Executive Committee to continue to forge strong ties with industry and be responsive to their needs.

**SIGITE** - The long-standing practice of the SIG was to have future conference chairs work through other roles (Sponsorship Chair, Program Chair) before becoming Conference Chair. While this approach carries significant benefits, a major downside is that each year the three key conference planning people were all new to their roles, software systems, and typical issues. We will continue this practice, but this past year we created a standing conference committee to provide continuity. These committee members will assist the “rising conference chairs” with their duties, resulting in smoother planning and execution of our annual conference.

**Notable Papers and Programs**

**SIGDOC** – We have increased our social media reach on Facebook and Twitter from our 2016 numbers, adding 108 more Twitter followers, for a total of 748, and 28 more Facebook followers, for a total of 348. We have also started a podcast series, which has produced and posted three podcasts to our website in the past six months with well-known researchers in the field of communication design.

**SIGGRAPH -** 119 papers were presented at SIGGRAPH 2016, selected from a total of 467 submissions. 89 technical papers were presented at SIGGRAPH Asia 2016 selected from a total of 300 submissions. The top 3 viewed papers in the DL from SIGGRAPH 2016 were: (1)Soli: ubiquitous gesture sensing with millimeter wave radar, (2)Fusion4D: real-time performance capture of challenging scenes, and (3)Painting style transfer for head portraits using convolutional neural networks.

**SIGHPC –** The SC16 Cluster challenge with support and encouragement of SIGHPC focused on replication of scientific studies. All of the student teams were assigned the task of replicating the results of a selected SC15 paper. During the conference, they coded and demonstrated their efforts. Conference attendees were able to stop by the booths for each team and talk with the students about their efforts. This project promoted the importance of replication in CS. A special issue of the journal Parallel Computing will feature the best of these student efforts.

**SIGMOD -** *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.

**SIGOPS** - We are putting on another Diversity Workshop co-located with SOSP 2017.

**SIGPLAN** - Two SIGPLAN-published papers were selected to appear in Communications of the ACM as Research Highlights.

Predicting Program Properties from “Big Code”

Veselin Raychev (ETH Zürich), Martin Vechev (ETH Zürich), Andreas Krause (ETH Zürich)

Originally published at POPL'15

Provably Correct Peephole Optimizations with Alive

Nuno P. Lopes (Microsoft Research), David Menendez (Rutgers University), Santosh Nagarakatte (Rutgers University), John Regehr (University of Utah)

Originally published at PLDI'15

**SIGSAM** - The East Coast Computer Algebra Day (ECCAD) decided last year to place itself under the aegis of SIGSAM. Thus, this the organization of this year’s meeting, ECCAD ‘17, was overseen by SIGSAM. It was hosted by Wolfram Research at their headquarters building in Champaign, Illinois on Saturday, 29 April, 2017

**SIGUCCS** - We continued to offer our semi-monthly webinars with great success. Between September 2016 and June 2017, we offered 7 webinars on a variety of technical, management and leadership topics. Since we are an all-volunteer community, we identify well reviewed conference presentations, and working with the presenter, deliver the content as a webinar. This approach minimizes the management of the program and the content development time of the presenters. It also gives national exposure to presenters, an experience highly regarded and valued by the individuals and their supervisors.