**SIGACCESS Annual Report**

**July 2015 - June 2016  
Submitted by: Shari Trewin, SIGACCESS Chair**

***SIGACCESS promotes the professional interests of computing personnel with disabilities and the application of computing and information technology in solving relevant disability problems. The SIG also strives to educate the public to support careers for people with disabilities.***

## Research and Innovation in Accessibility

This is an exciting time in accessibility. Technology advances are enabling new approaches to access and inclusion for people with disabilities and profoundly disrupting the industry. One especially hot topic is 3D printing. In his keynote at ASSETS 2015, John Schull from Rochester Institute of Technology described 3D printing and crowdsourcing for prosthetics as a new model for open source assistive technology innovation.

In understanding the barriers faced by people with disabilities, there is strong interest in people with cognitive impairment, and workplace environments, exemplified by Meredith Ringel Morris, Andrew Begel and Ben Weidermann’s *Understanding the Challenges Faced by Neurodiverse Software Engineering Employees: Towards a More Inclusive and Productive Technical Workforce*, winner of this year’s Best Paper Award at ASSETS*.* The Best Student Paper tackles the unique challenges of accessibility in developing nations: *Social Media Platforms for Low-Income Blind People in India* by Aditya Vashistha, Edward Cutrell, Nicola Dell, and Richard Anderson. To help guide research towards problems that matter, ASSETS includes an ‘Experience Reports’ submission category, in which individuals with disabilities provide a user’s perspective on the technologies they use.

With this year’s SIGACCESS ASSETS Paper Impact Award, SIGACCESS recognized the lasting impact of early work on designing for diverse users presented by Peter Gregor, Alan Newell and Mary Zajicek at ASSETS 2002 in the paper *Designing for Dynamic Diversity: Interfaces for Older People*. The paper focuses attention on the changing nature of user requirements, and describes two influential design approaches that can address this challenge.

With topics including robot-assisted independent living, text prediction and simplification, philosophical perspectives, exercise, mobile apps for independence, sign language generation, speech interaction, and nonvisual access to graphics, the vibrancy and diversity of the SIGACCESS community remains a great strength.

## Supporting Careers for People with Disabilities

SIGACCESS broadens career opportunities for people with disabilities by exploring a number of ways to make computing more accessible: providing travel scholarships; hosting community resources on running an accessible conference and preparing accessible papers; pushing accessibility into the publication process; and testing research technologies. A notable innovation is our ASSETS captioning challenge, where researchers apply their live captioning technology as a supplement to sign language interpretation. At ASSETS 2015, the program chair Jeff Bigham, Carnegie-Mellon University, provided a pdf accessibility service, run by volunteer students, and available to authors who were not able to provide an accessible pdf themselves. For next year’s conference, Sheridan will provide a core level of accessibility to further reduce the burden on authors.

## Volunteer Development

SIGACCESS elections in 2015 brought in new volunteers. We redefined our member-at-large roles to engage more actively in social media presence, liaison with other SIGs, and support for SIG members in reaching for higher levels of ACM Membership. Our community provided expertise in accessibility testing for ACM’s new web site.

This year, we drew in young researchers interested in accessibility through the ACM Student Research Competition, the ASSETS Doctoral Consortium (sponsored by NSF), a mentoring program for new authors, 6 travel scholarship awards, and support for two undergraduate ACM-W award winners.

ASSETS 2015, chaired by Yeliz Yesilada, Middle East Technical University, was located in Lisbon, Portugal, and attracted record submissions and attendance, strengthening our presence in Europe and ties with European researchers.

## Key Issues

Moving forward, there are a number of opportunities for SIGACCESS to reach further. The SIG will continue its active effort to develop leaders, and recruit new members of the community to participate both in the conference organizing committee and in other SIG activities. To build on the success of ASSETS 2015, we will be considering further international venues, taking into account the necessity and availability of high quality American Sign Language interpretation, and an accessible venue.

Dissemination of accessibility challenges to a broader computer science audience would be beneficial to reach scientists whose core technology breakthroughs could open up new accessibility solutions. Further, we recognize the need to reach out more effectively to individuals with disabilities outside the computing community.

PDF accessibility continues to be a challenge for authors. We will continue to explore scalable models for providing accessible conference papers that minimize the burden on authors.

**SIGACT Annual Report**

**July 2015 - June 2016  
Submitted by: Michael Mitzenmacher, SIGACT Chair**

***The primary mission of ACM SIGACT (Association for Computing Machinery Special Interest Group on Algorithms and Computation Theory) is to foster and promote the discovery and dissemination of high quality research in the domain of theoretical computer science. The field of theoretical computer science is interpreted broadly so as to include algorithms, data structures, complexity theory, distributed computation, parallel computation, VLSI, machine learning, computational biology, computational geometry, information theory, cryptography, quantum computation, computational number theory and algebra, program semantics and verification, automata theory, and the study of randomness. Work in this field is often distinguished by its emphasis on mathematical technique and rigor.***

**1. Awards**

* 2016 Gödel Prize: This was awarded to **Stephen Brookes and Peter W. O’Hearn** for their invention of concurrent separation logic, and specifically for Brookes’ paper “A Semantics for Concurrency Separation Logic” Theoretical Computer Science 375 (1-3): 227–270 (2007) and O’Hearn’s paper “Resources, Concurrency, and Local Reasoning” Theoretical Computer Science 375 (1-3): 271–307 (2007). The prize is awarded jointly with the EATCS and this year was awarded at the ICALP conference.
* 2016 Knuth Prize to **Noam Nisan**. (not yet public). The Knuth Prize is given jointly by SIGACT and IEEE CS TCMF and the Knuth Prize and Lecture will be given this year at the FOCS conference.
* 2015 Paris Kanellakis Theory and Practice Award: **Michael Luby,** for his work on coding theory and erasure-correcting codes. This award is an ACM award sponsored in part by SIGACT.
* 2015 Edsger W. Dijkstra Prize in Distributed Computing: **Michael Ben-Or** for the paper “Another Advantage of Free Choice: Completely Asynchronous Agreement Protocols” in Proceedings of the Second ACM Symposium on Principles of Distributed Computing, pages 27-30, 1983, and **Michael Rabin** for the paper “Randomized Byzantine Generals” in Proceedings of the Twenty-fourth IEEE Symposium on Foundations of Computer Science, pages 403-409, 1983.
* SIGACT Distinguished Service Award: **László Babai**STOC 2016 Best Paper Awards: “Reed-Muller Codes Achieve Capacity on Erasure Channels”by **Shrinivas Kudekar, Santhosh Kumar, Marco Mondelli, Henry D. Pfister, Eren Sasoglu and Rudiger Urbanke**;“Explicit Two-Source Extractors and Resilient Functions” by **Eshan Chattopadhyay and David Zuckerman**; “Graph Isomorphism in Quasipolynomial Time*”* by **László Babai**Danny Lewin Best Student Paper Awards (STOC 2016): “A Tight Space Bound for Consensus” by **Leqi Zhu**; “The 4/3 Additive Spanner Exponent is Tight” by Amir Abboud and Greg Bodwin
* SIGACT made approximately 40 student travel awards to allow students to attend the 2016 STOC conference.
* Though the Turing Award is not directly sponsored by SIGACT, the winners of this year’s award, **Whitfield Diffie** and **Martin Hellman**, received their award for their foundational work in cryptography, a topic which has been one of the central research themes of the SIGACT community.

**2. Significant papers on new areas published in proceedings**

Below we highlight some of the “Best Paper” award winners from various SIGACT conferences. (We limit ourselves to a subset of these papers for space.)

**STOC 2016**

The ACM Symposium on Theory of Computing (STOC 2016) covers much of computer science theory.

László Babai, in his paper “Graph Isomorphism in Quasipolynomial Time” which won the Best Paper Award, made amazing progress on one of the key open theoretical questions of our time: what is the complexity of graph isomorphism. Graph isomorphism is known to be in NP but is not known to be NP-complete; it may, potentially, be a rare natural problem that is neither solvable in polynomial time but not NP-complete itself. Its complexity is therefore an important open problem, as it maybe one of the rare “NP-intermediate” problems. The previous best algorithm for graph isomorphism ran in time 2O(sqrt{n log n}). Using “serious group theory”, Babai’s new algorithm runs in time 2O(logcn) for some constant c, which is quasipolynomial (almost polynomial) time, making a great leap forward on a decades-old problem.

Kudekar et al., in their paper “Reed-Muller Codes Achieve Capacity on Erasure Channels”, which won another Best Paper Award, proved that Reed-Muller codes could reach capacity for every possible code rate. Previously this was only known in the limiting cases where the rates went to 0 or 1. The proof is a novel and challenging combinations of deep and previously unconnected techniques, including the sharp threshold property for symmetric monotone Boolean functions and the area theorem for extrinsic information transfer functions.

**SODA 2016**

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

Mohsen Ghaffari’s paper “An Improved Distributed Algorithm for Maximal Independent Set” at SODA 2016 received both a Best Student Paper and Best Paper Award. The Maximal Independent Set (MIS) problem a fundamental problem in distributed graph algorithms, as it provides a natural model for ensuring that local agents avoid conflict (by not having two agents, or vertices, at both ends of an edge attempt to perform some action at the same time) . This paper presents an extremely simple randomized algorithm providing a near-optimal local complexity for this problem that when combined with recent techniques also leads to a near-optimal global complexity.  That is, each agent terminates after a number of rounds that is approximately order of the logarithm of its degree. A corollary to the main theorem is a faster distributed algorithm for the Lovasz Local Lemma.

**SPAA 2016**

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

Tim Roughgarden, Sergei Vassilvitskii and Joshua Wang’s Best Paper at SPAA 2016, “Shuffles and Circuits (On Lower Bounds for Modern Parallel Computation)” focuses on the limitations of certain new models of parallel computation. The authors develop lower bounds on the speed of large-scale parallel computation in a model meant to capture the capabilities of Map-Reduce and Hadoop. They discover an important connection between these computations and polynomials representing Boolean functions, and use this fact to show lower bounds for a variety of natural and important problems.

**PODC 2016**

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

Andrea Cerone and Alexey Gotsman’s Best Paper at PODC 2016 “Analysing Snapshot Isolation”, analyzes snapshot isolation (SI), a widely used consistency model for transaction processing implemented by most major databases and some transactional memory systems. They start by providing a novel, alternative specification to SI that characterizes it in terms of transactional dependency. This characterization does not require adding additional information to dependency graphs about start and commit points of transactions. By exploiting their new specification, they are able to obtain a criterion for checking when a set of transactions executing under SI can be chopped into smaller pieces without introducing new behaviors to improve performance.

**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 Symposium on Principles of Database Systems (PODS), Symposium on Foundations of Computer Science (FOCS), and Symposium on Principles of Programming Languages (POPL).

SIGACT helped support the creation of SIGLOG the within ACM, which is now the home of LICS, a conference SIGACT previously co-sponsored.

**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. SIGACT has also 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.

SIGACT has co-sponsored the SIGACT CRA-W Grad Cohort Workshop and the Women in Theory Workshop. The Women in Theory Workshop this year was held May 22-25 at the Simon Institute at Berkeley. This brought together 60 women graduate and undergraduate students interested in theoretical computer science. The workshop featured technical talks by senior and junior women in the field, as well as social events and activities, including a trip to Google . The motivation for the workshop was twofold: to deliver an invigorating educational program and to bring together theory women students from different departments and foster a sense of kinship and camaraderie.

**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.

Another key issue relates to open access. By and large, the community is deeply supportive of open access and is encouraged by recent efforts by the ACM to make conference papers more readily and freely accessible. A natural consequence of this may be decreased funding for SIGACT through the ACM Digital Library program, which provides the bulk of our discretionary budget. We are actively monitoring this budget issue and are ready to engage our members in discussions regarding possible outcomes should significant changes occur.

**6. Volunteer Development Process**

SIGACT does not have a consistent, suitable volunteer development process. This is another issue the SIGACT community will have to deal with in the coming years, but it has been a significant issue for some time. SIGACT would appreciate help or advice in this area.

**SIGAda Annual Report**

**July 2015 - June 2016  
Submitted by: David A. Cook, Ph.D., SIGAda Chair**

***The ACM Special Interest Group on the Ada Programming Language provides a forum on all aspects of the Ada language and technologies, including usage, education, standardization, design methods, and compiler implementation. SIGAda members include practitioners, educators, researchers, and managers from a wide range of organizations in industry, academia, and government. Among the topics that SIGAda addresses are software engineering practice, real-time applications, high-integrity & safety-critical systems, object-oriented technology, software education, and large-scale system development. SIGAda explores these issues through an annual international conference, special-purpose Working Groups, active local chapters, and its Ada Letters publication.***

In 2014, SIGAda had a successful conference, HILT 2014 (High Integrity Language Technology) in Portland, OR. At an Executive Committee meeting, we agreed to switch to a biennial conference, with our next conference scheduled for late 2016. We therefore did not have a conference in the 2015 – 2016 fiscal year. However, we aggressively marketed our conference both on the internet and during the SIGCSE 2016 conference (where we had a booth).

This year’s conference will be in Pittsburgh October 6 – 7, and is the **International Workshop on Model-Based Development and Contract-Based Programming**, part of Embedded Systems Week (ESWEEK).

During this fiscal year, we published, as an issue of our newsletter, the proceedings of the 2016 Real-Time Ada Workshop (IRTAW).

During SIGCSE, we procured a booth, and worked to aggressively market Ada to the academic community. This included promoting our HILT 2016 conference.

Also, in an effort to attract undergraduate participants, we solicited student papers for special presentation at our conference.

Volunteers in SIGAda are recruited from active membership. During our conferences, we ask all those interested in volunteering to talk to a member of the Executive Committee (ExCom). Volunteers are “mentored” – by working with an experienced member of the ExCom. Currently, we are a small SIG and have a relatively stable base of volunteers and officers.

In Fall 2015, we presented the SIGAda Distinguished Service Award to Ahlan Marriott for his service to the SIGAda Community at large. He will officially be presented his award at the 2016 HILT Conference in October 2016.

We also marked a significant event in the Ada community. In June of 2016, we renamed the highest award SIGAda bestows – the Ada Community Contribution Award. On July 19, 2016, ACM issued the following press release: ACM’s Special Interest Group on Ada (SIGAda) today announced that its annual award for “broad, lasting contributions to Ada technology and usage” has been named the “Robert Dewar Award for Outstanding Ada Community Contributions”. Dr. Dewar, who passed away in June 2015, received this award himself in 1995 – it was then known as SIGAda’s Ada Community Contributions Award – in recognition of his innovative technological achievements surrounding the Ada language. Dr. Dewar was an integral part of SIGAda and the Ada community from the origins of the language. We are honored that his family let us keep his legacy alive by renaming our highest award in his name.

**SIGAI Annual Report**

**July 2015 - June 2016  
Submitted by: Yolanda Gil, SIGAI 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 this period:

1. QUARTERLY NEWSLETTER

SIGAI launched a new quarterly newsletter in August 2014, “AI Matters”, that features articles of general interest to the AI community. The newsletter publishes research overview articles, thesis summaries, and position pieces. A new editor-in-chief was appointed in the Fall of 2015. Of particular note is an article that appeared in the December 2015 issue titled “Who Speaks for AI?” which featured 12 prominent AI researchers discussing how to bring the field together given the many AI organizations that exist across the globe.

2. NEW SIGAI CAREER NETWORK CONFERENCE

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. SIGAI decided to move the conference to the Fall, rather than hold it in the Spring. The next SIGAI CNC will take place in Boston in October 19-20, 2016.

3. CONFERENCES

SIGAI co-sponsored the following conferences:

\* ACM SIGAI Career Network and Conference (CNC), October 19-20, 2016, Boston, MA.

\* ACM International Conference on Intelligent User Interfaces (IUI), March 7-10, 2016, in Sonoma, CA.

\* 10th ACM/IEEE International Conference on Human-Robot Interaction (HRI), March 7-10, 2016, Christchurch, New Zealand.

\* 30th IEEE/ACM International Conference on Automated Software Engineering (ASE), September 3-7, 2016 Singapore.

\* IEEE/WIC/ACM International Conference on Web Intelligence (WI-IAT), October 13-16, 2016, Omaha, Nebraska.

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 2016 ACM SIGAI Autonomous Agents Research Award recipient is Professor Peter Stone of the University of Texas at Austin. Prof. Stone's work is exceptional in both its breadth and depth in multiagent systems. Some of his most influential work has been in reinforcement learning and multiagent learning as applied to robot soccer, autonomous traffic management, and trading agents. His contributions are ongoing, as evidenced by the growing influence of one of his recent innovations, the formulation of ad hoc teamwork as a new research area. In addition to the impact of his research, his teams' successes in international competitions, including RoboCup and the Trading Agent Competition, are particularly notable. Prof. Stone has also served the multiagent systems, AI, and RoboCup communities in various leadership roles.. Dr. Stone gave a plenary address at the 2016 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 2016 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. SIGAI CHAPTERS

A new local chapter of SIGAI was founded in the San Francisco Bay area in 2014, and continues to be active. New chapters are currently under consideration.

7. MEMBERSHIP

SIGAI has almost 1,000 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’16 Annual Report**

**July 2015 - June 2016**

**Submitted by: Jiman Hong, SIGAPP 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 Pisa, Italy after taking place in Salamanca, Spain, in 2015. 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, the 2015 Reliable and Convergent Systems (RACS 2015) was held in Prague, Czech Republic in October 2015, and the 2016 International Conference on Ubiquitous Information Management and Communication (IMCOM 2016) was held in Da Nang, Vietnam in January, 2016. The RACS 2015 and IMCOM 2016 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 2016 in Pisa, Italy. 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, RACS and IMCOM, as well. We have a number of in-cooperation conferences, and the list of in-cooperation conferences are below:

* SENSORNETS 2016 (International Conference on Sensor Networks)
* ICPRAM 2016 (International Conference on Pattern Recognition Applications and Methods)
* FedCSIS 2016 (Federated Conference on Computer Science and Information Systems)
* MOBIQUITOUS 2016 (International Conference on Mobile and Ubiquitous Systems : Computing, Networking, and Services)
* PECCS 2016 (International Conference on Pervasive and Embedded Computing and Communications Systems)
* HPCS 2016(International Conference on High Performance Computing & Simulation
* ENASE 2016 (International Conference on Evaluation of Novel Approaches to Software Engineering)
* MobiCASE 2016 (International Conference on Mobile Computing, Applications and Services)
* SBSI 2016 (Brazilian Symposium on Information Systems)
* MEDES 2016 (International Conference on Management of Computational and Collective Intelligence in Digital Ecosystems)
* PPPJ 2016 (Principles and Practice of Programming in Java Platform, Virtual Machines, and Platforms)
* XSEDE 2016 (Extreme Science and Engineering Discovery Environments)
* EATIS 2016(Euro American Conference on Telematics and Information Systems)
* URC 2016 (Annual Undergraduate Research Conference on Applied Computing)
* ICCCV 2016 (International Conference on Communication, Computing and Virtualization)
* CTS 2016 (International Conference on Collaboration Technologies and Systems)
* Urb-IoT 2016(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. 39 students were granted awards to attend SAC 2016, representing 15 countries. $41,859 was spent for this year of these awards. We also implemented a Developing Countries Travel Award for researchers from developing countries who would otherwise have difficulty attending the SAC conference. For 2016, 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 2017 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 31st 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 University of Pisa, Pisa, Italy, April 2016. There was an open Call for Track Proposals and after prescreening the proposals, 37 Tracks were finally accepted for SAC 2016. 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 1,047 final paper submissions from 58 different countries. The submitted papers underwent the blind review process and 252 papers were finally accepted as full papers for inclusion in the Conference Proceedings and presentation during the Symposium. The final acceptance rate for SAC 2016 is 24% for the overall track. In addition to the accepted full papers, 111 papers that received high enough review scores were accepted as short papers for the Poster Program. The Monday Tutorials program offered over 7 tutorials and attracted over 100 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. 47 submissions were received and finally 22 SRC contributions were actually presented in the final program.

SAC 2016 will be held in and will be hosted by Cadi Ayyad University (UCA) of Marrakesh, Morocco from April 3 – 7, 2017. The web site <http://www.sigapp.org/sac/sac2017/> has further details such as symposium committee, technical tracks, and track chairs. SAC 2018 is being considered for Biarritz, France. A decision by the SAC steering will be made soon. To date, 2017 SAC local host proposals have been submitted from Biarritz, France.

**SigAPP volunteer development process**

The SigAPP volunteer development process is an essential issue for SigAPP. The SigAPP Executive Committee keeps looking for the new volunteer to serve the future SIGAPP officers.  We usually encourage the SIGAPP members to serve as a volunteer for SAC conference which is the flagship conference of SIGAPP.   The development process is as follows,

* Encourage to submit the track proposal of the SAC, and server as the track chair
* Encourage to serve the SAC organizing committee member based on the successful track chair records.
* Encourage to be a candidate for SIGAPP officer election.

SIGAPP’s volunteer process has been successful but we will continue to improve and establish our volunteer development process

**Summary**

1. 39 Student Travel Awards were granted, totaling $41,859.

2. SIGAPP Outstanding Service Award was given to, Prof. Sung Y. Shin, South Dakota State University, SD, USA and SAC Distinguished Service Award was given to, Prof. Dongwan Shin, New Mexico Tech, NM, USA

3. 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.

4. 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.

5. 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 22 SRC contributions actually presented in the final program have been selected out of 47 submissions.

6. A very brief summary for the key issues:

* To increase SIGAPP membership
* To continue the awards including STAP
* To achieve SCI index for ACR (SIGAPP Newsletter)

**SIGARCH Annual Report**

**July 2015 - June 2016  
Submitted by: Sarita Adve, SIGARCH Chair**

***The mission of SIGARCH is to advance the field of computer architecture by enabling (1) premier fora for technical exchange on topics related to computer architecture, (2) talent development and recognition of computer architects, and (3) outreach across and outside the computing field to communicate and broaden the impact of architects.***

**New SIGARCH Executive Committee**

A new SIGARCH EC was elected in October 2016. We have restructured the EC to make it a fully working committee with each member leading at least one project and with teleconferences about once a month. As part of the restructuring, we revised our mission statement to emphasize three aspects to our mission – technical exchange, talent development, and outreach. We have started work on new projects within each component, with a particular emphasis on the new component of outreach. Notable new efforts include (planning for) **annual vision workshops, a new computer architecture blog, and lightning mentoring sessions at conferences.** Our presentation at the SIGARCH business meeting at ISCA in June 2016 was met with enormous enthusiasm from the broader community. This report provides a few highlights.

**Technical exchange**

(1) Meetings: SIGARCH (co-)sponsors a strong portfolio of a variety of conferences. Most notably, the premier conference for computer architecture, ISCA, co-sponsored with IEEE, was held in Seoul in June’16 with a record attendance (about 760 registrations), record external sponsorships (about $305,000), and an incredible organization effort by the local community, including the recently formed Korean SIGARCH chapter. Many sponsored conferences continue to co-host a variety of highly attended specialized workshops and tutorials on leading edge topics. A highlight this year was the Architecture 2030 Workshop, co-located with ISCA’16 and supported by the Computing Community Consortium, as part of its series of visioning activities to craft new directions for the field.

(2) SC transition: We are pleased to report that the transition of the SC conference from SIGARCH to the new SIGHPC has been completed smoothly and ahead of schedule. We wish to thank the past SIGARCH leadership, specifically David Wood, and the SIGHPC leadership for their efforts on this difficult task.

(3) **New: Reviewing the review process:** Key to our mission is a well-regarded peer review process for technical submissions. The SIGARCH business meeting at ISCA’16 included a presentation by T. N. Vijaykumar that identified potential problems and solutions in our review processes. Based on input from the audience, SIGARCH (in conjunction with IEEE) will appoint a committee to undertake a review of our peer-review process to systematically identify any shortcomings and propose changes (if needed).

**Talent development and recognition**

(1) Current awards: The ACM/IEEE Eckert-Mauchly award is the most prestigious award in computer architecture given for contributions to computer and digital systems architecture. The 2016 recipient was Uri Weiser for “leadership and pioneering industry and academic work in high performance processors and multimedia architectures.” The SIGARCH Maurice Wilkes award is the most prestigious award given to a researcher in the first 20 years of their career and went to Timothy Sherwood for “contributions to novel program analysis advancing architectural modeling and security.” The SIGARCH/IEEE-CS TCCA influential ISCA paper award recognizes a paper from the ISCA 15 years earlier. The 2016 recipient was “Focusing processor policies via critical-path prediction,” by Brian Fields, Shai Rubin, and Rastislav Bodík. The ASPLOS influential paper award recognizes an ASPLOS paper from 10 or more years ago. The 2016 recipient was “Limits of instruction-level parallelism” by David W. Wall from ASPLOS’91.

(2) Travel and child care grants: Student travel grants for conferences is our flagship benefit for student members. All conferences where SIGARCH co-sponsors at a level greater than 33% are eligible for student travel grant support. SIGARCH was a pioneer in supporting travel grants for companions for childcare or disability support. These have expanded to supporting on-site childcare. We are pleased to see other organizations provide similar support, including IEEE TCCA recently approving a similar program. We are currently revisiting our algorithms for travel grants and collecting data to make these even more effective.

(3) **New: SIGARCH Alan D. Berenbaum Distinguished Service Award:** SIGARCH is deeply saddened by the untimely loss of Alan Berenbaum. In memory of Alan’s many contributions to the SIGARCH community (including as SIGARCH chair), the SIGARCH distinguished service award has been renamed after Alan. The inaugural recipient is Michael Flynn for “the founding of SIGARCH.”

(4) **New: Dissertation award proposal:** The SIGARCH EC developed a proposal for a joint SIGARCH/IEEE CS TCCA dissertation award. This has been approved by TCCA and will be submitted shortly to ACM and IEEE.

(5) **New: Lightning mentoring sessions:** We ran a very successful pilot, “Meet a Senior Architect” at ISCA’16. Several senior architects signed up to mentor graduate students in one-on-one 30 minute sessions. This was a resounding success as assessed through informal feedback and a formal survey. We plan to expand this program.

**Outreach**

The SIGARCH EC has added outreach to other communities as part of our mission with dual goals: (i) communicate the excitement and impact of architecture work to other communities and (ii) catalyze new directions within our own community by exposing us to exciting developments in other areas. Towards these goals, we have begun planning the following two activities, both inspired by the work of the Computing Community Consortium (CCC).

(1) **New: Annual SIGARCH vision workshops:** A committee co-chaired by Luis Ceze and Karin Strauss, with mentoring from Joel Emer, will seek proposals for annual workshops that will explore new areas and develop a vision for new future directions. Cross-disciplinary involvement will be a particular emphasis. Follow-up with white papers and other outreach or demonstrated impact will be a requirement.

(2) **New: Computer Architecture News Blog:** SIGARCH has traditionally published a conventional newsletter, Computer Architecture News (CAN) that has had a decline in submissions and readership over the years and whose function has been replaced in part by a monthly SIGARCH mailing with event announcements. We plan to replace CAN with a blog whose purpose is to advertise exciting developments in computer architecture and related areas broadly. The goal for the blog is to serve as the “go-to” source of information about computer architecture. Alvy Lebeck will be the inaugural editor, mentored by Babak Falsafi, with expected rollout in January 2017.

**Volunteer development process**

We do not have a formal volunteer development process except to have the executive committee lead by example through its hard work. The community remains enthusiastic and we have been fortunate to be able to attract volunteers as needed. The SIGARCH business meeting at ISCA’16 was standing room only with several community members ranging from graduate students to senior researchers coming forward voluntarily after the meeting to offer help for our proposed programs as well as suggesting new programs.

**Summary**

SIGARCH remains a financially healthy and vibrant organization with a broad and enthusiastic membership and committed leadership. The EC looks forward to implementing the many new ideas we have developed over the last year with the support of the larger community.

**SIGBED Annual Report**

**July 2015 - June 2016  
Submitted by: Insup Lee, SIGBED Chair**

***SIGBED is intended to be a focal point within ACM for all aspects of embedded computing systems, including both software and hardware. Embedded systems has come to be recognized as a key discipline, which includes new computer and systems science foundations, new design technology, and new hardware and software frameworks.***

**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 2015 Paul Caspi Memorial Dissertation Award recipient is Marco Zimmerling, ETH Zurich, for his thesis End-to-end Predictability and Efficiency in Low-power Wireless Networks. The winner of the 2015 award was chosen from a total of 7 nominations. The selection committee found the winning thesis to offerboth a significant theoretical contribution and a substantial systems work.The committee took into consideration the citation counts of research publications that form the basis for the thesis, as well as awards received by these publications.

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 2015 SIGBED-EMSOFT Best Paper is titled “A scalable algebraic method to infer quadratic invariants of switched systems,” by Xavier Allamigeon, Stéphane Gaubert, Eric Goubault, Sylvie Putot, and Nikolas Stott.

**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 can be used to partially cover conference registration and/or hotel accommodation.The current SIGBED leadership views travel grants as one of the best investments into the SIG future and the budget allocation for travel grants is significantly increased. As a result, all 18 applicants for travel grants to ESWEEK 2015 in Amsterdam, the Netherlands, have received the awards. CPSWEEK 2016 in Vienna, Austria, received 25 applications for travel grants, of which 22 were awarded.

**Events highlighting new areas of interest 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 2015 featured the following keynotes on emerging horizons in embedded systems:

* “Enabling the digital transformation for a smarter life” by Philippe Magarshack, Executive VP and CTO Embedded Processing Solutions, ST Microelectronics
* “Evolution or Revolution? Requirements for the architecture of automated vehicles” by Dr. Michael Fausten, VP Vehicle Systems Development, Bosch GmbH
* “Connected Vehicles – Carstalking to each other, safely& securely” by Mark Steigemann, Senior Director Product Architecture, NXP Business Unit Automotive

Similarly, CPSWEEK 2016 featured keynotes discussing new CPS applications and significant challenges:

* “Smart Mobility” by Ken Butts, Executive Engineer, Toyota USA
* “Smart Grid – Opportunitiesand challenges for the industry” by Rada Rodriguez, SVP Central and Eastern Europe, CEO Schneider Electric GmbH, Germany
* “The problem of intelligence: Today's Science, Tomorrow's Engineering” by Tomaso Poggio, Eugene McDermott Professor, Department of Brain and Cognitive Sciences and Artificial Intelligence Laboratory, MIT, USA

**SIGBED membership drive**

SIGBED officers organized business meetings at ESWeek 2015 in Amsterdam, the Netherlands, and at CPSWeek 2016 in Vienna, Austria. The purpose of the meetings was to raise awareness of the research community regarding activities organized or sponsored by SIGBED and benefits that SIGBED provides to its members.

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

SIGBED continues to sponsor two major federated conferences, CPSWEEK (comprised of HiCoNS, HSCC, ICCPS, IPSN, RTAS)in the spring and ESWEEK (comprised of 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 2015, ICCPS 2016, HSCC 2016, EMSOFT 2016, MEMOCODE 2016, NOCS 2016, and LCTES 16. “In cooperation” status was approved for Ada-Europe 2016, ICDSC 2016, Mobiquitous 2016, SCOPES 2016, IWSN 2016 and 2017.

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.

# SIGCAS Annual Report

# July 2015 ― June 2016 Submitted by: Michael Goldweber, SIGCAS Chair

***SIGCAS mission has been to provide a forum to discuss, debate and research all issues pertaining to the social implications of computing, including ethical and philosophical concerns, for the computing profession.***

## General Report

FY 2016 was a solid year for SIGCAS. The leadership team, elected the year prior to help turn around this floundering SIG, hit its stride.

The SIG’s newsletter’s editorial team of Vaibhav Garb and Dee Weikle put in place a new vision for the publication. Nineteen “area editors” were successfully recruited; each being personally responsible for either penning or soliciting two submissions per year. The first two editions of the newsletter, under this new direction, have been published. Both have been very successful and very well received by the SIG’s membership.

Sadly, after putting in a tremendous effort towards the newsletter, its EIC, Vaibhav, due to overwhelming professional responsibilities, concluded he needed to step down from his role. Happily Dee Weikle, his assistant EIC (in reality co-EIC), in spite of herself stepping into a new job herself has agreed to step into the EIC role. With nineteen area editors contributing to the newsletter’s success, it should be rather straightforward to elevate one of this volunteers into the assistant EIC role and recruit a new area editor.

SIGCAS’s social media presence continues to both flourish and grow. Vigorous debate continues to take place on the SIGCAS-TALK list whenever a topic hits the nerve of the membership. (e.g. The Apple Court order this past February.) Karla Carter, SIGCAS’s vice-chair remains enthusiastic as the Twitter presence of the SIG. The primary focus of this Twitter feed is not to “speak for the SIG,” but to continually draw the membership’s attention to issues, both large and small, of potential interest to the community.

Last year it was decided that while Computers and Society is a rather large umbrella, the SIG’s primary foci would be professional ethics, both in practice and in education, along with Computing for the Social Good (CSG). To date, the CSG side of the equation has focused primarily on education. In March 2016 the SIG held two half-day symposia as pre-events at the annual SIGCSE Technical Symposium. The morning event was dedicated to CSG while the afternoon event, held in conjunction with COPE, focused on ethics. Both events were considered successful.

Looking forward we are hoping to get moving on our plans to produce member-focused webinars, coordinate with other SIGs to offer either ethics and/or CSG workshops at their annual gatherings and to evolve the CSG work beyond its current education focus.

## 2. Awards

This year the SIG finally got back on track with its awards program. Under the leadership of Flo Appel.

The 2015 “Making a Difference” award was given to Gloria Childress Townsend, Professor of Computer Science at DePauw University.

The 2015 “Outstanding Service” award was given to Vaibhav Garg, Director of Information Security Awareness, Visa Inc.

Since there is no annual SIGCAS meeting to present the winners with their awards, we are still working on plans to appropriately recognize our winners.

Finally, the awards committee has already begun its work on recognizing the 2016 award winners.

## 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 your 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 continues to participate in a joint IEEE/ACM Ethics project.
* SIGCAS continues to work with other conferences world-wide through an “in cooperation” status.

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

Like all SIGs the key issue is attracting new members and keeping our current membership engaged. Our EIC has done an excellent job of recruiting a new cadre of volunteers to help see the newsletter forward. The CSG sub-group has also been successful in attracting additional volunteers though not to the same level. The ethics sub-group, sadly has not seen any significant growth; its primary movers and shakers at or near retirement.

Another challenge area, which is also an opportunity, is how to raise the SIGs visibility among the other SIGs. We have much to offer but struggle to get the word out.

Finally, since we are not a research oriented SIG, we continue to struggle to understand our role among the other SIGs.

**SIGCHI Annual Report**

**July 2015 - June 2016**

**Submitted by: Loren Terveen, SIGCHI Chair**

***The scope of the Special Interest Group on Computer-Human Interaction (SIGCHI) is the study of human factors in the human-computer interaction process, including research, design, development and evaluation of interactive computing systems.***

The 2016 fiscal year was a very successful one for SIGCHI. Key milestones and activities included:

\* Significant growth and excitement in our conference series. The CHI conference had record attendance (over 3800 people from over 50 countries) and a record amount of content and submissions. At least two of our other conferences also had record attendance (CSCW: over 750; Ubicomp: over 900). And our conference portfolio continues to grow, with two new conferences added in the fiscal year. We also are actively encouraging our sponsored conferences to find opportunities for collaboration and knowledge sharing: we call this our “Family of Conferences” initiative. We have worked with all the conference steering committee chairs to define some specific opportunities and have begun to implement a few of them.

\* 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 continue to focus on Asia, and have acknowledged this by forming an Asian Development Committee to guide our efforts in the area. They have held or planned workshops and conferences in their regions, always including participation from around the region and typically from leading SIGCHI members from North America and Europe. They also are working to help us in planning for the next CHI conference in Asia, which we tentatively plan for 2021.

\* Increased emphasis on volunteer development. We have appointed an Executive Committee member with volunteer development as her portfolio. She has developed a database to record the people who have filled committee roles at our major conferences; this will aid conference organizers in finding people for other roles and help us identify candidates for mentoring to take on additional roles. We also have begun holding “How to be a SIGCHI Volunteer” events at our conferences. We held the first such event at CHI 2016, and it was very well received, resulting in several dozen people expressing interest in getting involved.

\* Increased emphasis on diversity and inclusion. SIGCHI is fortunate in that many of our conferences have a reasonable gender balance, participation from people in many countries, and (sometimes) a good mix of academics, people from various industries and disciplines, and students. However, we continue to emphasize this; for example, CHI 2016 led the way on this front (see https://chi2016.acm.org/wp/diversity-and-inclusivity/), and the Executive Committee is in the process of drafting guidelines to encourage this across the range of our conferences and activities.

\* Funding programs to support innovation and participation. We had a funding program that enables successful conference series to receive “grants”; many of our conferences have taken advantage of this to support new activities and enhance participation (say, by people who do not have the resources necessary to attend). We also have various programs to support participation in our conferences by students including the Gary Marsden Student Development Fund (for students from developing world countries), and the Student Travel Grant (for students who are presenting their work at a conference).

**Key issues SIGCHI will face over the next few years include:**

\* Scaling our software infrastructure and processes to handle the growth in our flagship conferences.

\* Transitioning some of our conference publications to the Proceedings of the ACM.

\* Developing venues to present SIGCHI work to a broader popular audience.

SIGCHI Awards are presented at each year’s CHI conference to recognize and honor leading members of the human-computer interaction community . This year’s award winners were (see http://www.sigchi.org/about/awards/2016-sigchi-awards for details):

Lifetime Achievement in Research

Robert E. Kraut

Lifetime Achievement in Practice

Jeff A. Johnson

Social Impact

Jonathan Lazar

Lifetime Service

Garry M. Olson

Gerrit C. van der Veer

SIGCHI Academy

Margaret Burnett

Elizabeth F. Churchill

Allison Druin

Susan R. Fussell

Yves Guiard

Leysia Palen

Daniel M. Russell

John Stasko

**SIGCOMM Annual Report**

**July 2015 - June 2016**

**Submitted by: S. Keshav, SIGCOMM Chair**

***SIGCOMM is ACM's professional forum for the discussion of topics in the field of communications and computer networks, including technical design and engineering, regulation and operations, and the social implications of computer networking. SIG members are particularly interested in the systems engineering and architectural questions of communications***

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 last year, Symposium on SDN Research (SOSR).  Finally, we participated in the creation of and support ANRW 2016 (to be held in July 2016), the joint ACM, ISOC, IRTF Applied Networking Research Workshop is targeted at fostering the exchange between research and industry, to be co-located with the 96th IETF in Berlin in July 2017.

Our flagship conference, continuing our policy of rotation among regions on a 3-year cycle, was held in London (the ‘European’ location in the rotation) in August 2015. The conference had an attendance of about 750 participants. As in 2014, 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. The conference made a small profit, as did all of our other conference.  The overall financial strength of the SIG, therefore, continues to be extremely strong, which allows us considerable freedom to support the community and to be innovative.

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 are in-cooperation with a number of events, including RAIM 2015, MMSys 2016, CSNM 2016, CFI 2016, NSDI 2016, and ITC 2016.

In a significant change, we worked with ACM to use a hosted service hotcrp.com to host all of our conferences. We have also worked with hotcrp.com to directly move papers from this site into the ACM Digital Library. This allows us to not only reduce the time between camera-ready paper submission and paper publication, but also onerous fees being paid to Sheridan Publishing.

There has been one change to our executive committee: our former Education Director, Olivier Bonaventure took over as editor of our newsletter. His place was taken by Tristan Henderson, from St. Andrews University.

We continue to work with MeetGreen to provide administrative support to our volunteers. By taking on registration and travel grant duties, MeetGreen has allowed us to reduce the number of errors made by volunteers and also made it easier for our volunteers to serve as conference managers.

**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. Starting with the July 2016 issue, there have been two significant changes. First, after four years of dedicated and excellent service, Dina Papagiannaki stepped down as Editor; her place has been taken by Olivier Bonaventure. Second, we have moved CCR completely online, with paper management being done using hotcrp.com and papers published both in the ACM digital library and on a WordPress site.

As in prior years, we will hold a ‘Best of CCR Session’ at SIGCOMM 2016. The two selected papers are:

Hassan Metwalley, Stefano Traverso, Marco Mellia, Stanislav Miskovic, and Mario Baldi. 2015. CrowdSurf: Empowering Transparency in the Web. SIGCOMM Comput. Commun. Rev. 45, 5 (September 2015), 5-12.

Carsten Orwat and Roland Bless. 2016. Values and Networks: Steps Toward Exploring their Relationships. SIGCOMM Comput. Commun. Rev. 46, 1 (May 2016), 25-31.

**Awards**

This year, SIGCOMM recognized Prof. Jim Kurose, University of Massachusetts, Amherst, with the SIGCOMM award for lifetime achievement; he will receive the award and present a keynote talk at the annual SIGCOMM conference in August 2016 in Florianopolis, Brazil. He was recognized for his sustained excellence in networking research, education, mentoring, and service to the SIGCOMM community.

The winner of the 2015 Doctoral Dissertation Award is Mosharaf Chowdhury, whose dissertation provides novel and application-aware networking abstractions which significantly improve the performance of networked applications running in the cloud.

The SIGCOMM Rising Star Award 2015 winner is Brighten Godfrey (University of Illinois at Urbana-Champaign). The award to Brighten Godfrey is in recognition of outstanding research contributions, early in his career in network architecture. His work has brought a synergy of algorithmic and systems insights to make significant contributions in problems such as pathlet routing, data center architectures, and network verification.

SIGCOMM 2016 Test of Time Awards Papers are:

Link-level measurements from an 802.11b mesh network

Daniel Aguayo, John Bicket, Sanjit Biswas, Glenn Judd, Robert Morris

Published in SIGCOMM 2004.

This paper was one of the first attempts to bring a “systems approach” to wireless networking and in particular provides key lessons from one of the first real operational deployments of wireless mesh networks. The impact of this work was in spawning new directions in wireless network research and in significantly raising the bar for research and evaluation in this domain by bringing to the fore real-world complexities of wireless signal propagation.

A first-principles approach to understanding the Internet's router-level topology

Lun Li, David Alderson, Walter Willinger, John Doyle

SIGCOMM 2004.

This paper questioned the prevailing work on scale-free graph structure for network topologies that incorrectly speculated an “Achilles’ heel” for the Internet, and instead provided a methodologically sound basis to explain the observed structure of Internet topologies. The impact of the paper was in bringing a greater degree of rigor in network topology research and evaluation, and in informing the community of potential pitfalls in using black-box network models without a clear understanding of underlying structural effects in network design.

At the ACM level, during the year, ACM and the Infosys Foundation named Stefan Savage the recipient of the 2015 ACM-Infosys Foundation Award in the Computing Sciences. He was cited for innovative research in network security, privacy and reliability that has taught us to view attacks and attackers as elements of an integrated technological, societal and economic system. Also, three SIGCOMM members have been selected as ACM Fellows this year: Kevin Fall, Michael George Luby, and Pablo Rodriguez. Other members of the community were recognized as ACM Distinguished Scientists: Ratul Mahajan, Konstantina Papagiannaki, and Ben Y Zhao. Finally, the 2016-17 recipient of the ACM-W Athena Lecturer Award was Jennifer Rexford, Princeton University, a past Chair of ACM SIGCOMM.

**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 continue to support national networking summits with grants totalling $30K, to be given in the form of student travel grants.  The first ones being the UK-based event Cosener 2016, with the Chilenean Spring School on Networks in November 2016 and the German NetSys conference in March 2017 lined up next.
* We have continued 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 2016.
* We held preview talks to give background for the technical sessions at SIGCOMM 2015. This helps new community members come up to speed on ‘hot’ topic areas
* 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.
* Two 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.

The SIGCOMM industrial liaison board has worked on many fronts to increase

industry-academic collaboration:

- Continued the industrial demo session at the SIGCOMM 2016 conference.

This year the board accepted 8 industrial demos.

- 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 create a joint ACM/ISOC/IRTF workshop ANRW (see: <https://irtf.org/anrw/>).

- Held, in collaboration with SIGMOBILE, an industry day on wireless

co-chaired by Sachin Katti (Stanford) and Ranveer Chandra (Microsoft). See: <http://wnid2016.stanford.edu/>

- Continued the 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. In the past year, George Varghese described his experience with technology transfer of network algorithms and Nandita Dukkipati, Yuchung Cheng, and Amin Vahdat discussed how research in congestion control has impacted datacenter networks and the Internet.

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

* To support the participation of women in SIG conferences and in our community, we support N^2women 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).
* 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. The first is that, like many other venues, some participants do not behave as we would wish them to. We have crafted a anti-harassment policy that is nearly ready for adoption, and this will be rolled out for SIGCOMM 2016.

Second, it has been a challenge organizing SIGCOMM 2016 in Brazil, with the Zika issue. We moved the venue to a non-endemic location, but expect participation to be affected. In future years, it may be necessary to support multiple remote sites to reduce the travel burden on participants and deal with unexpected world events.

**SIGCSE Annual Report**

**July 2015 - June 2016**

**Submitted by: Susan H. Rodger, SIC CSE Chair**

***SIGCSE is to provide a forum for educators to discuss issues related to the development, implementation, and/or evaluation of computing programs, curricula, and courses, as well as syllabi, laboratories, and other elements of teaching and pedagogy.***

This report concludes my final year as SIGCSE Chair. I want to thank the members of the 2013-2016 SIGCSE Board: Paul Tymann, Vice-Chair, Judy Sheard, Secretary, Amber Settle, Treasurer, Renee McCauley, Immediate Past-Chair, Tiffany Barnes, Sue Fitzgerald and Alison Clear. I'd also like to thank our publication editors: John Impagliazzo, Mark Bailey, Laurie Smith-King, Leo Porter, Maureen Doyle, Dave Kauchak and Christine Alvarado, and our ACM contacts Irene Frawley and April Mosqus for their support.

1. Awards that were given out:

The SIGCSE Award for Outstanding Contribution to Computer Science Education was presented to Jan Cuny, Program Officer of CISE BPC at the National Science Foundation, for her vision and principled leadership that has transformed computer science education and has moved the United States closer to making computing education accessible to everyone.

The SIGCSE Award for Lifetime Service to the Computer Science Education Community was presented to Barbara Boucher Owens, Emeritus Professor of Computer Science from Southwestern University, for her extraordinary record of service to the computing education community for working relentlessly to grow the effectiveness of SIGCSE as a global leader in computer education.

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

ICER 2015 had two best paper awards. The Chair's award is selected by the organizing committee and was presented to:

Briana B. Morrison, Lauren E. Margulieux, and Mark Guzdial. Subgoals, Context, and Worked Examples in Learning Computing Problem Solving, ICER '15, Proceedings of the eleventh annual conference on international computing education research, pages 21-29, 2015.

The ICER 2015 John Henry Award is selected by the conference delegates and was presented to:

Kristin A. Searle and Yasmin B. Kafai, Boys' Needlework: Understanding Gendered and Indigenous Perspectives on Computing and Crafting with Electronic Textiles, ICER '15, Proceedings of the eleventh annual conference on international computing education research, pages 31-39, 2015.

The best paper selected at ITiCSE 2016 was:

Suzanne Dazo, Nicholos Stepanek, Robert Fulkerson and Brian Dorn, University of Nebraska at Omaha, USA, An Empirical Analysis of Video Viewing Behaviours in Flipped CS1 Courses, 21st Annual Conference on Innovation in Computer Science Education (ITiCSE), p. 106-111, 2016.

Two papers at ITiCSE 2016 were given Commendation Best Paper:

Veronica Catete, Tiffany Barnes and Erin Snider, Developing a Rubric for a Creative CS Principles Lab, 21st Annual Conference on Innovation in Computer Science Education (ITiCSE), p. 290-295, 2016.

Jennifer Campbell, Diane Horton, and Michelle Craig, Factors for Success in online CS1, 21st Annual Conference on Innovation in Computer Science Education (ITiCSE), p. 320-325, 2016.

One paper at ITiCSE 2016 was given a Commendation Best Presentation:

Andrew Luxton-Reilly, Learning Programming is Easy, 21st Annual Conference on Innovation in Computer Science Education (ITiCSE), p. 284-289, 2016.

The best paper selected at SIGCSE 2016 was:

Leo Porter, Beth Simon, University of California, San Diego; Dennis Bouvier, Southern Illinois University, Edwardsville; Quentin Cutts, University of Glasgow; Scott Grissom, Grand Valley State University; Cynthia Lee, Stanford University; Robert McCartney, University of Connecticut; and Daniel Zingaro, University of Toronto, Mississauga; A Multi-institutional Study of Peer Instruction in Introductory Computing, Fourty-seventh SIGCSE Technical Symposium on Computer Science Education, p. 76-81, 2016.

3. Innovative programs which provide service or broadened participation to some part of your technical community

SIGCSE Special Projects Fund provides grants up to $5000 per project and has calls in November and May each year. The November 2015 call funded three projects for a total of $10,337. One award was made to David Musicant of Carleton College for $4,737 for developing a new Git client named Elegit that is a subset of Git commands to help students understand Git's organizational structure. A second award was made to Daniel Krutz of Rochester Institute of Technology for $2,400 for creating a publicly accessible oracle of mobile apps which contain well-defined vulnerabilities and steps on how to exploit each vulnerability. A third award was made to Bruce Maxim of the University of Michigan-Dearborn for

$3,200 for creating a serious game that allows students to create agile process models and to experiment with process improvement practices.

The May 2016 call funded three projects for a total of $11,451. One award was made to Richard Ladner at the University of Washington for $4,064 for making Block Languages accessible to blind children by extending the open source Blockly language and building on touchscreen phone applications. A second award was made to Mark M. Meysenburg at Doane University for $3000 for creating a role-playing game on Charles Babbage and the Difference Engine to encourage students to study computing. A third award was made to Chun Wai Liew at Lafayette College for $4,387 to develop a web based tutoring system to help students learn top-down insertion and deletion algorithms in balanced trees, specifically red-black trees.

ITiCSE 2016 had seven working groups on the topics of 1) Latin American Perspectives to Internationalize Undergraduate Information Technology Education, 2) Game Development for Computer Science Education, 3) Teaching Model-Driven Software Development, 4) Ground Rules for Academic Integrity in Computing, 5) Gender Equity in Computing Programs, 6) Novice Programmers and the Problem Description Effect, and 7) Game Jam Junior. Many of the working groups start projects that continue collaborations.

We held the second New Educator's Workshop on Wednesday March 2, the day before the SIGCSE Symposium 2016, organized by Andrea Danyluk and Dave Reed. This workshop will be held every other year at the SIGCSE Symposium. In 2014 there were ten participants. In 2016 this workshop had a

much larger attendance with thirty-five participants (graduate students and faculty) and seven speakers including the organizers. SIGCSE provided travel grants for eleven of the graduate student attendees, and the food for participants.

On alternate years, the SIGCSE Board runs a workshop for future or present Department Chairs the day before the SIGCSE Symposium. The next such workshop will be held at SIGCSE 2017.

The 2016 SIGCSE Symposium held twenty-nine three-hour workshops for professional development. In addition, the SIGCSE Symposium provided the meeting space for ten pre-symposium events for educators that included the SIGCSE Sponsored New Educator's Workshop, Web Development with the MEAN Stack, Pogil Activities, Fulbright for CS Education, Posse Roundup, SIGCAS Workshop, Computing Principles and Computation Examplars from China, Creating Classroom Activities, Computing Ethics, and Teaching in K-12.

A Doctoral Consortium was was run by Mark Guzdial and Anthony Robins on August 9, 2015, the day before ICER 2015 and attended by twenty graduate students in computer science education and five discussants. SIGCSE provided travel grants to the graduate students. The students presented their work at the workshop and also at the conference.

SIGCSE has a Travel Grant Program for faculty who have never attended the SIGCSE Symposium. Five awards were made for SIGCSE Symposium 2016 that included two high school teachers and one international member.

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. Grants were provided for three conferences this past year. The 22nd Annual Consortium for Computing

Sciences in Colleges Central Plains Conference (CSCC-PC) received a grant for Libby Shoop and Joel Adams to present a Pre-Conference Workshop entitled "Teaching Parallel and Distributed Computing with MPI" on April 1-2, 2016. The 21st Western Canadian Conference on Computing Education (WCCCE) 2016 received a grant for Dan Garcia to give a Keynote entitled "Transforming High School Computer Science: The Beauty and Joy of Computing (BJC)" on May 6-7, 2016. The Twenty-Third Annual Conference of the Midwest region of the Consortium for Computing Sciences in Colleges (CCSC-MW 2016) received a grant for October 2016 for two speakers, "Modality Matters: Understanding the Design of Introductory Programming Environments" by David Weintrop and "Beyond Code: Progressing from Plain Text to Blocks Based Computing” by Jens Monig".

4. 2-3 Key Issues for the next few years.

One key issue is the growth of our smallest conference of computer science education researchers, ICER. In August 2015, ICER had its largest attendance ever with around 120 attendees and 20 participants in the Doctoral Consortium that was held the day before ICER. We hope to continue to grow this conference and to support those graduate students in computer science education research.

A second issue is growing computer science education around the world. We are looking at several issues on this theme. A) In Europe, SIGCSE is working with several other organizations (ACM-Europe, Informatics Europe) and conferences (WiPSCE, ISSEP, CSERC, and possibly others) on creating a computing education conference or a federated conference in Europe in the future. B) ITiCSE was held in Europe for its first twenty years, but in 2016 it was held in Arequipa, Peru. By going to Peru we have generated interest from several other countries who would like to host an ITiCSE conference, including India, China and Canada. We have decided to keep ITiCSE in or near Europe for the next five years, but are considering creating a new ITiCSE-like conference that would go around the world.

5. SIGCSE's Volunteer Development Process

SIGCSE's volunteers are recruited at conferences and on the SIGCSE listserv. Board members all attend the annual SIGCSE Symposium and encourage attendees to consider volunteering in some way. At SIGCSE.org we have a volunteer signup page with a list of SIGCSE positions that one can express interest in. 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.

**SIGDA Annual Report**

**July 2015 - June 2016**

**Submitted by: Vijaykrishnan Narayanan, SIGDA Chair**

***SIGDA is organized and operated exclusively for educational, scientific, and technical purposes in design automation. The mission of SIGDA and its activities include: 1) Collecting and disseminating information in design automation through a newsletter and other publications; 2) Organizing sessions at conferences of the ACM; 3) Sponsoring conferences, symposia and workshops; 4) Organizing projects and working groups for education, research, and development; 5) Serving as a source of technical information for the Council and subunits of the ACM; and 6) Representing the opinions and expertise of the membership on matters of technical interest to SIGDA or ACM.***

1. **SIGDA Awards**

**ACM/IEEE A. Richard Newton Technical Impact Award in Electronic Design Automation:** 2016: Chandu Visweswariah, Kaushik Ravindran, Kerim Kalafala, Steven G. Walker, Sambasivan Narayan, "First-Order Incremental Block-Based Statistical Timing Analysis," In Proc. of the 41st Design Automation Conference, 2004.

**SIGDA Outstanding New Faculty Award:**  2016 Swaroop Ghosh, University of South Florida, FL

**ACM Outstanding Ph.D. Dissertation Award in Electronic Design Automation:** 2016 Zheng Zhang, for the dissertation "Uncertainty Quantification for Integrated Circuits and Microelectromechanical Systems ", Massachusetts Institute of Technology. Advisor: Luca Daniel.

**Distinguished Service Award:** Prof. Steven Levitan (Posthumously)

**Significant papers on new areas that were published in proceedings**

|  |  |
| --- | --- |
| ASPDAC'16 | Lattice-Based Boolean Diagrams: Canonical, Order-Independent Graphical Representations of Boolean Functions Ahmed Nassar, Fadi Kurdahi (Univ. of California, Irvine)  Netlist Reverse Engineering for High-Level Functionality Reconstruction Travis Meade, Shaojie Zhang, Yier Jin (Univ. of Central Florida) |
| FPGA'16 | FPRESSO: Enabling Express Transistor-Level Exploration of FPGA Architectures Grace Zgheib, Manana Lortkipanidze, Muhsen Owaida, David Novo, Paolo Ienne |
| DATE'16 | D track:  UTILIZING MACROMODELS IN FLOATING RANDOM WALK BASED CAPACITANCE EXTRACTION Authors: Wenjian Yu1, Bolong Zhang1, Chao Zhang1, Haiquan Wang1 and Luca Daniel2  1Tsinghua University, CN; 2Massachusetts Institute of Technology (MIT), US   A track:  OTEM: OPTIMIZED THERMAL AND ENERGY MANAGEMENT FOR HYBRID ELECTRICAL ENERGY STORAGE IN ELECTRIC VEHICLES Authors: Korosh Vatanparvar and Mohammad Abdullah Al Faruque, University of California, Irvine, US  T track:  MODELING FABRICATION NON-UNIFORMITY IN CHIP-SCALE SILICON PHOTONIC INTERCONNECTS  Authors: Mahdi Nikdast1, Gabriela Nicolescu2, Jelena Trajkovic3 and Odile Liboiron-Ladouceur4  1Polytechnique Montréal and McGill University, CA; 2Polytechnique Montréal, CA; 3Concordia University, CA; 4McGill University, CA   E track:  PROBABILISTIC WCET ESTIMATION IN PRESENCE OF HARDWARE FOR MITIGATING THE IMPACT OF PERMANENT FAULTS Authors: Damien Hardy1, Isabelle Puaut1 and Yiannakis Sazeides2  1University of Rennes 1/IRISA, FR; 2University of Cyprus, CY   Best Interactive Presentation Award (IP) went to:  ANALYZING THE IMPACT OF INJECTED SENSOR DATA ON AN ADVANCED DRIVER ASSISTANCE SYSTEM USING THE OP2TIMUS PROTOTYPING PLATFORM  Authors: Alexander Stühring1, Günter Ehmen1, and Sibylle Fröschle2  1University of Oldenburg, DE; 2OFFIS Institute for Information Technology, DE |
| ISPD'16 | Title: Generating Routing-Driven Power Distribution Networks with  Machine-Learning Technique Authors: Wen-Hsiang Chang, Li-De Chen, Chien-Hsueh Lin, Szu-Pang Mu,  Mango C.-T. Chao, Cheng-Hong Tsai and Yen-Chih Chiu |
| GLVLSI'16 | Low-Power ManyCore Accelerator for Personalized Biomedical Applications  Adam Page, Nasrin Attaran, Colin Shea, Houman Homayoun and Tinoosh Mohsenin |
| IWLS |  |
| DAC'16 | Accurate Phase-Level Cross-Platform Power and Performance Estimation Xinnian Zheng, Lizy K. John, Andreas Gerstlauer  Distributed On-chip Voltage Regulation: Theoretical Stability Foundation, Over-design Reduction and Performance Optimization Xin Zhan, Peng Li, Edgar Sanchez-Sinencio |
| ICCAD’15 | Polyhedral-based SystemC Modeling and Generaton Framework for Effective Low-power Design  Space Exploraton  Wei Zuo, Warren Kemmerer, Jong Bin Lim, Louis-Noël Pouchet, Andrey Ayupov, Taemin Kim, Kyungtae Han, Deming Chen   Defect Clustering-Aware Spare-TSV Allocaton for 3D ICs  Shengcheng Wang, Mehdi Tahoori, Krishnendu Chakrabarty  Ten Year Retrospective Most Influential Paper Award Performance Analysis of Carbon Nanotube Interconnects for VLSI Applicatons Navin Srivastava, Kaustav Banerjee |

**Innovative programs which provided service or, broadened participation to some part of your technical community**

SIGDA initiated a new program, SIGDA Live. It is a series of webinars, launched monthly or bi-monthly, on topics (either technical or non-technical) of general interest to the SIGDA community. The talks in general fall on the last Wednesday of a month, and last about 45 minutes plus 15 minutes Q&A. Speaker and topic nominations are welcome and should be sent to sigdalive@gmail.com. All past talks are archived through our Youtube channel at: [https://www.youtube.com/channel](https://www.youtube.com/channel/UCj_RAsHIHlWPHrWvTJ1KEqQ).

SIGDA initiated a bi-annual e-meeting of all SIGDA sponsored conference organizers to meet with SIGDA EC to discuss possibility of synergies and coordination. The first meeting had enthusiastic participation from many of our conference leaders.

The EC has been engaging SIGDA chapters to work with the local leadership in identifying interests and to help ensure that SIGDA conferences are listed in the top most categories of the scientific establishments in their local country. Specifically, we have been engaged with ACM SIGDA China volunteers to have DAC listed as a A Category publication by CCF, China

SIGDA Newsletter continues to provide timely information for our community. A transition to a newsletter editorial leadership team will be made in August. The selection used a new worldwide nomination process that infuses new leadership into the editorial board, especially from Europe and Asia. The SIGDA E-Newsletter is sent out to the SIGDA members via it’s mailing list on the 1st of every month The newsletter reaches more than 2700 individuals. Students have mentioned how the paper deadlines and special announcements on tool releases and postdoc positions available are invaluable for their careers.

The CADAthlon contest at the ICCAD 2015 was successfully held on November 1, 2015. The contest-organizing committees pre-installed the relevant software, problems and setup the room and contest environment on the night before the contest. A total of 13 international teams - North America (6), Taiwan (5), India (1), and Brazil (1) - participated in the contest to solve six difficult problems in CAD and showcase their skills in programming and problem solving. Evaluation was based on correctness of implementation and its performance. Based on the evaluation scores after the contest, two teams from Taiwan were selected as winners and announced in the opening session of ICCAD 2015. Each team also received a cash award and trophies. Out of 13 teams (26 students), 9 SIGDA member students received partial travel supports based on financial needs. Food and drinks/coffee are provided, offering pleasant atmosphere. The CADAthlon is organized by ACM SIGDA and sponsored by ACM SIGDA, IBM Research, and Chung Yuan Christian University.

The DATE PhD Forum 2016 took place on March 14th, 2016 in Dresden, Germany and was associated with the Design Automation and Test in Europe Conference. In order to participate at the forum, young researchers who either have finished their PhD thesis within the last 12 months or who are close to finish to their thesis work have been asked to submit a two-page summary of their work. This attracted to a total of 55 submissions from all over the world which constituted a 13% increase compared to the previous year.

The DAC Young Faculty Workshop, as part of the DAC 2016 event, was held successfully on Sunday. The workshop covered a wide range of topics that are most relevant to the young faculty candidates and professionals. Many attendees came or wrote to us, saying that they really enjoyed this workshop and learned a lot. The workshop has a very good turn-out, and there were more than 60 people attending the workshop.

The Design Automation Summer School (DASS) is a one-day intensive course on research and development in design automation. We had 71 A. Richard Newton Young Fellowship awardees attend this one-day event. Each student is also assigned a mentor for following-up discussions and tutoring. Seven distinguished researchers from universities in US and in Canada participated as mentors.

At the DAC PhD Forum, 32 PhD students presented the posters about their research work in front of academic and industrial experts. Food and drinks were provided at the forum. More than 150 people from academia and industry attended the event. Concurrently. DAC University demonstration forum provided a forum for showcasing their prototypes. In 2016, we had 14 demonstrations from 12 institutes.

The Student Research Forum (SRF) was held in Macau at the ASP-DAC 2016. Total 15 graduate students from Asia (10), Europe (2), and North America (3) presented the posters about their research in front of academic and industry experts and exchanged the ideas.

The Student Research Competition (SRC) at the ICCAD 2015 had a total of 20 graduate students from Asia (5), Europe (2), and North America (12), and South America (1). They presented the posters about their research in front of academic and industry experts and exchanged the ideas.

**Key issues facing SIGDA**

 SIGDA is engaged with the community and other sponsors of Design Automation Conference in addressing continued direction of our flagship conference as Moore’s Law is nearing its end and represents a major shift in design automation challenges for the community. We are also exploring cost-efficiency improvements for our sponsored conference with input from leaders in the field.

SIGDA has been a stakeholder in enabling ESWEEK community to move to an integrated conference-journal publication and in facilitating communication with IEEE CEDA leadership to benefit ACM members and community at large.

**Summary**

SIGDA is very vibrant with several young professionals volunteering their time and effort towards fostering its mission.

**SIGDOC Annual Report**

**July 2015 - June 2016**

**Submitted by: Liza Potts, SIGDOC Chair**

***(1) Promote the professional development of technical communication practitioners, researchers, and educators; (2) Encourage interdisciplinary approaches to solving communication problems related to online and print documentation and to human-computer interfaces; (3) Provide avenues for publication and for the exchange of professional information; (4) Support research that focuses on the needs of humans and their goals and tasks in technological contexts; (5) Support the development and improvement of computer-supported communication technologies.***

SIGDOC has continued to build upon its success over the past three years and distinguish the SIG in the DOC community. This report highlights SIGDOC activities, awards, publications, and conferences that support this work.

**1. Awards Given Out.** This year, SIGDOC gave out the Diana Award to Women in Technical Communication for their contributions to the field of communication design. We honored the founders of this organization during our 2015 conference, and they delivered the keynote. Their work has united women across our three major field organizations (SIGDOC, Council for Programs in Technical and Scientific Communication (CPTSC), and the Association for Teachers of Technical Writing (ATTW). Through their work, a network has been established to support women in their roles as academics from graduate students to emeritus faculty.

**2. Significant Papers on New Areas that Were Published in Proceedings.** SIGDOC continues to build up a strong library of proceedings papers and articles from its peer-reviewed publication, *Communication Design Quarterly* (CDQ). Recent significant papers and research include:

1. Responsive, mobile app, mobile first: untangling the UX design web in practical experience by Cheri Mullins
2. Digital badges for deliberate practice: designing effective badging systems for interactive communication scenarios by Joseph R. Fanfarelli, Rudy McDaniel
3. Target data breach: applying user-centered design principles to data breach notifications by Fer O'Neil
4. The communication design of WeChat: ideological as well as technical aspects of social media by Xiaobo Wang, Baotong Gu
5. Are personas really usable? By Tharon W. Howard

**3. Innovative Programs which Provided Service and Broadened Participation**

*Working with Leaders Across Technical Communication and Co-Locating Conferences*. We have created partnerships across the field. We are leaders 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. In 2015, we co-located our conference with IEEE’s ProComm conference in Ireland. This allowed us to connect with scholars who might not have normally thought of SIGDOC as a place to publish and present. Our members participated in and worked with the CPTSC to coordinate an international Round Table meeting of technical and professional communication scholars in Ireland during that same time. We know that this collaboration increased our attendance and reach based on feedback from our members and field leaders.

*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 our Board, our committees, our conference program, and CDQ. Our Chair will nominate several new members to our board with a focus on diversity.SIGDOC was one of the earliest supporters of Women in Technical Communication, an organization in our field dedicated to supporting women in the academy. We continued to host a breakfast for them at our conference, and we awarded them the Diana Award.

*Microsoft Student Competition*. At our 2015 conference at the University of Limerick in Ireland, we hosted our first-annual Microsoft-sponsored SIGDOC’s Student Research Competition (SRC). We had a remarkable number of graduate and undergraduate students participating, including 28 students who submitted proposals and 11 students who participated in the competition. We had 30 faculty reviewers of abstracts and 15 additional faculty during the competitions at the conference.

*Supporting the Annual Symposium on Communicating Complex Information*. We continued to support this conference in 2015. Their proceedings are part of ACM’s Digital Library because of this collaboration, increasing our reach and sharing knowledge across our communities.

**4. A Very Brief Summary of Key Issues the SIG within the Next 2-3 years**

*Increase visibility of SIGDOC within the field to build and strengthen our member base.*

* We have appointed a dedicated social media manager is make visible the work our SIG is doing and that members can learn from and stay connected through
* We are developing robust materials to distribute at affiliated conferences and faculty
* We are holding our conferences in interesting places (Ireland last year, Washington DC this year, Halifax next year) and co-locating them with other organizations and groups.

*Establish the Publication* Communication Design Quarterly *as a journal with ACM*

* An editorial board and guidelines for the publication and peer review process is in place
* A publication schedule for 2016 through the first issue of 2018 (an 18+ month backlog of content) has been established and content for these issues has been secured
* An active campaign about CDQ as a publication venue in field has begun

*Improve the quantity and visibility of quality of research*

* We are continuing to publicize the Microsoft SRC, a unique competition and source of research support within the technical communication community
* We are continuing our second-annual Research Network Forum at at our conference for participants to share their research-in-progress in a supportive setting
* We are building our publication into a reputable journal in the technical communication and user experience fields by attracting reputable scholars and quality research

**5. Volunteer Development Process**

SIGDOC is very focused on developing volunteers. The Board is active in mentoring scholars in our field, with the goal of having them running for office, leading special issues of CDQ, and working across our field in leadership roles. We use CDQ to engage in mentoring and development activities for production and development roles, mentoring junior scholars in the publishing process. Many of these represent a new pool of volunteer talent we have developed.

**SIGEcom Annual Report**

**July 2015 – June 2016**

**Submitted by: Kevin Leyton-Brown, SIGEcom Chair**

***ACM SIGecom is dedicated to the advancement of electronic commerce, principles and practice. As the leading computing-centric professional organization in the field, SIGecom seeks to promote the informed development of commerce automation technology, employing the best available engineering methods and economic understanding.***

SIGecom thus serves as a bridge between theoretical research on economic systems (conducted by those in the fields of economics and operations research as well as computer science) and the practice of electronic commerce in industry. As this report details, we are very successfully carrying out this mission: we attract top researchers and publications on topics that span theory and practice (with a relative emphasis on the former) and maintain close relationships with—and ongoing conference sponsorship from—some of the most significant companies in our sector (notably Google, Microsoft and Facebook) as well as smaller businesses. However, maintaining this position requires a careful balancing act, ensuring that we continue to accommodate the viewpoints, research methodologies, and publication practices of different communities.

SIGecom's four primary activities are convening the annual *Conference on Economics and Computation* (EC), giving paper and dissertation awards which are announced at this conference, 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, and hence was described in last year’s annual report. The 17th conference was held July 24-28, 2016 in Mastricht, Netherlands, along with the 5th World Congress of the Game Theory Society. Thus, although the SIG has continued to convene its conferences annually, there happens to have been no conference that fell within the reporting period prescribed for this annual report. Because our paper awards are announced at the conference, they again fell outside the reporting period, and discussion of these activities is similarly deferred to next year’s annual report.

We have formed the organizing committee for EC'17, which will be held at the Massachussets Institute of Technology in Cambridge, MA, June 26-30, 2017. The program chairs will be Moshe Babaioff (Microsoft Research Israel) and Herve Moulin (University of Glasgow); the general chair will be Costis Daskalakis (MIT). For the first time in several years, and in response to popular demand from the community, this conference will not be co-located with another event.

The TEAC journal is doing well. It continues to run by-invitation special issues of the most recent EC conferences. Its pair of editors (one from computer science and one from economics) will retire shortly. Their replacements have now been identified: David Pennock (Microsoft Research) and Ilya Segal (Stanford University). They aim to continue growing the journal and cementing it as a preferred destination for work in our field.

Our Exchanges newsletter continues to publish two issues annually. Our previous editor finished his term, and has been replaced by Hu Fu (University of British Columbia). For a second year in a row, in an effort to improve the EC academic job market, Exchanges has collected and published bios of all job market candidates.

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 our various workshops; tutorial presenters; TEAC editors in chief and associate editors; SIGecom Exchanges editors; SIG executive; three best paper award committees. We are extremely conscious of diversity—particularly, but not limited to, diversity across research areas, countries of origin, and gender—and have been very successful in ensuring that our volunteer leaders are diverse, reflective of the community at large, and top-caliber researchers.

The main topics for active discussion in the SIG concern the format of our conference.

* The conference continues to grow, and has reached a size where we will need to reduce our acceptance rate, hold a longer event, or add a third track to at least some of the conference.
* To accommodate authors who publish journal papers in non-CS venues that do not allow previous conference publication, we allow single-page abstracts (which are reviewed as full papers and presented identically at the conference). This has grown from five or ten percent to nearly half the papers in the conference, forcing us to think carefully about the link between talks and archival papers. In one change, we modified our best paper award rules this year, allowing abstract-only papers to win but granting a second, “best full-paper award” in years when this happens.
* We have an unusual “tracks” system in which papers are designated as belonging to either one or two of “theory”; “AI” and “empirical”. Each of these has a separate SPC who oversee all papers having that area’s “tag”. This reassures minority communities in the conference that their work will be reviewed according to the community’s own standards, but is somewhat complex to handle in the conference management system (because papers may have two tags). We may explore alternative conference management systems over the next few years.
* Like many conferences, we allow authors to submit rebuttals to reviews. Some members of the community passionately support this system, while others passionately disagree with it.

**SIGEVO Annual Report**

**July 2015 - July 2016**

**Submitted by: Marc Schoenauer, SIGEVO Chair**

***The ACM Special Interest Group on Genetic and Evolutionary Computation (SIGEVO) aims to promote and disseminate in academia, industry, and society the principles, techniques and applications of Genetic and Evolutionary Computation as well as other bio-inspired methods. Evolutionary algorithms address discrete and continuous optimization, modeling and machine learning. They have achieved human competitive results and solved complex, challenging problems in a myriad of real world domains. Evolutionary computation also includes the study of complex artificial evolutionary systems and processes.***

**JOHN HOLLAND**

SIGEVO (the SIG on Genetic and Evolutionary Computation) Executive Board experienced a sad loss, with the death of one of the pioneers of the field, John Holland, in August 2015. One issue of our newsletter was dedicated to his memory, and during the 2016 GECCO conference, the first SIGEVO Chair's lecture was given “in honor of John Holland” by one of his former students, Stephanie Forrest.

**EXECUTIVE BOARD**

A business meeting of the Executive Committee was held in Denver, during GECCO-2016 on July 21, 2016. Enrique Alba, who was invited to the Board and member of the business committee, was nominated to occupy John Holland's seat until its expiration in 2019.

**BUSINESS MEETING IN DENVER**

GECCO 2016 is formally outside the report period, but very close, so I shall report on the results of the business meeting, as they cover most of SIGEVO activities in the last 12 months.

Besides the EC, Enrique Alba, member of the Business Committee, the chair and E-i-C of both 2016 and 2017 GECCOs, and the E-i-C of MIT Press’s Journal Evolutionary Computation, which is closely affiliated with the SIG, were also invited. Note that the EiC of Springer journal *Genetic Programming and Evolvable Machines,* that is also closely related to SIGEVO, is a member of the EC and was present too.

The following announcements and decisions were made at the meeting:

1. Enrique Alba is nominated to replace John Holland in the Executive Board – subject to ACM approval.
2. Submissions and attendance to GECCO 2016 is on the low side this year. Going back-to-back with CEC didn't seem to be such a good idea in the end. Nevertheless, it was agreed to stick to our policy of maintaining high quality papers through an acceptance rate of no more than 40% (35% this year).
3. GECCO 2017 will be in Berlin in July, most probably the third week. Direct poster submissions will be allowed.
4. Decision to try to move GECCO to Asia in 2018, more preferably Japan. The BC is looking for a general chair and a local chair.
5. Six issues of the SIGEVO Newsletter have been sent out by Emma Hart, new EiC, and we will be on complete schedule if 3 more issues were edited before end 2016. Two are already planned, which will leave us only one issue behind by end 2016. It is wished that we decrease the frequency to at most 3 per year starting in 2017 – Fall, Winter and Spring.
6. Job Ads were to be placed on the SIGEVO website as of last year, but nothing had happened. This year, Tea Tusar, a young researcher, has volunteered to take care of this, and as of today (July 29),the Job Ads section is fully functioning on our Web site: anyone can post an available position, but the ads only go public after moderation based on the adequacy of their content with SIGEVO moto.
7. Next FOGA will take place in Copenhagen in January 2017 – see http://foga-2017.sigevo.org/. Call for papers ends August 31.
8. SIGEVO web sites, in particular GECCO, are now CMS-based and hosted at INRIA, as planned. They can be collaboratively edited, which allowed great saves on budget (from $4800 per year to ~$3000 once (site design) + $400 per year (graphics design). The look-and-feel will be “modernized”.
9. Since last year, nothing has happened on the summer school project. A new attempt is to be made, Enrique Alba to be responsible: The Summer school will be co-located with GECCO, so the students can benefit from the great GECCO tutorials, and extended 2 days after the conference. Next step is tentative budget and program to be worked out for consideration by the board.
10. The ad-hoc award committee has proposed to create 2 new awards: an “outstanding achievement” award (working title) and a “Best PhD dissertation” award, subject to ACM approval. Added to the “Impact Award”, this would result in SIGEVO having 3 awards. An “Award Marshall” would coordinate these three awards, supervising the nomination of a committee with own chair for each of them.

**GECCO 2015**

GECCO 2015 was held in Madrid, Spain, in July 2015. In odd years we usually go to a site in Europe. The conference was held at a hotel in Madrid and was relatively well attended, though a bit less than expected from previous European venues. 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 2015 was Anna Esparcia (Universitat Politècnica de València, Spain) and the E-i-C was Sara Silva (University of Lisbon, Portugal). Executive Events was our conference management provider.

**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, Summer School) to use surplus for rewarding our membership through higher visibility and more services for students: Student support in travel grants at GECCO has been at $25-30K per year, the next FOGA workshop will also be sponsored for students.

**AWARDS**

**Competitions**: seven competitions were held at GECCO-2015 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: Recovering missing information in heating system operating data
* Virtual Creatures Competition
* Wind Farm Layout Optimization

**Humies Awards**: The most prominent competition is the Humies Award for the best human-competitive application of Evolutionary Computation methods published in the last year (July 2014 - June 2015). 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.

Gold Medal: *Evolutionary Approach to Approximate Digital Circuits Design*

Zdenek Vasicek & Lukas Sekanina, Brno University of Technology, Cech Repuplic.

Silver Medal: *Performance Optimization of Multi-Core Grammatical Evolution Generated Parallel Recursive Programs*

Gopinath Chennupati, R. Muhammad Atif Azad & Conor Ryan, University of Limerick, Ireland

**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.

**Impact Award**: For the sixth time, the “SIGEVO Impact Award” was given in 2016 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 two papers published in GECCO 2006 proceedings:

*\* Reference point based multi-objective optimization using evolutionary algorithms*

Kalyanmoy Deb, and J. Sundar.

*\* Search-based determination of refactorings for improving the class structure of object-oriented systems*

Olaf Seng, Johannes Stammel, and David Burkhart.

**SIGGRAPH Annual Report**

**July 2015 - June 2016**

**Submitted by Jeff Jortner, SIGGRAPH President**

***ACM SIGGRAPH's mission is to foster and celebrate innovation in Computer Graphics and Interactive Techniques. The organization promotes its vision by bringing people together in physical, on-line, and asynchronous communities to invent, inspire, and redefine the many creative and technical artifacts, disciplines, and industries that are touched by computer graphics and interactive techniques.***

**Awards that were presented:**

Significant New Researcher Award: Johannes Kopf, Microsoft Research

Steven A. Coons Award: Henry Fuchs, University of North Carolina at Chapel Hill

CG Achievement Award: Steve Marschner, Cornell University

Distinguished Artist Award: Lillian Schwartz

Outstanding Service Award: Mike Bailey, Oregon State University

SIGGRAPH Computer Animation Festival Awards: The festival presents several awards. The Best in Show Award qualifies the winner to be considered for nomination in the Academy of Motion Picture Arts and Sciences? Best Animated Short Film category.

**Significant papers on new areas that were published in the proceedings:**

118 papers were presented at SIGGRAPH 2015, selected from a total of 462 submissions. 84 technical papers were presented at SIGGRAPH Asia 2015 selected from a total of 348 submissions. The top 3 papers that were viewed from SIGGRAPH 2015 were: (1) High-quality streamable free-viewpoint video, (2) Computational bodybuilding: anatomically-based modeling of human bodies and (3) Image based relighting using neural networks.

**Innovative Programs which provide service or broaden participation to some part of our many technical communities:**

The SIGGRAPH Student Services Committee (S3) took over the XSV (ex-student volunteer) program. This program places ex-student volunteers into positions on SIGGRAPH Executive Committees and Conference Committees. The goal for each XSV is to increase their knowledge of SIGGRAPH, foster their network within SIGGRAPH and groom them for future volunteer roles. We were able to match 8 volunteers in FY15, 4 of which are with ACM SIGGRAPH Executive Committees.

In addition to our monthly newsletter, ACM SIGGRAPH extensively uses social media as a communication path our members and community. All of the social media channels have seen significant increases in usage in FY15:

Twitter: 2015 - 23,400 2016 - 26,589 Facebook: 2015 - 25,047 2016 - 29,500

ACM SIGGRAPH Facebook: 2015 - 3,281 2016 - 4,329 YouTube: 2015 - 14,206 2016 - 17,372

SIGGRAPH, the world?s premier conference on computer graphics and interactive techniques returned to Los Angeles in 2015 for its 42nd conference attracting attendees from over 75 countries. We also saw the 8th ACM SIGGRPAH Asia Conference and Exhibition in Kobe, Japan. SIGGRAPH Asia attracted attendees from over 53 countries.

ACM SIGGRAPH has agreements with 26 specialized conferences. The first ever group meeting for all specialized conference organizers was held at SIGGRAPH 2015. The purpose of the meeting was to share ideas and discuss common issues among themselves, ACM and ACM SIGGRAPH.

We signed a cooperative agreement IEEE VGTC to exchange ideas, space, and possibly presentations at each other?s conferences.

We modified our election schedule to give our SIGGRAPH conference attendee members an opportunity to meet and ask questions of our Executive Committee candidates and to encourage their voting participation.

**Key Issues facing ACM SIGGRAPH in the foreseeable future:**

Volunteer development is a continuing issue for all aspects of the organization. Efforts in this area need to be increased to maintain a healthy diverse volunteer base.

Knowledge transfer is becoming more important as the mainstay volunteer base is aging. More thorough documentation of activities is being stressed as part of the process.

**SIGHPC Annual Report**

**July 2015 - June 2016**

**Submitted by: Cherri Pancake, SIG HPC Chair**

***SIGHPC's mission is to promote the advancement of the field of High Performance Computing in three ways:***

* ***by disseminating research and experience by those using computing resources to tackle problems at the largest scale***
* ***by promoting the mentoring and education of the next generation of HPC professionals***
* ***by serving as a source of information about the field to other parts of ACM and the larger scientific community***

1. **Awards that were given out**

Travel grants to attend SC15 were given to ten students: 2 undergraduate and 8 graduate students from universities in Brazil, Canada, Greece, and the United States.

SIGHPC in collaboration with Intel awarded the 14 inaugural recipients of the ACM SIGHC/Intel Computational and Data Science Fellowship (applications and reviewing was during FY16, awards were made in early July). The fellowship, funded by Intel and announced at SIGHPC’s SC conference in November of last year, enables outstanding women and underrepresented minority students to pursue graduate degrees in computational and data science. The fellowship provides $15,000 annually for study anywhere in the world.

Students were nominated by their graduate advisors. Nominees spanned 21 disciplines and represented large, mid-sized, and small institutions in 23 countries. 80% of nominees were female, and 20% were identified as an underrepresented minority.

1. **Significant papers on new areas that were published in proceedings**

ACM Gordon Bell Prize winner: Johann Rudi et al., “An Extreme-Scale Implicit Solver for Complex PDEs: Highly Heterogeneous Flow in Earth’s Mantle”

SC15 Best Paper winner: Xu Liu and Bo Wu, “ScaAnalyzer — A Tool to Identify Memory Scalability Bottlenecks in Parallel Programs”

SC15 Best Student Paper winner: Patrick Flick and Srinivas Aluru, “Parallel Distributed Memory Construction of Suffix and Longest Common Prefix Arrays”

Other SC15 finalists:

Martin Bauer, et al., “Massively Parallel Phase-Field Simulations for Ternary Eutectic Directional Solidification”

Raffaele Solcà , et al., “Efficient Implementation of Quantum Materials Simulations on Distributed CPU-GPU Systems:”

Ang Li, et al., “Adaptive and Transparent Cache Bypassing for GPU's”

Luc Jaulmes, et al., “Exploiting Asynchrony from Exact Forward Recovery for DUE in Iterative Solvers”

Sungpack Hong, et al.,“PGX.D: A Fast Distributed Graph Processing System”

1. **Innovative programs which provided service or, broadened participation to some part of your technical community**

In October 2015, we held a webinar “Oh the Places You’ll Go! HPC in the Design of Aircraft Engines”, featuring Brian E. Mitchell from GE Global Research. We had 350 people register to see it, and over 100 attend live. Over half were not SIGHPC members so it did help to spread out message to a broader community.

1. **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.**

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.”

We are going to make a focused effort to recruit members to SIGHPC who would not normally join ACM. Specifically we are going to reach out to computationally focused researchers whose home technical communities include Society of Industrial and Applied Mathematics (SIAM), American Physical Society (APS), and American Chemical Society (ACE).

SIGIR Annual Report

July 2015-June 2016

Charles Clarke, SIGIR Chair

***SIGIR focuses on all aspects of information storage, retrieval and dissemination, including research strategies, output schemes and system evaluations.***

# 1. Overview

The SIGIR Executive Committee consists of five elected officers, elected for a three-year term. During FY’16 the committee consisted of Charles Clarke (Chair), Yoelle Maarek (Vice Chair), Diane Kelly (Treasurer), Jaap Kamps (Secretary) and James Allan (Past Chair). The term of the current Executive Committee ended on June 30, 2016. Over the past year, elections were held for a new committee, with the following outcome:

* Diane Kelly (Chair)
* Jaap Kamps (Vice Chair)
* Ben Carterette (Treasurer)
* Emine Yilmaz (Secretary)

Charles Clarke continues on the committee as Past Chair. SIGIR thanks the outgoing members of the Executive Committee for their service.

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 $500K. 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.

**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

JCDL Liaison: Edie Rasmussen

CIKM Liaison: Jimmy Lin

WSDM Liaison: Ricardo Baeza-Yates

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. SIGIR 2015 was held in Santiago, Chile, August 9-13. SIGIR 2016 will be held in Pisa, Italy, July 17-21; SIGIR 2017 will be held in Tokyo, Japan; SIGIR 2018 will be held in Ann Arbour, Michigan; and SIGIR 2019 will be held in Paris France.

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. The first SIGIR-sponsored ACM ICTIR was 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.

## 4.3 Conference on Human Information Interaction and Retrieval

The first ACM SIGIR Conference on Human Information Interaction and Retrieval (CHIIR) was

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.

## 4.3 Co-sponsored Conferences

SIGIR also co-sponsors three other ACM conferences: CIKM, JCDL, and WSDM. JCDL 2015 was held in Knoxville in June; JCDL 2016 will be held in Newark, New Jersey. CIKM 2015 was was held in Melbourne, Australia in October 2015; CIKM 2016 will be held in Indianapolis. WSDM 2016 was held in San Francisco in February 2016; WSDM 2017 will be held in Cambridge England.

## 4.4 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 Australiasian Document Computing Symposium, the Asia Information Retrieval Society Conference, and the ACM Conference on Recommender Systems.

## 4.5 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 Awards made by SIGIR

In addition to Best Paper Award(s), SIGIR provides the triennial Gerard Salton Award (to be awarded next in 2018), 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 website. 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.

At SIGIR 2015 the award was presented 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.

At SIGIR 2015 the award was presented to Susan Dumais, Edward Cutrell, JJ Cadiz, Gavin Jancke, Raman Sarin, and Daniel C. Robbins for their SIGIR 2003 paper “Stuff I’ve seen: a system for personal information retrieval and re-use”.

## 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 2015 conference Best Paper Award was presented to Claudio Lucchese, Franco Maria Nardini, Salvatore Orlando, Raffaele Perego, Nicola Tonellotto and Rossano Venturini for their paper “QuickScorer: A Fast Algorithm to Rank Documents with Additive Ensembles of Regression Trees” that “develops a novel representation of binary regression trees based on bitvectors and an algorithm to perform a fast interleaved traversal of the trees in a cache-aware fashion, and demonstrates significant efficiency gains on publically available learning-to-rank data sets with various models that use ensembles of regression trees.”

SIGIR awards a parallel Best Student Paper Award if the Best Paper award is not given to a student paper. At SIGIR 2015 the award went to Eugene Kharitonov, Aleksandr Vorobev, Craig Macdonald, Pavel Serdyukov, and Iadh Ounis for their paper “Sequential Testing for Early Stopping of Online Experiments” that “extends sequential statistical testing procedures by adjusting stopping thresholds based on observed log data, and demonstrates how this significantly reduce the time required for online A/B and interleaving experiments.”

# 6 Communications

The SIGIR Website 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 website 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 operates a Twitter feed and a maintains a Facebook page, both managed by our Social Media Director.

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 compliments 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 online, 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. This committee has completed its work, and we expect to hold an award ceremony at SIGIR 2017.

In addition. the SIGIR EC is continuing an effort to locate procedural documents related to the SIG and to move them onto the SIGIR website 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. Highlights include the first ACM ICTIR and ACM CHIIR conferences. 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 Annual Report**

**July 2015 - June 2016**

**Submitted by: Steve Zilora, SIGITE Chair**

***SIGITE's mission is to provide a forum for the interaction of practitioners, educators and others in the field of Information Technology Education to exchange ideas and engage in activities that advance the knowledge of its members, the curriculum and teaching of information Technology and the development and transfer of innovative concepts and applications in teaching and pedagogy.***

***Annual Conference***

The 16th Annual Conference on Information Technology Education, co-located with the 4th Annual Conference on Research in Information Technology, was hosted by DePaul University and held in Chicago, IL, September 30 – October 3, 2015. There were a total of 98 submissions of papers, posters, panels, workshops, and lightning talks. For SIGITE, 24 of 58 papers were accepted (41%); for RIIT 10 of 22 papers were accepted (45%). A record number of 152 people attended the conference. Approximately 50% of these attendees completed a conference survey where 85% rated the conference Very Good or Excellent. Only 1% rated the conference Fair or Poor.

***Awards that were given out***

At the 2015 SIGITE/RIIT Conferences, two best paper awards were presented:

(*SIGITE 2015 Best Paper Award Winner*)

*Serious Toys: Introducing Sensors and Sensor Networks in Pre-collegiate Classrooms*

Yvon Feaster, Clemson University; Jiannan Zhai, Florida Atlantic University; Jason O. Hallstrom, Florida Atlantic University  
(*RIIT 2015 Best Paper Award Winner*)

*Studying the Effect of Multi-Query Functionality on a Correlation-aware SQL-to-MapReduce Translator*

Thivviyan Amirthalingam, Purdue University; John Springer, Purdue University

***Significant conference papers that have proven popular (as measured by download count):***

# *Framework for Autonomous Delivery Drones*, by Mark O. Milhouse, Illinois Institute of Technology

# *A Man-in-the-Middle attack against OpenDayLight SDN controller*, by Michael Brooks and Baijian Yang, Purdue University.

***Significant programs that provided a springboard for further technical efforts***

We launched two new initiatives this year. We have begun efforts to establish a repository of materials for members engaged in K-12 outreach efforts. The idea is to have a collection of demonstration ideas, videos, and other resources for those engaged in exciting young people about computing field.

We also have begun a concerted effort to increase the number of submissions for our annual conferences. This effort has already begun to yield good results with a 20% increase in submissions for the 2016 annual conference relative to recent years.

***A brief description of the SIG’s volunteer development process.***

SIGITE continues to have an atmosphere of contribution amongst its members. Finding volunteers for various activities has never been a problem. As a recent example, less than 24 hours after a call to the membership for people to serve as session chairs at the upcoming annual conference, we had nearly twice the necessary volunteers. While about half of these volunteers were familiar names, the other half represented new involvement by members.

Developing future SIG leaders is more involved; however, we have taken steps to foster the process. Our recent creation of two committees (described above), each with a membership of about 15 people, provides an opportunity for several members to work with the current SIG leadership and become involved in important SIG initiatives. These committees should serve as a springboard for members to become more involved in SIG leadership.

***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.***

As noted above, we need to increase the number of submissions for our annual conferences so that we can increase our selectivity. This is particularly true for the Research in IT conference where we continue to struggle attracting research-oriented papers.

While our current membership is very active, the size of the SIG remains flat to slightly decreasing. We need to change that and grow the SIG.

Professional accreditation: we need more members involved in enhancing the communication/coordination flow between SIGITE, CSAB and ABET/CAC. More broadly, we need to establish a tighter relationship between the SIG and accrediting bodies.

**SIGKDD Annual Report**

**July 2015 - June 2016**

**Submitted by: Bing Liu, SIGKDD Chair**

***To encourage basic research in KDD, adoption of standards in the market, and interdisciplinary education among KDD researchers, practitioners, and users.***

SIGKDD Executive Committee consists of the following individuals who are in their third year in these roles in SIGKDD:

Bing Liu, University of Illinois at Chicago, USA (Chairman)

Michael Zeller, Zementis, Inc. USA (Secretary/Treasurer)

Deepak Agarwal, LinkedIn, USA

Usama Fayyad, Oasis500, Jordan & ChoozOn Corp, USA

Johannes Gehrke, Cornell University, USA

Ying Li, Concurix Corporation, USA

Jian Pei, Simon Fraser University, Canada

Raghu Ramakrishnan, Microsoft, USA

Mohammed J. Zaki, Rensselaer Polytechnic Institute, USA

Information director: Ankur Teredesai, University of Washington, USA

**1. Awards**

SIGKDD had another wonderful year. Our flagship conference, *ACM SIGKDD International Conference on Knowledge Discovery and Data Mining* (KDD), was attended by 1192 people around the world in 2015, which is a record attendance excluding the exceptional year of 2014 in New York City. Our fund balance is $1,947,957 as of May 2016. The community is healthy and still growing. In this section, we list the main awards given in the past year.

**1.1. SIGKDD Awards**

SIGKDD presents three prestigious awards each year: Innovation Award, Service Award, and Distinguished Dissertation Award.

**ACM SIGKDD 2015 Innovation Award**

**Hans-Peter Kriegel**, Ludwig-Maximilians-Universitaet Muenchen, Germany.

**ACM SIGKDD 2015 Service Award**

**Jian Pei**, Simon Fraser University, Canada.

**ACM SIGKDD 2015 Distinguished Dissertation Award**

**Winner**

**Chi Wang** of University of Illinois at Urbana-Champaign for his dissertation titled “Mining Latent Entity Structures from Massive Unstructured and Interconnected Data.” – Advisor: Jiawei Han, University of Illinois at Urbana-Champaign

**Runners-up (2 awards)**

(1) **Qirong Ho** of Carnegie Mellon University for his dissertation titled “Modeling Large Social Networks in Context.” – Advisor: Eric Xing, Carnegie Mellon University

(2). **Jiliang Tang** of Arizona State University for his dissertation titled “Computing Distrust in Social Media.” – Advisor: Huan Liu, Arizona State University

**1.2. 2015 KDD Test-of-Time Paper Awards**

KDD Test-of-Time awards honor papers published in a KDD conference at least 10 years ago that have made significant impact in research. KDD-2015’s awards were given to the following three papers:

**Thorsten Joachims,** “Optimizing Search Engines using Clickthrough Data,” KDD 2002.

**Pedro Domingos** and **Geoff Hulten,** “Mining High-Speed Data Streams,” KDD 2000.

**Minqing Hu** and **Bing Liu**. “Mining and summarizing customer reviews,” KDD 2004.

**1.3 2015 KDD Best Research Paper Awards**

These awards recognize best papers presented at the annual KDD conference that advance the fundamental understanding of the field of knowledge discovery in data and data mining.

**Best research track paper award (1 winner)**

Title: Efficient Algorithms for Public-Private Social Networks Authors: Flavio Chierichetti, Alessandro Epasto, Ravi Kumar, Silvio Lattanzi, Vahab Mirrokni.

**Best student paper awards (2 winners)**

(1) Title: Edge-Weighted Personalized PageRank: Breaking a Decade-Old Performance Barrier Authors: Wenlei Xie, David Bindel, Alan Demers, Johannes Gehrke

(2) Title: Who supported Obama in 2012? Ecological Inference through Distribution Regression

Authors: Seth Flaxman, Yu-Xiang Wang, Alex Smola

Note: No runner-up awards were given at KDD-2015.

**1.3. 2015 KDD Best Industry/Government Track Paper Awards**

These awards recognize papers presented at the annual KDD conference that advance the fundamental understanding and applications of knowledge discovery in data and data mining.

No best paper awards were given for Industry/Government track at KDD-2015.

**2. KDD-2015 - Broadened Participation and Significant Publications**

**2.1 KDD-2015 Conference and Attendance**

The 2015 annual KDD conference maintained KDD’s position as the leading conference on data mining and knowledge discovery. KDD-2015 was held in Sydney, Australia, August 10 - 13, 2015. It was attended by 1192 people, which is a great turn out considering the location of Sydney, which is difficult to reach from many parts of the world. The number of registrants is more than that of KDD-2013 in Chicago (1175) (it is less than that of KDD-2014 in New York City (2,134), which is an outlier due to the attractiveness of the New York City and a large number of local companies in the data mining space.

**Innovative Programs and Broadened Participation**

• Industry/Government (I/G) invited talks: These talks were given by world-renowned experts, highlighting successful applications of Data Mining, Big Data, and Data Science. This program was extremely successful. The rooms for the talks were always full.

• Industry/Government track: KDD-2015 conference continued to have strong participation from industrial researchers, as evidenced by 189 papers submitted to the I/G track (68 are accepted). Based on the report from KDD-2015 Program Committee chairs, the submissions were of very high quality due to the reputation of the conference established over the years.

• Regional and local engagement: KDD-2015 conference organizers invited industry delegations from both China and India to present their work and experience. Major local industry and government units in Australia were also engaged through collocated events related to big data and data science.

• Expanded student travel awards: KDD-2015 gave student travel awards to all students who applied to attend KDD-2015.

• Local chapter: SIGKDD China chapter was established by a group of researchers in China in 2015.

**Volunteer development process:** Our volunteers mainly consist of conference organizers and student helpers. In appointing conference organizers, function chairs, and senior and regular program committee (PC) members, we strive for diversity in terms of gender composition, geography location, and seniority. In last year’s SIGKDD Executive Committee (EC) meeting, EC also decided to appoint Industry/Government (I/G) track Program Committee (PC) Chairs directly by EC as EC wants to the I/G track PC Chairs to have the same status as the PC Chairs for the research track, and to ensure the diversity of the track chairs so that the same people will not be appointed multiple times, which happened previously when they were appointed by research track PC chairs. EC will discuss how to improve the volunteer development process further in the coming EC meeting.

**2.2 Significant Publications**

KDD-2015 published the proceedings of the KDD conference. It features 4 plenary keynote presentations, 11 Industry & Government invited talks, 228 paper presentations, a discussion panel, a poster session, 14 workshops, 12 tutorials, 27 exhibition booths, and the KDD Cup competition. The keynote and invited talks focused on timely topics such as AI and Data Mining, Open source and Cloud based systems for Big Data Analytics, Large-scale optimization in Computational Advertising and Finance, and Scalable Machine Learning applications in Web, Telecom, and Fraud. The panel was on the topic: What does it take to bring Big Data Analytics to the Mainstream? Pragmatism, not Theory or Hype.

There were 819 submissions to the Research Track, of which 160 papers were accepted, representing a very selective acceptance rate of only about 19.5%. There were 189 submissions to the I/G track, of which 68 papers were accepted, representing an acceptance rate of 36%.

The breadth of topics covered in the KDD-2015 research program is diverse, including social networks, privacy, text mining, Web mining, predictive modeling, time-series forecasting, spatial data analysis, opinion mining, stream mining, and more. These areas were in addition to the traditional classification and clustering research and applications papers.

**3. Summary for Issues to Deal with in Next 2-3 Years.**

SIGKDD does not have any outstanding issues. We plan to do the following in the next 2-3 years

Industrial Standards Initiative. With data mining and machine learning entering mainstream across many industry verticals and business solutions, a common standard is imperative for an easier, practical applications of predictive models. The SIGKDD Standards Initiative intends to facilitate a broader adoption of a common standard despite a highly fragmented market where many vendors offer data mining tools which users need to deploy in just as many different IT platforms. SIGKDD has the unique opportunity to use its leadership by promoting standards that are beneficial for data science practitioners. Especially as bridge between academia and industry, SIGKDD will be able to influence the role of open standards in data science education, academic research as well as applied data science in industry and government. We anticipate that our initiative will bring additional visibility to SIGKDD and additional attendees to KDD and SIGKDD local chapters.

Data Science Education and Curriculum Initiative. As data science and data mining are becoming increasingly popular and studied in many natural science, engineering, and social science fields, it is urgent to design a good data science curriculum to guide the education activities of data science in academia and in industry.

Conference steering committee and volunteer development. We will consider setting up a conference steering committee for the annual KDD conference. KDD has grown to be a very large and complex conference. We need a committee with senior researchers and past conference organizers to provide advice to each new group of conference organizers and to oversee the running of each conference. Along with this, we would also like to develop a formal process to groom our future volunteers and leaders of the SIGKDD community.

Increase the number of local chapters and SIGKDD members.

**SIGLOG Annual Report**

**July 2015 – June 2016**

**Submitted by: Prakash Panangaden, SIGLOG Chair**

SIGLOG was chartered in April 2014 and renewed for two years at the Fall 2015 meeting in New York City. SIGLOG’s flagship conference the ACM-IEEE Symposium on Logic in Computer Science was held in July 2015 in Kyoto, Japan collocated with ICALP, the leading conference of EATCS.

The first ever SIGLOG elections were held in spring. All the previous office holders ran for office. The chair (Panangaden), vice-chair (Ong) and secretary (Silva) were re-elected and Amy Felty was elected as treasurer. We now have a gender-balanced executive. Every post was contested which speaks to the vibrancy of the community. A new Editor-in-Chief for ACM Transactions was appointed: Orna Kupferman.

**I. Awards**: The long-awaited Church Award was approved by ACM and a committee was struck to choose the winners of the inaugural prize. This was given to Rajeev Alur and David Dill for their invention of timed automata. The paper cited was: Rajeev Alur and David Dill: A theory of timed automata. Theoretical Computer Science 126(2):183–235, 1994. In the twenty plus years since their invention, timed automata have become the standard model for the analysis of continuous-time systems, which underlies thousands of papers, dozens of tools, and several textbooks. This is a remarkable achievement for any formalism. It is all the more remarkable that this achievement was accompanied by an elegant theory that was already put down, in its most essential elements, in the very first paper by Alur and Dill, where they identified timed automata as one of the cases where finite-state reasoning can be extended to infinite-state systems.

A major milestone for SIGLOG is the award of the Gödel Prize to Stephen Brookes and Peter O’Hearn for their invention of concurrent separation logic. Though the Gödel Prize is not awarded by SIGLOG (it is awarded jointly by SIGACT and EATCS) this award clearly recognizes the importance of logic in verification of realistic programs. This year's prize is the 24th to be awarded and only the third to be awarded in the areas of logics, verification and programming languages. This ranks CSL as not just an outstanding contribution from two leaders of the logic and computation community, but as a contribution to computer science as a whole. For a new SIG it is a fantastic testament to the impact that logic and semantics can have on computer science as a whole.

At the LICS conference in Kyoto the Kleene award was given to Fabien Reiter for his paper “Distributed graph automata”. This award recognizes the best paper written by a student.

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

One of the most significant developments over the past year was the emergence of separation logic as an industrial-strength tool for the verification of programs. As noted above, Brookes and O’Hearn won the Gödel Prize for the development of concurrent separation logic. O’Hearn and several associates developed a tool for the verification of sequential programs and founded a company called Monoidics. This was acquired by Facebook and became a very successful tool that is now used as part of the development process for software within the company. This is not just an experimental tool in a research lab but a real industrial success. Clearly, all this did not happen in one year but last year the success of this approach became evident. O’Hearn gave a keynote talk at LICS in Kyoto called “From category theory to Facebook engineering”.

A number of important new directions were presented at various conferences. Homotopy type theory and especially the variant cubical type theory by Coquand, Licata, Harper and others showed great promise for a new understanding for the mechanization of mathematics and indeed for the foundations of mathematics itself. There were several results on the theory of vector addition systems which have been a source of deep problems since the 1980s. There were new directions in automata theory from a categorical understanding of classical results like the Eilenberg variety theorem to a new concept: approximate minimization of automata.

III. **Significant Programs:**

SIGLOG undertook to make a serious effort to address issues related to the lack of diversity in the computer science research community. First, all affiliated conferences are required to adhere to the ACM code of conduct and specifically to the measures to combat harassment of women at conferences. I wish I could say that this magically improved everything, it did not but it represents a step forward. Second, SIGLOG has also committed to support workshops for Women in Logic and also mentoring workshops for students along the lines of the very successful mentoring workshops at POPL run by SIGPLAN.

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

The SIGLOG newsletter has proved to be a valuable source of review articles on topics across a whole range of topics. In recognition of this we are putting in place a web site where the technical articles can be read and also be commented upon in the spirit of many highly successful individual blogs.

V. **Summary of key issues**:

We are still in the growth phase and are pleased by the present membership. However, we are still suffering from the fact that our main conference has been around for 30 years. This makes it hard to get across the message that SIGLOG is more than the LICS conference. However, we have successfully negotiated in cooperation agreements with POPL and are in negotiation with Computer-aided verification (CAV). We feel that this will lead to the visibility of the SIG.

**SIGMETRICS Annual Report**

**June 2015 – July 2016**

**Submitted by: Vishal Misra, SIGMETRICS Chair**

***SIGMETRICS focuses on computer system performance, seeking to balance theoretical and***

***practical issues. Members' interests typically include advancing the state of the art in addition***

***to applying new performance evaluation tools and techniques in practice.***

ACM Sigmetrics concluded another successful and very significant year in many ways. Some of

the highlights of the year were:

**Awards:**

Sigmetrics gives out a number of awards every year. This year the awards were:

**The SIGMETRICS Achievement Award**: **Dr. John Tsitsiklis** of MIT was the recipient of the 2016

ACM SIGMETRICS Achievement Award in recognition of his fundamental contributions to

decentralized control and consensus, approximate dynamic programming and statistical

learning.

**The SIGMETRICS Rising Star Research Award**: **Prof. Yi Lu** of UIUC (University of Illinois Urbana-

Champaign) as the recipient of the **2016 ACM SIGMETRICS Rising Star Research Award** for her

fundamental contributions to performance, scalability and energy efficiency of data-intensive

clouds.

**The SIGMETRICS Test of Time Award: Bhuvan Urgaonkar, Giovanni Pacifici, Prashant Shenoy,**

**Mike Spreitzer, and Asser Tantawi received the award for their paper "An analytical model**

**for multi-tier internet services and its applications." Published in the Proceedings of ACM**

**SIGMETRICS 2005.**

**Conference and Workshops:**

The annual conference ACM Sigmetrics was successfully held in Juan-les-pins, France in June of

this year. Along with the main conference, a number of workshops were also organized.

**MAMA 2016** The 18th Workshop on MAthematical performance Modeling and Analysis

**NetEcon 2016** The 11th Workshop on the Economics of Networks, Systems and

Computation

**GreenMetrics 2016**

**Future challenges in User-Centric Networks (UCN)**

**1st International Workshop in Systems Analytics and Characterization (SAC 2016)**

**Rearchitecting the main conference**

This 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. In parallel,

we involved the Sigmetrics community in the discussion and decision making and a general

body meeting at the conference in Juan-les-pins discussed and enthusiastically endorsed the

idea. As a result, the conference is moving to a “journaference” model starting next year with a

rolling submission deadline. The venue for next year’s conference will be Champaign, Illinois.

**Challenges for the next 2-3 years**

The biggest challenge for the next 2-3 years is to ensure the success of the changed model for

the conference. We are working with sister conferences and organizations (like IFIP

Performance with whom we jointly hold a conference every 3 years) to make sure the

transition happens smoothly. Another challenge for us is to increase the membership numbers.

An effort in that direction is to increase our outreach to other communities. To that end, we are

instituting “Sigmetrics Impact Awards”, which will be given out to a paper at overlapping SIGs

like Sigcomm, Sigmobile, Sigops and Sigarch. Additionally, the award winners of those papers

will be invited to Sigmetrics every year to present their papers at a special session at the

conference.

**Other Issues**

The finances, research activity and community involvement remains healthy for the SIG. Like

other SIGs, we are closely tracking the open access issues that are being explored by ACM.

**SIGMICRO ANNUAL REPORT**

**July 2015- June 2016**

**Submitted by: Pradip Bose, SIGMICRO Chair**

***Especially through its annual MICRO-n symposia, SIGMICRO provides a forum for discussing the state-of-the-art in computer microarchitecture and for stimulating the advancement of that state.***

The following are highlights of SIGMICRO's activities during fiscal year 2016.

**SIGMICRO** has worked to ensure the success of our flagship MICRO conference (in conjunction with co-sponsor, IEEE Technical Committee on Microarchitecture (TCµArch)). MICRO celebrated its 48th anniversary last year in Waikiki, Hawaii. 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 are at present 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. This effort bore fruit this past year, when Computing Frontiers turned around to offer up a healthy surplus. 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 second annual award was given in December 2015 at the annual MICRO conference. The awardee this year was Dr. Richard Belgard.

SIGMICRO awarded plaques to the four 2015 inductees to the Micro Hall of Fame: (<http://newsletter.sigmicro.org/micro-hof.txt/view>), Drs. Murali Annavaram, Rajeev Balasubramonian, Joel Emer and Natalie Enright Jerger.

**SIGMICRO CONFERENCE Activities**

**MICRO-48:** December 5-9, 2015

<http://www.microarch.org/micro48>/

SIGMICRO's flagship conference was quite successful with an excellent registration count, somewhat above the “normal” target of about 300. The conference received 283 submissions from all over the world (~15 countries). Of the 283 submissions, 61 were accepted with a ~21.5 % acceptance rate. There were also 5 workshops and 7 tutorials. As in MICRO-47, the main technical program included a “Lightning Session” as well as a “Poster Session” in addition to the regular paper presentations. The MICRO-48 conference allocated at least $15,000 for student travel grants, of which $7000 was committed by ACM SIGMICRO. As of July 1, 2016, $6350 was reimbursed to students who applied with receipts. One of the workshops held at MICRO-48 was the Career Workshop for Women and Minorities in Computer Architecture, which was co-sponsored by ACM SIGMICRO, which contributed $2000 for travel grants.

MICRO attendees 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 somewhat better than the 2014 (Cambridge) offering – with regard to conference organization logistics (including meals). The SIGMICRO executive committee had a meeting in June 2016 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-49 offering.

**Location**: Waikiki, Hawaii, USA.

**Excursion (including Banquet):**

The organizers did an excellent job in organizing the conference excursion and banquet. The banquet was organized as an evening luau party (Hawaiian style) and was quite a success.

**General Chair:** Milos Prvulovic, Georgia Tech University

**Program Chair:** Moin Qureshi, Georgia Tech University

**Keynotes**: Margaret Martonosi, Princeton

Uming Ko, MediaTek

**Bob Rau Memorial Award Recipient:**

* Robert P. Colwell – award citation: *For contributions to critical analysis of microarchitecture and the development of the Pentium Pro processor*

**Tutorials:**

* Intel Processor Graphics: Architecture and Programming
* The AMD gem5 APU Simulator: Modeling Heterogeneous Systems in gem5
* Pd-gem5: Modeling and Simulating a Distributed Computer System Using Multiple Simulation Hosts
* Fast and Accurate Microarchitectural Simulation with ZSim
* Understanding Program Behavior with Intel Processor Trace
* Using SASSI to Flexibly Instrument GPGPU programs
* Building Online Power Models from Real Data

**Workshops:**

* Eighth International Workshop on Network on Chip Architectures (NoCArc)
* 2nd Career Workshop for Women and Minorities in Computer Architecture
* WoNDP:3rd Workshop on Near-Data Processing
* Internet of Things Evolution: Role of MicroArch

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* NOPE: Negative Outcomes, post-mortems, and Experiences

**Best Paper Award:**

Guowei Zhang, Webb Horn, Daniel Sanchez, “Exploiting commutatitivity to reduce the cost of updates to shared data in cache-coherent systems.”

**Student travel:** Original allocation was $7000 for the main conference and $2000 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 $6350 and $2000 respectively. In addition, SIGMICRO contributed $500 to the expenses of the NoCArc workshop at MICRO.

**CGO 2015:** March 12-18, 2016

http://www.cgo.org/cgo2016; co-located with HPCA-2016 and PPoPP-2016

*Also Co-Sponsored by ACM SIGPLAN.*

**CGO** [**C**ode **G**eneration and **O**ptimization] was held in Barcelona, Spain. Submissions: 108 papers (up from 88 last year); of which 25 were accepted (23%). CGO 2016 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**: Barcelona, Spain.

**General Chair**: Björn Franke, University of Edinburgh

**Program Chairs**: Fabrice Rastello (INRIA, France), Youfeng Wu (Intel, USA).

**Keynotes**: Madan Musuvathi, Microsoft Research

Keshav Pingali, U of Texas, Austin

Avinash Sodani, Intel Corporation

**Tutorials and Workshops:**

* Real World Domain Specific Languages (RWDSL)
* Program Transformation for Programmability in Heterogeneous Architectures (PROHA)
* Architectures and Systems for Real-time Mobile Vision applications (ASR-MOV)
* International Workshop on Dynamic Code Auto-Tuning (DCAT)
* Building Dynamic Tools with DynamoRIO on x86 and ARM (DynamoRIO)
* International Workshop on Dynamic Compilation Everywhere (DCE)
* An Open-Source GPGPU Compiler (GPUCC)
* The International Workshop on Architectural and Micro-Architectural Support for Dynamic Optimization (AMAS-DO)

**Best Paper Award:**

* Exploiting Mixed SIMD Parallelism by Reducing Data Reorganization Overhead **Hao Zhou and Jingling Xue, UNSQ, Australia**

**ACM Student Research Competition**

**Winner:** Inference of Peak Density of Indirect Branches to Detect ROP Attacks  
*Rubens E. A. Moreira (Universidade Federal de Minas Gerais, Brazil)*

**1st Runner Up:** Generalized Tiling  
*Duco van Amstel (Kalray SA/Inria, France)*

**2nd Runner Up:** Autotuning Multi-tiered Applications for Performance  
*Vimuth Dinuka Fernando (University of Moratuwa, Sri Lanka)*

**Test of Time Award:**

**BIRD: Binary Interpretation using Runtime Disassembly**

The CGO 2006 paper “BIRD: Binary Interpretation using Runtime Disassembly” by Susanta Nanda, Wei Li, Lap-Chung Lam and Tzi-cker Chiueh marks a turning point in achieving complete disassembly of commercially distributed x86 binaries.  BIRD attains complete disassembly by combining static and dynamic disassembly in a novel way.  BIRD uncovers as many instructions as possible statically, deferring the hard to find instructions until runtime at which point when the program transfers to a statically unknown area BIRD disassembles the instructions. By integrating static and dynamic disassembly together, BIRD achieves 100% coverage with low run-time overhead. BIRD has emerged as a building block in the development of binary transformation and analysis systems.  The BIRD is the WORD!

**CASES 2015:** October 4-9, 2015

http://esweek.org/archive/esweek2015/

*Also in cooperation with ACM SIGBED*

**CASES** [**C**ompilers, **A**rchitecture, and **S**ynthesis for **E**mbedded **S**ystems] 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 2015 version in Amsterdam, Holland. As always, the paper selection process has been competitive with acceptance ratios of 35% for CASES, 26.6% for CODES+ISSS and 25.9% for EMSOFT. CASES received 78 registered submissions, of which 49 turned into complete submissions and went through the review process. The CASES program committee accepted 18 papers from these 49 submissions.

**Location**: Amsterdam, The Netherlands,

CASES is 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 3 other Symposia:

* ESTIMedia: IEEE Symposium on Embedded Systems for Real-Time Multimedia
* RSP: IEEE International Symposium on Rapid System Prototyping
* IoT Symposium (new!)

**Program Chairs:**

* CASES: Ravi Iyer, Intel Corp. and Siddharth Garg, New York University, USA.
* CODES-ISSS: [Gabriela Nicolescu](http://www.polymtl.ca/recherche/rc/en/professeurs/details.php?NoProf=312), École Polytechnique de Montréal, Canada;

[Andreas Gerstlauer](http://users.ece.utexas.edu/%7Egerstl/), University of Texas at Austin, USA

* EMSOFT: [Alain Girault](http://pop-art.inrialpes.fr/%7Egirault/), INRIA, Grenoble, France; [Nan Guan](http://faculty.neu.edu.cn/ise/guannan/), Northeastern University, China

Overall, the ESWEEK program in 2015 was spread across 6 days and included 3 conferences, 4 plenary keynotes, 3 symposia, 5 tutorials, 5 workshops and 1 embedded panel.

**Computing Frontiers 2016:** May 16-18, 2016

http://www.computingfrontiers.org/2016

Computing Frontiers (CF) was held this year in Como, Italy. For 2016, Computing Frontiers received 94 submissions, building on the success of last year's event and demonstrating the importance of research in the areas addressed by the conference. CF received submissions from the entire world: Americas (both North and South America), Asia (including Russia, China and Japan), Europe, and Australia. Maintaining the conference's high standard of quality, the Program Committee accepted only 30 papers. For the first time, this year the conference program committee used a shepherding process to improve the quality of papers before presentation. To provide an opportunity to discuss promising and thought-provoking, but perhaps not completely

mature works, the conference accepted 10 posters that were targeted to inspire a lively and entertaining poster session. The number of paid conference registrants remained roughly at the level of the past year, and the conference turned around to show a surplus. There were 2 keynotes and 3 workshops offered. Student travel scholarships were provided by SIGMICRO. As in prior years, SIGMICRO approved funds (to the tune of $2000) for student travel grants – but at the time of writing this annual report actual disbursement amounts were not available.

**Location:**

Coma, Italy

**General Chairs:**

* Gianluca Palermo, Politecnico di Milano, Italy
* John Feo, PNNL/NIAC, USA

**Program Co-Chairs:**

* Antonio Tumeo, PNNL, USA
* Hubertus Franke, IBM Research, USA

**Keynotes:**

* Luca Benini, ETH Zurich
* Maria Gironi, CERN OpenLab

**Best Paper Award:**

* Sequential pattern mining with the Micron Automata Processor  
  K. Wang, E. Sadredini, K. Skadron, University of Virginia.

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**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 46 members, with four new members inducted in 2015: Murali Annavaram, Rajeev Balabramonian, Joel Emer and Natalie Enright Jerger.
* 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 (yet again!), 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. The second award was given out at MICRO-47 in December 2015.
* 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. MICRO-48, in December 2015, continued this award.
* 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 has been a sponsor of the CRA-W workshop in multiple recent years, and it also supported the Career Workshop for Minorities and Women in Computer Architecture in 2014 and 2015.**
  + 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 and Chang-Hong Hsu *(U of Virginia) – Website Editors*

SIGMIS Annual Report

**July 1, 2015 - June 30, 2016**

**Submitted by: Janice C. Sipior, SIGMIS Chair**

***SIGMIS focuses on information systems and technologies and their management. SIGMIS promotes best-practice and research in the management of information systems and technologies and the use of these systems and technologies. As one of the oldest of ACM's SIGs, SIGMIS traces its beginning back to 1961, and for decades has been instrumental in defining and developing the field of management and information systems.***

**Awards**

Beginning with ICIS (International Conference on Information Systems) 1995, SIGMIS became the sponsor of the ICIS MIS Doctoral Dissertation Award. In 2015, the award was given to Roman Lukyanenko, Memorial University of Newfoundland, supervised by Jeff Parsons of Memorial University of Newfoundland, Canada, for the dissertation entitled “An Information Modeling Approach To Improve The Quality Of User-Generated Content.”

Beginning at the 2004 SIGMIS CPR conference, SIGMIS initiated the “Magid Ibaria Outstanding Conference Paper of the Year Award.” This year at the 2016 SIGMIS CPR Conference, the recipients were Christine Koh and Damien Joseph, both of Nanyang Technological University in Singapore, for their paper entitled “Meaningfulness and Calling: Effects on IT Professionals’ Retention Intention.”

**Papers**

SIGMIS held the SIGMIS CPR Conference June 2-4, 2016 in Alexandria, Virginia, USA. The conference program is available from the SIGMIS CPR conference website at: http://sigmis.org/sigcpr2016/ or directly at: http://sigmis.org/CPR2016Program.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. On January 1, 2017, Stacie Petter of Baylor University and Tom Stafford of University of Memphis will begin their three year term as Co-Editors-in-Chief. For information about *Data Base*, please visit the SIGMIS website at: http://sigmis.org/the-data-base/.

**Programs**

Since 2006, SIGMIS has held the Computers and People Doctoral Consortium. This year’s CPR Doctoral Consortium was held on Thursday, June 2, 2016 at the SIGMIS CPR Conference June 2-4, 2016 in Alexandria, Virginia, 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. In 2016, these panels were not held, but the ACM Student Research Competition and Posters/Demo sessions were initiated.

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

Beginning in 2001, SIGMIS has held a networking reception at the ICIS conference.

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 IS 2010 Curriculum Guidelines for Undergraduate Degree Programs in Information Systems, available at http://www.acm.org/education/curricula/IS%202010%20ACM%20final.pdf. 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.

**Key Issues**

We initiated a Task Force at our Business Meeting on Saturday, June 4, 2016 to address key issues we are facing. Among them are how to retain members and recruit new members, how to increase attendance and participation at our annual CPR conference, and how to improve the CPR conference acceptance rate.

**Volunteer Development**

The Task Force mentioned above will reach out to the community, which will facilitate the identification of members to serve various roles as needed. One initiative to reach out to the community is to provide research funding for SIGMIS members, for which the Task Force will be instrumental in finalizing the process. Recipients of the funding will be required to share their research by giving talks or workshops.

The 2017 conference will be held in Bangalore, India with which we are expanding our volunteers and increasing our membership reach. The Conference Committee is comprised of an entirely new set of volunteers, with the exception of one member.

**SIGMM Annual Report**

**July 2015 – June 2016**

**Submitted by: Shih-Fu Chang, SIGMM Chair; Rainer Lienhart, SIGMM VC and Nicu Sebe, SIGMM Conference Director**

***SIGMM provides an international interdisciplinary forum for researchers, engineers, and practitioners in all aspects of multimedia computing, communication, storage and application.***

1. **Awards:**

SIGMM 2015 Technical Achievement Award was given to Prof. Tat-Seng Chua of National University of Singapore in recognition of his pioneering contributions to multimedia, text and social media processing. Prof. Chua has been active in both SIGMM and SIGIR communities. Besides his scholarly contributions, Dr. Chua has also successfully started a company named ViSenze to commercialize research in mobile visual fashion search.

SIGMM 2015 Rising Star Award was given to Dr. Yu-Gang Jiang of Fudan University China for his outstanding contributions to video analysis and retrieval. Dr. Jiang has also received the Early Career Faculty Award from Intel and CCF in 2013 and the prestigious 2014 ACM China Rising Star Award. In addition, SIGMM has presented other prestigious awards, including **TOMM Nicolas D. Georganas Best Paper Award and SIGMM** Outstanding PhD Thesis Award**.**

1. **Significant Papers:**

SIGMM researchers led the creation of an influential dataset called YFCC100M (Yahoo Flickr Creative Commons 100 Million images and videos), featured in the cover page of the 2016 February issue of Communications of ACM.

Thomee, Bart, Benjamin Elizalde, David A. Shamma, Karl Ni, Gerald Friedland, Douglas Poland, Damian Borth, and Li-Jia Li. "YFCC100M: The new data in multimedia research." Communications of the ACM 59, no. 2 (2016): 64-73.

Being the largest multimedia dataset by far with full creative commons license conditions, it has had major impacts on large-scale multimedia content analysis research and many multimedia evaluation events such as MediaEval, Multimedia Event Detection, ACMMM Grand Challenge, and ACM Multimedia MMCommons Workshop held in Brisbane, Australia.

SIGMM ACM Multimedia 2015 presented the following paper awards plus a few others.

(Best Paper Award)  
Title: Analyzing Free-standing Conversational Groups: A Multimedia Approach  
Authors: Xavier Alameda-Pineda, Yan Yan, Elisa Ricci, Oswald Lanz, Nicu Sebe (Trento Italy)

This paper presents an innovative framework to analyze free-standing conversations by fusing multimodal data emanating from a combination of distributed and wearable sensors. It also presents a novel and challenging SALSA dataset which contains visual, auditory and infrared recordings of people interacting in a regular indoor environment.

(Best Open Source Software Award)

Title: Theia: A Fast and Scalable Structure-from-Motion Library

Authors: Chris Sweeney, Tobias Hollerer, Matthew Turk (UCSB)

This Open Source software presents a comprehensive and innovative multi-view geometry library Theia with a vast collection of algorithms to create high quality 3D reconstructions. Theia has gathered an active community of users since its release in Feb 2015.

Multimedia Systems (MMSys) 2016 presented the Best Paper Award to

Title: Distributed Rate Allocation in Switch-Based Multiparty Videoconference

Authors: Stefano D’bronco (EPFL), Sergio Mena (Cisco Systems), Pascal Frossard (EPFL).

This paper proposes a distributed algorithm to allocate the users' rates in a Quality of Service (QoS) aware manner by optimizing the QoS and adapting to dynamic system changes.

International Conference in Multimedia Retrieval (ICMR) 2016 presented

(Best Paper Award)  
Title: Pooling Objects for Recognizing Scenes without Examples  
Authors: Svetlana Kordumova, Thomas Mensink, and Cees G.M. Snoek (University of Amsterdam)

The paper showed how pool over ten thousand object classifiers to recognize scenes without examples.  It explored an ontological hierarchy of objects, the influence of object classifiers from different hierarchy levels, and object positions in scene images, and demonstrated new scene retrieval scenarios with complex queries.

(The Best Multimodal Paper, First Edition)  
Title: Multilingual Visual Sentiment Concept Matching  
Authors: Nikolaos Pappas (IDIAP), Miriam Redi (Yahoo!), Mercan Topkara (JW Player), Brendan Jou, Hongyi Liu, Tao Chen, and Shih-Fu Chang (Columbia University)

The paper used powerful computational linguistics tools to explore, retrieve and browse a dataset of 16K multilingual affective visual concepts, and 7.3M Flickr images. Crowdsourcing followed by dimensionality reduction expanded the meaning around concepts, which was sensitive to language differences.

1. **Innovative Programs**

The revamped Doctoral Symposium at ACMMM15 was a great success. It highlighted an interactive session for students (more than 30), industry leaders, and community senior members to closely interact through a very lively mixed poster and lunch session. See http://www.acmmm.org/2015/student-symposium/

This year’s ACM MMSys introduced a new format referred to as overview talks which have attracted great responses. Topics cover games, streaming, MPEG-DASH, smart camera systems, and others. Slides and recordings are at https://mmsys2016.itec.aau.at/overview-talks/.

ICMR2016 was distinguished by its industrial participation.  The industrial demos, presentations, and panel were very well received. Speakers from Clarifai, Facebook, Google, IBM, and Microsoft explored how multimedia research and applications must scale, and how they should reflect but also adapt to the strengths and weaknesses of current machine learning research.

1. **Key Issues for SIGMM in the next 2-3 years**

* Developing rising leadership in the community continues to be among the top priorities. This year we are continuing the very successful Rising Stars Symposium featuring young researchers and emerging topics. In addition, an emphasis was placed on both excellence and diversity – six of the ten nominations were active female researchers.
* SIGMM needs to continue developing strengths in both technical depth and breadth. We have specifically called for theoretical foundational contributions as well as real world applications utilizing multimedia technologies. This year at ICMR16, the first edition of the Best Multimodal Paper Award was given.
* Multimedia is a field that celebrates growing success in the industry. Many large-scale applications and problems are driven by groups in industry such as Google, Facebook, Microsoft, Yahoo!, etc. So far, we have been able to engage leading industry groups to play active roles in SIGMM programs, such as the YFCC100M multimedia dataset, and the industrial overview talks and panel at MMSys and ICMR. Going forward, it’s important to maintain a balanced coverage of both academic and industrial research.

1. **Volunteer Development Process**

To develop the rising leadership of the multimedia community, we launched the inaugural SIGMM Workshop on Multimedia Frontiers, highlighting plenary talks by 12 junior leading researchers in multimedia. The plenary talks by the junior star speakers were followed by on-site comments from senior leaders in related fields, igniting lively discussion about the exciting directions and challenges in the multimedia community. An ACM book dedicated to Multimedia Research Frontiers (expected publication in 2017) is also being edited to cover the topics presented in this inaugural workshop. This initiative has been received extremely well and will continue at ACMMM16 this year in Amsterdam.

In addition, SIGMM continues to support student travel grants in all conferences. SIGMM local chapters (Bay Area and China) also continue to host extremely vibrant programs bringing together new bloods into the community.

**SIGMOBILE Annual Report**

**July 2015 – June 2016**

**Submitted by: Suman Banerjee, SIGMOBILE Chair**

***The purpose of ACM SIGMOBILE is to promote research and development by bringing together researchers and practitioners and fostering interest in the mobility of systems, users, data, and computing. SIGMOBILE will address the above spectrum of topics, sharing one common theme - mobility. The group's technical scope reflects the emerging symbiosis of portable computers and wireless networks, addressing the convergence of mobility, computing and information organization, its access, services, management and applications.***

 In the past few years, mobile computing is a fast moving, topical, and exciting area of computer science and engineering. Supporting the mobile computing and wireless networking research community, SIGMOBILE sponsors multiple successful conferences and workshops (MobiCom, MobiSys, MobiHoc, SenSys, UbiComp, WUWNet, PerDis, and HotMobile) 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.

SIGMOBILE’s Executive Committee (EC) comprises of

* 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)

In addition, SIGMOBILE’s leadership has introduced a number of new appointed positions to match the expanding activities and events of this community. They include:

* 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) --- handles all content and communication from SIGMOBILE via websites, social media, and email.
* Digital Library Coordinator: Dr. Guanling Chen (University of Massachusetts Lowell, USA) --- coordinates issues related to publications from our conferences and workshops.
* Award Committee Chair: Prof. Edward W. Knightly (Rice University, USA) --- manages the various key awards that the community bestows.
* Outreach director: Dr. Thyaga Nandagopal (NSF, USA) --- assists authors of papers to broadly disseminate their work to the general public.
* Video director: Shweta Jain (Rutgers University, USA) --- supports video recording of talks at major conferences.

**Awards**

SIGMOBILE has a number of awards that it bestows of community members every year. In addition to the Outstanding Contributions Award (OCA) for career-long achievements, the Rockstar award for early career achievements, a Distinguished Service Award for service to the community, and various best paper awards at the leading conferences, SIGMOBILE introduced two new awards this year --- the Test of Time award for publications in any venue that appeared at least 10 years prior, and the ACM SIGMOBILE Doctoral Dissertation Award for best PhD work in the field.

Some of the notable award winners are mentioned below.

Outstanding Contributions Award: Prof. Mario Gerla (UCLA)

Rockstar Award: Dr. Karthikeyan Sundaresan (NEC Labs)

The new Test of Time award was inducted for the first time this year, and in this inaugural year, a committee chaired by Prof. Andrew Campbell identified 11 seminal pieces of work as winners. They are:

* Abramson, Norman. "THE ALOHA SYSTEM: another alternative for computer communications." Proceedings of the November 17-19, 1970, fall joint computer conference. ACM, 1970.
* Kleinrock, Leonard, and Fouad A. Tobagi. "Packet switching in radio channels: Part I--carrier sense multiple-access modes and their throughput-delay characteristics." Communications, IEEE Transactions on 23.12 (1975): 1400-1416.
* Weiser, Mark. "The computer for the 21st century." Scientific American 265.3 (1991): 94-104.
* Want, Roy, Andy Hopper, Veronica Falcao, and Jonathan Gibbons. "The active badge location system." ACM Transactions on Information Systems (TOIS) 10, no. 1 (1992): 91-102.
* Kistler, James J., and Mahadev Satyanarayanan. "Disconnected operation in the Coda file system." ACM Transactions on Computer Systems (TOCS) 10.1 (1992): 3-25.
* Bakre, Ajay, and B. R. Badrinath. "I-TCP: Indirect TCP for mobile hosts. "Distributed Computing Systems, 1995., Proceedings of the 15th International Conference on. IEEE, 1995.
* Bahl, Paramvir, and Venkata N. Padmanabhan. "RADAR: An in-building RF-based user location and tracking system." INFOCOM 2000. Nineteenth Annual Joint Conference of the IEEE Computer and Communications Societies. Proceedings. IEEE. Vol. 2. IEEE, 2000.
* Gupta, Piyush, and Panganmala R. Kumar. "The capacity of wireless networks." Information Theory, IEEE Transactions on 46.2 (2000): 388-404.
* Polastre, Joseph, Jason Hill, and David Culler. "Versatile low power media access for wireless sensor networks." Proceedings of the 2nd international conference on Embedded networked sensor systems. ACM, 2004.
* LaMarca, Anthony, Yatin Chawathe, Sunny Consolvo, Jeffrey Hightower, Ian Smith, James Scott, Timothy Sohn, James Howard, Jeff Hughes, Fred Potter, Jason Tabert, Pauline Powledge, Gaetano Borriello, Bill Schilit. "Place lab: Device positioning using radio beacons in the wild." In Pervasive computing, pp. 116-133. Springer Berlin Heidelberg, 2005.
* Bicket, John, Daniel Aguayo, Sanjit Biswas, and Robert Morris. "Architecture and evaluation of an unplanned 802.11 b mesh network." In Proceedings of the 11th annual international conference on Mobile computing and networking, pp. 31-42. ACM, 2005.

The SIGMOBILE Doctoral Dissertation Award was approved just recently and a selection process is underway. Finally, SIGMOBILE plans to recognize some of the work that best reaches out to and impacts a wide audience in each year through a selection process to create SIGMOBILE Research Highlights every year, and forward these papers for potential publication in the CACM Research Highlights.

**Innovative programs**

SIGMOBILE is delighted at the significant transformation of its quarterly publication, GetMobile, which is a revamped version of the ACM SIGMOBILE Mobile Computing and Communications Review, (MC2R). Each issue of GetMobile consists of a set of regular sections curated by a committed group of editors and has won a lot of praise from the broad community for improved quality of content and articles.

SIGMOBILE has recently launched the SIGMOBILE YouTube channel through which we provide video-recorded talks from our major conferences and workshops. This content is publicly available and anyone can now watch the talks from our conferences at their convenience, even if they were not able to attend the conference itself. There is clearly a significant following this channel has generated, with more than 11,000 views in 2015, with an average of 3 hours of viewing activity daily. Many of our viewers seem to be from diverse countries, incuding Asia, South America, and Africa, thereby allowing us to reach many more constituents than our conferences and workshops currently does.

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.

SIGMOBILE also introduced the availability of technical papers in the mobile friendly ePub format which allows readers to better browse such materials on their phones and tablets. We have setup an arrangement by which any SIGMOBILE event can ensure that camera-ready papers can be easily converted into the ePub format and is made available through the ACM Digital Library. This reflects our commitment to keep up with the changing needs of the community and the ways in which we consume content in the modern world.

SIGMOBILE also routinely provides financial support to various community activities. They include CRAWDAD --- a community resource hosted at Dartmouth University that archives research datasets; and Networking Networking Women (N^2 Women) is a community of researchers who foster connections among the under-represented women in computer networking and related research fields.

SIGMOBILE is celebrating its 20th anniversary at ACM MobiCom 2016 in New York City, USA, in early October 2016. The planning of celebration event is underway. Recognizing the inaugural batch of SIGMOBILE Test-of-Time Awards is one of many celebration events being planned as part of this activity.

**Challenges and considerations facing the community**

**Identifying community projects that SIGMOBILE can fund:** SIGMOBILE has created the Mobile Computing Community Research (MCRC) fund to support activities of broad community interest (such as CRAWDAD and N^2Women). However, we need to work harder to identify other projects that this community can and should support.

**Greater industry engagement:** We believe that SIGMOBILE can engage even better with the significant mobile and wireless industry that is having such a significant impact in the world today. We have taken some initial steps, e.g., the Wireless Industry Days workshop, the revamped GetMobile publication with a broader appeal. But much more can and should be done, and we need to look for better and greater ways of engaging with our broader industry.

**Conference co-locations:** SIGMOBILE today sponsors multiple major conferences --- MobiCom, MobiHoc, MobiSys, SenSys, UbiComp, along with two newer additions, PerDis and WUWNet. Each conference has slightly different focus, has thrived over the years, and is considered a premier venue in the field. However, sometimes there is a concern that too many conferences may dilute a community and there maybe need for periodic co-locations and greater coordination. This is an issue that require further introspection.

**Summary**

Mobile computing and wireless networking are among the fastest growing fields within computer science and engineering, and as a result SIGMOBILE continues to be a strong, successful, well-supported organization. The SIG’s conferences and workshops are well attended, creating a wealth of publications for the ACM digital library and the SIG’s members. The community continues to create significant impact both technically and to the broader society through research, education, and other activities.

**SIGMOD ANNUAL REPORT**

**July 2015 – June 2016**

**Submitted by: Donald Kossmann, SIGMOD Chair**

**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 2016 conferences, but also in the planning of these conferences for 2017 (held in Raleigh, USA), 2018 (Houston, USA), and 2019 (Amsterdam, Netherlands). 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 Massachussetts, Amherst) heads a team of twelve associate editors. In February 2016, we published a special issue of SIGMOD Record called “Research Highlights”. It contained adapted versions of

the eight best papers of SIGMOD 2015, PODS 2015, and VLDB 2015. These papers were rewritten for a more general computer science audience. Furthermore, a technical perspective was written by a senior member of the community for each of these papers. Three of these eight papers will be published in the “Research Highlights” column of CACM.

**Awards**

SIGMOD sponsors several awards each year that recognize excellence in the database community. In 2016, these awards were given to the following researchers:

*SIGMOD Edgar F. Codd Innovations Award*: Gerhard Weikum (Max-Planck Gesellschaft, Germany).

*SIGMOD Systems Award:* Martin Kersten (CWI, Netherlands).

*SIGMOD Contributions Award*: Sam Madden (MIT, USA).

*SIGMOD Jim Gray Doctoral Dissertation Award*: Paris Koutris (University of Washington, USA).

*SIGMOD Programming Contest:* Takuto Ikuta, Takanori Hayashi, Yosuke Yano, Yoichi Iwata (University of Tokyo, Japan).

***Takuto Ikuta, Takanori Hayashi, Yosuke Yano,***

*SIGMOD Test-of-Time Award*: “Provenance Management in Curated Databases”, Peter Buneman, Adriane Chapman, James Cheney. ACM SIGMOD Conference, 2006.

*SIGMOD 2016 Best Paper Award*: “Wander Join: Online Aggregate via Random Walks”, Feifei Li (University of Utah), Bin Wu, Ke Yi (HKUST, China), Zhao (Shanghai Jiao Tong University, China).

*PODS Alberto O. Mendelzon Test-of-Time Award*: “Two variable logic on data trees”, Mikolaj Bojanczyk, Claire David, Anca Muscholl, Thomas Schwentick, Luc Segoufin.

*PODS 2016 Best Paper Award*: “FAQ: Questions asked Frequently”, Mahmoud Abo Khamis (LogicBlox), Hung Ngo, Atri Rudra (University of Buffalo, USA).

*PODS 2016 Best Student Paper Award*: “Shortest Paths and Distances with Differential Privacy”, Adam Sealfon (MIT, USA).

hortest Paths and Distances with

Differential Privacy

**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. In 2016, we relaunched the website in order to incorporate more information and improve readability and searchability.

*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 over the past 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. Over the years, the number of papers that have participated in this program has declined. We are now trying to revive these efforts and advertise repeatability again as part of our calls for papers of our major conferences. The ACM repeatability policy that was recently put into effect will help these efforts.

*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.

*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. For SIGMOD 2016, we were able to attract more than $250,000 in sponsorship, 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 the more general scientific community in Computer Science.

**SIGOPS Annual Report**

**July 2015 – June 2016**

**Submitted by: Robbert van Renesse, SIGOPS CHAIR**

***SIGOPS addresses a broad spectrum of issues associated with operating systems research and development. Although many of the members are drawn from industry, academic and government professionals are also represented in the membership***.

**Overview**

This was the first year for Robbert van Renesse (Cornell) as Chair, Shan Lu (University of Chicago) as Vice Chair, Kaoutar El Maghraoui (IBM Research) as Treasurer, and Håvard Johansen (University of Tromsø, Norway) as Information Director. We took these roles over from Jeanna Matthews (Clarkson University) as Chair, George Candea (EPFL) as Vice Chair, Dilma da Silva (Qualcomm) as Treasurer, and Muli Ben-Yehuda (Technion) as Information Director.

This year SIGOPS has added a new chapter, ChinaSys. The ChinaSys board consists of Wenguang Chen (Tsinghua, Chair), Haibo Chen (Shanghai Jiao Tong, Vice Chair), and Yungang Bao (ICT, Treasurer). The other two chapters are Eurosys and SIGOPS de France.

SIGOPS publishes a quarterly newsletter, *Operating Systems Review (OSR)*, which focuses on specific research topics or research institutions, manages an electronic mailing list, and maintains a web site: <http://www.sigops.org/>. Jeanna Matthews and Tom Bressoud have retired as co-editors of Operating System Review. These posts are being taken over by Mark Silberstein (Technion) and Chris Rossbach (UT Austin).

There were 3 issues of OSR in the last year.

SIGOPS encourages participation in conferences and career building activities for young members of the community. For example, substantial funding was provided this year as travel grants for students to attend conferences and diversity workshops, with many of these grants targeted at women and underrepresented minorities.

Professional SIGOPS membership dues remain at $10, and student membership is just $5 per year.

**Awards**

The SIGOPS Dennis M. Ritchie Doctoral Dissertation Award 2015 committee was run by Emmett Witchel (Chair, UT Austin), Andreas Haeberlen (U. Penn.), and Edouard Bugnion (EPFL). The award went to Cristiano Giuffrida’s "Safe and Automatic Live Update" (Vrije Universiteit Amsterdam), advised by Andrew S. Tanenbaum. Nadav Amit (Technion–Israel Institute of Technology) got an Honorable Mention for "Alleviating Virtualization Bottlenecks", advised by Assaf Schuster and Dan Tsafrir. Cristiano Giuffrida was also the recipient of the EuroSys Roger Needham Ph.D. Award 2015.

The Mark Weiser Award 2015 was awarded to Yuanyuan Zhou of UC San Diego. The committee consisted of John Wilkes (Google, Chair), Stefan Savage (UCSD), and Margo Seltzer (Harvard).

The previous SIGOPS chair, Jeanna Matthews, put together a group to revise selection procedures for the SIGOPS Hall of Fame Awards. The group consisted of Tom Anderson, Peter Druschel, Steve Hand, Jeanna Matthews, Jeff Mogul, and Amin Vahdat. The group has proposed to complete the selection of the most influential papers of the past fifty years in time for the celebration of the 50th anniversary of the founding of SIGOPS at SOSP 2015. In order to do this, the HoF Award was suspended for the year 2014. Starting from OSDI 2016, the selection of HoF papers will be restricted to papers that appeared 10-11 years previously. The selection committee for these awards will be made up of the program chairs / co-chairs of the SOSP/OSDI conferences that were held within that 10-11 year timeframe. The 2015 selection committee consisted of Peter Druschel (MPI), Gernot Heiser (NICTA), Remzi Arpaci-Dusseau (Wisconsin), Butler Lampson (Microsoft), Barbara Liskov (MIT), Jeff Mogul (Google), Mendel Rosenblum (Stanford), Willy Zwaenepoel (EFPL), and was co-chaired by Hank Levy (Washington) and Frans Kaashoek (MIT). 14 papers were selected and are listed on our website.

The SIGARCH/SIGPLAN/SIGOPS ASPLOS Influential Paper 2016 went to “Limits of instruction-level parallelism” by David W. Wall. *SIGARCH Comput. Archit. News* 19, 2 (April 1991). Also *SIGOPS Oper. Syst. Rev.* 25, Special Issue (April 1991.

**Conferences**

* SOSP 2015 was held in Monterey, CA in October 2015. It was 100% sponsored by SIGOPS. The General Chair was Ethan Miller (UC Santa Cruz) and the Program Chair was Steven Hand (Google).
* Collocated with SOSP 2015, we sponsored the following workshops:
  + In celebration of the 50th Anniversary of SIGOPS we sponsored a History Day workshop. Chaired by Peter Denning, the organization committee consisted of Steve Bellovin, Ken Birman, Andrew Birrell, Matt Blaze, David Clark, Peter Denning, Jack Dennis, Virgil Gligor, Casey Henderson, Andrew Herbert, Frans Kaashoek, Butler Lampson, Barbara Liskov, Jeanna Matthews, David Mazières, Mark Miller, Peter Neumann, Dave Patterson, Robbert van Renesse, Mahadev Satyanarayanan, Margo Seltzer, Fred Schneider, Mike Schroeder, Andy Tanenbaum, Robert Watson, and Yuanyuan Zhou.
  + The 2015 Workshop on Supporting Diversity in Systems Research.
  + The Conference on Timely Results in Operating Systems (TRIOS).
  + The 9th ACM SIGOPS Workshop on Large-Scale Distributed Systems and Middleware (LADIS).
* Planning for the next *ACM Symposium on Operating Systems* (SOSP), which is scheduled for October 2017 in Shanghai, is underway. Haibo Chen and Lidong Zhou are serving as General Chairs, and Lorenzo Alvisi and Peter Chen as Program Chairs. We also put together as Steering Committee consisting of Andrew Birrell, Dilma Da Silva, Mike Dahlin, Peter Druschel, Steven Hand, Hank Levy, and Ethan Miller.
* The 11th Eurosys Conference (Eurosys 2016) was held in London in April. Sponsored by SIGOPS and Eurosys.
* The 21st ACM International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS) was held in Atlanta, GA, April 2–6, 2016. ASPLOS is sponsored 25% by SIGOPS, 50% by SIGARCH, and 25% by SIGPLAN.
* The 12th ACM SIGPLAN/SIGOPS international conference on Virtual Execution Environments was collocated with ASPLOS in Atlanta. VEE is sponsored 50% by SIGPLAN and 50% by SIGOPS.
* The 34th Annual ACM SIGACT-SIGOPS Symposium on Principles of Distributed Computing (PODC) was in in Donostia-San Sebastián, Spain in July 2015. PODC was sponsored 50% by SIGOPS and 50% by SIGACT.
* The 6th ACM Symposium on Cloud Computing (SOCC) was held in Hawaii in August 2016. SOCC is sponsored 50% by SIGOPS and 50% by SIGMOD.
* The 13th ACM SenSys (SenSys) was held November 2015 in Seoul, Korea. Sensys is sponsored 10% by SIGOPS, SIGARCH, SIGMETRICS and SIGBED, 30% by SIGMOBILE, and 30% by SIGCOMM.
* The 6th SIGOPS Asia-Pacific Workshop on Systems(APSys) was held in July 2015 in Tokyo, Japan. SIGOPS is 100% sponsored by SIGOPS
* The 9th ACM International Systems and Storage Conference (SYSTOR) was held in Haifa in June 2016. It is 100% sponsored by SIGOPS.
* We sponsored the 2016 CRA-W Grad Cohort Workshop, held in San Diego, April 10-11, 2016 at the Bronzelevelsponsorship. A record 511 women masters and Ph.D. students attended, representing 159 institutions from the United States and Canada and 60 had research interests in Operating Systems.
* In-cooperation events included Usenix events OSDI 2016, FAST 2016, and NSDI 2016.
* We are considering adopting the HotOS workshop, which has been run by USENIX.

**Selection of Recent Initiatives**

* SIGOPS is in the process of considering sponsorship of childcare services at major systems conferences in order to promote diversity. We have agreed to sponsor childcare at OSDI 2016 for up to 12 children.
* SIGOPS approved providing registration discounts to SOSP 2015 for retirees.
* Eric Eide (U. Utah) has agreed to participate on the ACM SGB Replication Taskforce (on independent verification of results) on behalf of SIGOPS.

**SIGPLAN Annual Report**

**July 2015 – June 2016**

**Submitted by: Michael Hicks, SIGPLAN Chair**

***SIGPLAN, the premier programming languages organization, promotes awareness and advancement of research and practice in programming languages. SIGPLAN accomplishes its mission by sponsoring conferences and publishing newsletters. The SIG also serves as a coordinating body for the volunteers who wish to undertake projects to further the SIG goals.***

**1. Awards that were given out:**

Robin Milner Young Researcher Award

2015 David Walker, Princeton University

Citation:

David Walker has made deep and varied contributions to programming language research, but always with an eye towards emerging and surprising applications of foundational theory. He was one of the co-authors of the work on Typed Assembly Language (TAL), which showed how conventional type systems could be brought to bear on low-level machine code, and which forms the basis for today’s typed virtual machines such as Microsoft’s .NET. Focusing on the need for better reasoning principles for pointers, he helped develop Alias Types, the Calculus of Capabilities, and region-based formalisms that influenced the design of type systems for modern languages like Cyclone, Vault, and Rust. Walker also provided semantic foundations for secure program monitoring, and used his insights to develop new tools for enforcing security policies on legacy code. Long before “big data” was a hot topic, he and his co-authors designed languages for processing large, ad-hoc data collections. Recognizing trends in hardware, he developed new techniques for verifying the safety of programs executing on faulty processors. And, most recently, foreseeing the rise of software-defined networking, he has worked with people from both the networking and PL communities to develop new, high-level languages (Frenetic, Pyretic) for programming networks. In summary, Prof. Walker is a groundbreaking researcher in programming languages, connecting foundations to novel applications.

John Vlissides Award, given to a doctoral student participating in the OOPSLA Doctoral Symposium showing significant promise in applied software research.

2015 Chang Liu, University of Maryland

Advisors: Michael Hicks and Elaine Shi

Citation:

Chang Liu’s work explores programming language support for oblivious applications, an important dimension of security in the presence of side channels. His work bridges two disjoint efforts on opposite ends of the hardware-software design spectrum – oblivious RAM and oblivious algorithms – and adopts a language design approach to facilitate users in their development of efficient oblivious applications. The new language is endowed with a type system providing formal guarantees of obliviousness, and can support both sequential and parallel applications. The promising approach Chang proposed may significantly improve development productivity and performance of oblivious applications.

The 2016 winners of the Programming Languages Achievement Award, the Distinguished Service Award, and the Programming Languages Software Award will be given out later in 2016.

Most influential paper (MIP) designations are awarded to papers presented at the POPL, PLDI, ICFP, and OOPSLA conferences held 10 years prior to the award year. A designated committee judges papers according to their influence over the past decade.

ICFP 2005: Manuel M. T. Chakravarty, Gabriele Keller, and Simon Peyton Jones for Associated Type Synonyms

OOPSLA 2005: Philippe Charles, Christian Grothoff, Vijay Saraswat, Christopher Donawa, Allan Kielstra, Kemal Ebcioglu, Christoph von Praun, and Vivek Sarkar for X10: An Object-Oriented Approach to Non-Uniform Cluster Computing

POPL 2006: Xavier Leroy for Formal certification of a compiler back-end or: programming a compiler with a proof assistant

PLDI 2006: Emery Berger and Benjamin Zorn for DieHard: probabilistic memory safety for unsafe languages

**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**

SIGPLAN submitted an application to the Publications Board for a series in the newly created Proceedings of the ACM (PACM). This series would include the proceedings of OOPSLA, starting in 2017, with the expectation of including other SIGPLAN conferences, such as POPL and ICFP. As of late June 2016, the publications board approved the proposal and details will be firmed up during the latter half of 2016.

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

SIGPLAN has been a leader in supporting reproducible research, with its conferences increasingly using an "artifact evaluation committee" (AEC) to judge artifacts upon which published results are based. All major SIGPLAN conferences now use an AEC. ACM has more generally begun to support such efforts, and SIGPLAN will continue to work with them on this important issue.

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

The Programming Language Mentoring Workshop (PLMW) has been broadened to include the OOPSLA and PLDI conferences; the first offering for the former was OOPSLA'15 and for the latter it was PLDI'16. This is an opportunity to bring more students (with a special emphasis on women and minorities) into our community; it targets senior undergraduates and junior graduate students. A new steering committee has been appointed to manage the series.

Our efforts to support the PACM process should help researchers in Asia and South America, which tend to overlook the rigorous review of SIGPLAN conference papers.

SIGPLAN also offers $100,000 per year in travel support for attendance by authors (primarily students) at SIGPLAN conferences.

Finally, SIGPLAN directly supports (with donations) CRA-W grad cohort, to encourage increased participation of women in computer science, and WomENcourage, an ACM-sponsored European event encouraging the same. In late summer 2016, Susan Eisenbach---a SIGPLAN EC member---is speaking at WomENcourage in Linz.

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

The SIGPLAN Executive Committee (EC) has been working on a number of issues involving the management of conferences and conference publications. These include:

- Publishing issues. We have been working with the publications board to ensure that the new ACM formatting guidelines accommodate SIGPLAN publication practices, which often involve heavy use of mathematics. We have also been working to unify formatting as much as possible between the various conferences, to streamline the publication review process.

- Technical review. We have streamlined and unified documents that describe prescriptions and suggestions for the review processes of SIGPLAN conferences. The goal is to formalize best practices for achieving rigorous reviews that are nonetheless fair and efficient. We continue to study the efficacy of blind reviewing. We will also study the possibility for transparent mechanisms for informed reviewer selection and review re-consideration.

- Conference-based publication models. Conferences are the heart of SIGPLAN publication practices, but along with their benefits they impose both direct and indirect costs on authors. One particular concern is the high environmental cost (i.e., carbon footprint) of air travel. SIGPLAN will continue to explore ways to mitigate this cost; possible strategies we will explore include co-location, carbon offsets, live streaming, and journal-first publication styles.

- Open Access. We will continue to explore publication models that support Gold Open Access, though SIGPLAN is happy about ACM's increasing support for Green Open Access models, in particular openTOC.

**SIGSAC Annual Report   
July 2015- June 2016  
Submitted by: Trent Jaeger, SIGSAC Chair**

***SIGSAC’s mission is to develop the information security profession by sponsoring high quality research conferences and workshops.***

1. **SIGSAC 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 2012 edition of CCS was held in Raleigh (NC); the conference received 439 submissions of which 81 were accepted. The 2013 edition was held in Berlin (Germany); the first CCS conference held outside the US since 2000. 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 was held in Denver, CO USA. Once again, a new record number of submissions have been received (646) and accepted papers (128)**.** 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, with Andrew Myers (Cornell) and Shai Halevi (IBM Research) as the junior program co-chairs. Once again, a new record number of submissions have been received (around 700 submissions) and accepted papers(over 130)**.** We will be using $60,000 of the profit from CCS 2015 to support student travel grants for CCS 2016. The 2017 CCS edition will be held in Dallas, TX USA.

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 2016, the CCS acceptance rate was approximately 19%. Undoubtedly, CCS remains one of the most competitive conferences in the area. Three papers were selected as “best student papers” at CCS 2015.

* **David Adrian, Karthikeyan Bhargavan, Zakir Durumeric, Pierrick Gaudry, Mathew Green, J. Alex Halderman, Nadia Heninger, Drew Springall, Emmanuel Thomé, Luke Valenta, Benjamin Vandersloot, Eric Wustrow, Santiago Zanella-Béquelin, and Paul Zimmerman,** Imperfect Forward Secrecy: How Diffie-Hellman Fails In Practice
* **Brendan Saltaformaggio, Rohit Bhatia, Zhongshu Gu, Xiangyu Zhang and Dongyan Xu,** Guitar: Piecing Together Android App GUIs From Memory Images

**Viet Tung Hoang, Jonathan Katz and Alex J. Malozemoff,** Automated Analysis And Synthesis Of Authenticated Encryption Schemes

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, in 2014 in London, Ontario, Canada, and in 2015 in Vienna, Austria. SACMAT 2015 was held in Vienna, Austria, where 59 papers were submitted and 17 accepted, and the attendance returned to 55 attendees. 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. SACMAT 2016 was held in Shanghai, China on June 6-8, 2016. 20 papers (including 3 short papers) were accepted out of 55 submitted to the conference. The conference will be held in Indianapolis, IN USA in 2017. The SACMAT Steering Committee is exploring approaches to broaden the scope of the conference.

In 2016, SIGSAC held the eleventh instance of its third major conference, namely ACM AsiaCCS (formerly ACM Symposium on Information, Computer and Communications Security, ASIACCS), in X’ian, China. 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 Honk Kong on March 22-24, 2011, the seventh in Seoul, South Korea on May 2-4, 2012, the eighth in Hangzhou, China on May 8-10, 2013, the ninth in Kyoto, Japan on June 4-6, 2014, the tenth in Singapore on April 14-17, 2015. The conference name was changed to AsiaCCS for the 2016 edition that was held in X’ian, China from May 30-June 3, 2016. 81 papers (including 8 short papers) were accepted from 350 submissions, and 193 paid attendees participated in conference. All are record highs for the conference. The AsiaCCS 2017 edition will be held in Abu Dhabi, UAE with Xun Yi being the PC co-chair from Asia and Ahmed Reza-Sadeghi from TU Darmstadt being the other PC co-chair.

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. The 2016 conference was held in Darmstadt, Germany on July 18-20, 2016. In the 2016 conference, 13 regular papers and 7 short papers were accepted. The ACM DL states that 51 papers were submitted to ACM WiSec, which is the lowest number of submissions in its history (if true). I am actively checking this situation and will discuss with the WiSec Steering committee.

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 was the first to be held in a location other than San Antonio – moving to New Orleans on March 9-11, 2016. The PC Chair was Alexander Preschner. 27 papers were accepted in 2016 and 118 paid attendees participated in the conference, indicating that CODASPY has reached a new level of maturity.

**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 David Basin (ETH Zurich) has been selected as the new EIC and begun his term. We do not expect to sponsor another journal for the foreseeable future.

1. **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 in 2015, Florian Kerschbaum, and the committee received six nominated PhD theses, of which the following were chosen as winner and runner-up.

* ***Winner*:** **Nicholás Bordenabe**, *École Polytechnique*, Measuring Privacy with Distinguishability Metrics: Definitions, Mechanisms and Application to Location Privacy
* ***Runner-Up*:** **Karl Koscher**, *University of Washington*, Securing Embedded Systems: Analyses of Modern Automotive Systems and Enabling Near-Real Time Dynamic Analysis

For the 2016 version of this award seven PhD theses have been nominated. This year’s committee is being chaired by Tadayoshi Kohno who was the advisor of the 2015 winner, much as Dr. Kerschbaum was a significant collaborator of the 2014 winner. This approach of using past winner’s advisors as chairs appears to work reasonably well.

**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 Air Force 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. The 2015 Outstanding Innovation Award was given to Professor Ross Anderson of Cambridge University, and the Outstanding Contribution Award was given to Dr. Stephen Lipner from Microsoft Corporation (retired).

**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.

SIGSAC is recommending that all SIGSAC conferences utilize Open-TOC for their content in the future. We will have to examine the impact 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 Annual Report**

**July 1, 2015 - July 30, 2016**

**Prepared by Ilias S. Kotsireas, SIGSAM Chair**

***SIGSAM provides members with a forum in which to exchange ideas about the practical and theoretical aspects of algebraic and symbolic mathematical computation. Its scope of interests includes design, analysis and application of algorithms, data structures, system and languages.***

During the third 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 [www.sigsam.org](http://www.sigsam.org) continues to expand its horizons, largely due to the tireless efforts of the new SIGSAM Information Director that I appointed, Dr. Matthew England, from the University of Coventry in the UK.
2. The ACM Communications in Computer Algebra is being published consistently on time and a new Editor has been appointed, Dr. Wen-shin Lee, from Belgium. I am confident that Wen-shin will be a very successful editor, we already had lengthy meetings in order to discuss how to generate content for CCA. 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.
3. A new volunteer has been appointed as the Book Review Editor, Dr. Georg Regensburger, a Senior Scientist with the Austrian Academy of Sciences. His job includes updating the books section of the SIGSAM website and soliciting book reviews (to be published in CCA) from qualified individuals on the newly appeared books that are of interest to SIGSAM members and our entire community at large.
4. The idea of a new service called ``CA Digest’’ (Computer Algebra Digest) was discussed at the SIGSAM Business meeting during ISSAC 2016 and was approved. This will be modeled after the well-known NA Digest service.
5. The SIGSAM Executive worked on establishing a ``SIGSAM Dissertation award’’. This project was spearheaded by SIGSAM Vice-Chair, Dr. Jean-Guillaume Dumas. We hope that we will be able to send the proposal to ACM for approval in the next few months. Several SIGSAM members involved in this discussion (especially at the SIGSAM business meeting I conducted during ISSAC 2016) raised the issue of designing this award in a manner that is inclusive of dissertations written in a language other than English.
6. SIGSAM successfully presented a nomination for an ACM Fellow, receiving strong endorsements from very distinguished researchers in Computer Science. Even though the nomination was not upheld by ACM, we received useful feedback from the committee and we plan to present this nomination again this year.

**Financial Report:** SIGSAM is financially robust, as per the report prepared by SIGSAM Treasurer Dr. Agnes Szanto (NC State). The fund balance as of June 30, 2016 is $85,124.

**Conferences:**

1. 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.
2. The Milestones in Computer Algebra (MICA 2016) conference, celebrating the research of [Erich Kaltofen](http://www4.ncsu.edu/~kaltofen/) was held at the University of Waterloo, Canada, July 16-18, 2016. The conference was held in-cooperation with ACM and SIGSAM. <https://cs.uwaterloo.ca/conferences/mica2016/>

**Awards that were given out**

ISSAC 2016 was held at Wilfrid laurier University in Waterloo, Ontario Canada in-cooperation with ACM and SIGSAM and hosted by the CARGO lab <http://www.cargo.wlu.ca/>   
The ISSAC 2016 conference website is: <http://www.issac-symposium.org/2016/>   
and two SIGSAM awards were given out as follows:

**ISSAC 2016 Distinguished paper award**:

**Author:** Pierre Lairez and Tristan Vaccon

**Title:** On p-adic differential equations with separation of variables

**ISSAC 2016 Distinguished Student Author award: (split among two recipients)**  
**Author:**  Yi Zhang

**Title:**  Contraction of Ore Ideals with Applications

**Author:**  Matias Bender (with Jean-Charles Faugere, Ludovic Perret and Elias Tsigaridas)  
**Title:**  A Superfast Randomized Algorithm to Decompose Binary Forms

**SIGSIM ANNUAL REPORT**

**July 2015 – June 2016**

**Submitted by: Paul Fishwick, SIGSIM Chair**

***The Mission of SIGSIM is to become the world-wide leader in providing professional services on modeling, simulation and systems analysis. SIGSIM actively seeks to meet this objective in a variety of ways, including: sponsorship of both the Winter Simulation Conference and the Workshop on Parallel and Distributed Simulation.***

1. **Awards**

ACM Distinguished Contributions Award given at the 2015 Winter Simulation Conference to Professor Osman Balci, Virginia Tech

ACM SIGSIM-PADS Awards 2016, Banff Alberta, CA, May 2016:

PhD Colloquium Award:

Intelligent Realtime 3D Simulations

Patrick Lange, Universität Bremen

Best Paper Award:

Automated Memorization for Parameter Studies Implemented in Impure Languages

Mirko Stoffers, RWTH Aachen University; Daniel Schemmel, RWTH Aachen University; Oscar Soria Dustmann, RWTH Aachen University; Klaus Wehrle, RWTH Aachen University

5 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 Banff, Alberta Canada (May 2016) – similar to WSC payment (up to $1K each based on expenses).

SIGSIM Awards are documented here:

<http://www.acm-sigsim-mskr.org/awards.htm>

1. **Significant Papers**

The Best Paper student paper award given at the 2015 Winter Simulation Conference co-sponsored by ACM SIGSIM:

<http://www.acm-sigsim-mskr.org/bestPhDpaperAwardRecipients.htm>

1. **Significant Programs**

* Increasing student travel awards for SIGSIM-PADS and WSC conferences
* Continual expansion of MSKR: [www.sigsim.org](http://www.sigsim.org) (Balci, Editor in Chief)

1. **Innovative Programs**

* SIGSIM Digest started 08/14: [www.modelingforeveryone.com](http://www.modelingforeveryone.com) (Fishwick, Chair). Current Subscribers: 59 (June 2016), # of posts: 224 (July 18, 2016)
* Twitter feed started 02/15 (Loper, Vice Chair), Current Followers: 120

1. **Events or programs that broadened participation either geographically, or among under-represented members of your community**

None added during performance period.

1. **Key issues**
2. Improving benefits to becoming a SIGSIM member

Adding free SIGSIM membership for one year for students who obtain a SIGSIM Travel award for either the SIGSIM-PADS Conference or WSC Conference.

1. Increasing the registration for the annual SIGSIM-PADS conference

SIGSIM-PADS conference running in the black from a fiscal perspective. Broadening topics to extend beyond the base comprising a *parallel and distributed simulation* core.

**SIGSOFT Annual Report  
July 2015 – June 2016  
Submitted by Nenad Medvidovic, SIGSOFT Chair**

***SIGSOFT seeks to improve our ability to engineer software by stimulating interaction among practitioners, researchers, and educators; by fostering the professional development of software engineers; and by representing software engineers to professional, legal, and political entities.***

ACM’s SIGSOFT had another excellent year, both technically and financially in 2015-2016. This report provides a summary of key SIGSOFT activities over the past year.

**AWARDS GIVEN OUT**

SIGSOFT’s awards program recognizes the many achievements of the software engineering community (see <http://www.sigsoft.org/> for the most recent awardees). A number of the awards, including our prestigious service, research, and education awards, were presented again this year at the International Conference on Software Engineering (ICSE 2016) in Austin, TX.

* The **ACM SIGSOFT Outstanding Research** **Award** was presented to James Herbsleb from Carnegie Melon University, USA, “for his significant and lasting research contributions to the theory and practice of software engineering.”
* The **ACM SIGSOFT Influential Educator Award** was presented to Lori Pollock from the University of Delaware, USA, “for her contributions to the advancement of the research and practice of software engineering.”
* The **ACM SIGSOFT Distinguished Service Award** was presented to Martin Glinz from the University of Zurich, Switzerland, “for his key service contributions to the software engineering community, including major editorial responsibilities in journals and successful chairing of major technical events.”
* The **Outstanding Doctoral Dissertation Award** was given to Milos Gligoric, for his Ph.D. dissertation titled “Regression Test Selection: Theory and Practice.” The dissertation was completed at the University of Illinois, under the guidance of Professor Darko Marinov.
* We recognized the new ACM Senior Members, Distinguished Members, and Fellows from the SIGSOFT community. In particular, the new **Distinguished Members** are Margaret Burnett, Nenad Medvidovic, Nachiappan Nagappan, Sebastian Uchitel, and Tao Xie. The new **ACM Fellows** are Michael Franz, Sriram Rajamani, and Michael Rung-Tsong Lyu.
* 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. This year, the award went to the paper “*Finding Bugs with a Constraint Solver*” by Daniel Jackson and Mandana Vaziri, from the Proceedings of the 2000 ACM SIGSOFT International Symposium on Software Testing and Analysis (ISSTA 2000).
* The Impact Paper Award is in addition to the **Most Influential Paper Awards**, also known as “test of time awards”, which are given to papers that have appeared at a particular conference. ICSE is the SIGSOFT co-sponsored conference with the longest track record of awarding Most Influential Papers. This year, the award went to the ICSE 2006 paper “*Who Should Fix This Bug?*” by John Anvik, Lyndon Hiew, and Gail Murphy.
* Many of SIGSOFT’s sponsored meetings this year also presented **Distinguished Paper Awards**. SIGSOFT allows up to 10% of the accepted papers to be selected for this award. The list of awarded papers is maintained on SIGSOFT website’s Awards page.

**SIGNIFICANT PAPERS ON NEW AREAS**

Software engineering has become a truly interdisciplinary area as every facet of computing, as well as many other scientific and engineering disciplines, depend on software. Advances in these other areas—from big data, to the cloud, virtualization, deep learning, mobile computing, formal methods, etc., with applications in autonomous vehicles, robotics, medicine, and countless other areas—require corresponding software engineering methods, tools, and techniques. This is reflected in the types of papers that increasingly appear in software engineering venues sponsored by SIGSOFT. Such papers tend to combine advances in multiple areas into solutions to specific problems. As examples, we highlight two such papers, recipients of the SIGSOFT Distinguished Paper Award at ICSE 2016.

* “*Efficient Large-scale Trace Checking Using MapReduce*” by Marcello Bersani, Domenico Bianculli, Carlo Ghezzi, Srdjan Krstic, and Piearluigi San Pietro demonstrates an effective marriage of cloud computing, distributed programming frameworks, and temporal logic.
* “*VDTest: An Automated Framework to Support Testing for Virtual Devices*” by Tingting Yu, Xiao Qu, and Myra Cohen demonstrates a novel coupling of formal methods, static program analysis, software testing, and virtualization.

**INNOVATIVE PROGRAMS**

Over the past several years, SIGSOFT has introduced a number of programs to aid and expand our membership. Some representative examples are as follows: student-members receive discounted membership rates and registration fees at all SIGSOFT-sponsored conferences; most of our conferences offer Doctoral Symposia where students are mentored by experienced Software Engineering professors; the popular SIGSOFT Webinar series (in the past year, we have had 11 webinars that had a total of 2,875 attendees); an Early Career Award that recognizes individuals at early stages in their careers; SIGSOFT provides travel support to conferences for dozens of graduate and undergraduate student-members as well as support to defray the costs of childcare, through the Conference Aid Program for Students (CAPS).

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. As part of the support for the two communities, 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). Furthermore, SIGSOFT has sponsored travel for two speakers at each of the three annual Warm-up Workshops organized to expose the Latin American software engineering community to ICSE, which will be held in Buenos Aires in 2017.

**KEY ISSUES FACING SIGSOFT**

While SIGSOFT is stable and strong, there are several challenges we are facing:

* SIGSOFT’s membership numbers have been stable despite a large growth of software engineering worldwide. We will aim to address this, with a particular focus on practitioners.
* We will work on establishing a long-term working relationship with our Indian, Chinese, and South American colleagues, as well as expanding the reach of SIGSOFT into Africa.
* The typical conference registration fees place a significant burden on the research funds of many members of our community. SIGSOFT has tried to alleviate this burden through the CAPS program. We will work on developing ways of reducing the fees more directly.
* We recognize that traditional ways of reaching our membership are no longer sufficient. To address that, we will work on increasing SIGSOFT’s presence on social media.

**SIGSPATIAL Annual Report  
July 2015-June 2016  
Submitted by:  Mohamed F. Mokbel, SIGSPATIAL Chair**  
***ACM SIGSPATIAL addresses issues related to the acquisition, management, and processing of spatially-related information with a focus on algorithmic, geometric, and visual considerations. The scope includes, but is not limited to, geographic information systems (GIS).***  
**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.  
  
2015 was the seventh year of SIGSPATIAL and its main activity was its flagship conference (ACM SIGSPATIAL GIS) that was held in Seattle, Washington, (November, 3-6, 2015). ACM SIGSPATIAL GIS 2015 was the twenty third 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 eighth time that the conference was held under the auspices of the new ACM Special Interest Group on Spatial Information (SIGSPATIAL). The conference program attracted 353 attendees (including 116 students); an all-times record for the number of attendees. 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 263 paper submissions over three tracks: Research, Vision, and demos. The research paper track attracted 216 research paper submissions, of which 38 were accepted as full papers and 41 were accepted as poster papers. The Vision track, which we have tried for the first time, sponsored by the Computing Community Consortium (CCC), has received 20, of which nine is accepted, while the demonstrations track received 27 submissions, of which 15 were accepted. The research and demo tracks were reviewed by a program committee of 120 members, including three chairs, 18 meta-reviewers (Senior PC). Each paper was reviewed by at least three reviewers and one meta-reviewer. 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 Vision track has a separate small reviewing committee that includes only very senior member of the community. 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. Matt Hancher, Engineering Lead, Google Earth Engine, for a talk titled "Global-Scale Earth Science Data Analysis in the Cloud".  
  
2. Jeffrey Heer, University of Washington, for a talk titled "Visualization and Interactive Data Analysis".  
  
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 ACM Student Research Competition (SRC), and soliciting feedback from members.  
  
The conference was preceded by a workshop day with the following twelve  
workshops:  
  
1. BIGSPATIAL 2015: The Fourth 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. EM-GIS 2015: The First ACM SIGSPATIAL International Workshop on the Use of GIS in Emergency Management  
    General Chairs: Yan Huang (University of North Texas, USA), Jean-Claude Thill, (University of North Carolina at Charlotte, USA), and Hui Zhang (Tsinghua University, China)  
  
3- GeoPrivacy 2014: The Second ACM SIGSPATIAL International Workshop on Privacy in Geographic Information Collection and Analysis  
   General Chairs: Grant McKenzie (University of California, Santa Barbara, USA), Krzysztof Janowicz (University of California, Santa Barbara, USA), and Gueorgi Kossinets (Google, USA)  
  
4. ISA 2015: The Seventh ACM SIGSPATIAL International Workshop on Indoor Spatial Awareness  
   General Chairs: Nobuo Kawaguchi (Nagoya University, Japan) and Ki-Joune Li (Pusan National University, South Korea)  
  
5. IWCTS 2015: The Eighth ACM SIGSPATIAL International Workshop on Computational Transportation Science  
   General Chair: Yan Huang (University of North Texas, USA) and Xin Chen (HERE/Nokia, USA)  
  
6. IWGS 2015: The Sixth 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 Virginia, USA)  
  
7. LBSN 2015: The Eighth ACM SIGSPATIAL International Workshop on Location-Based Social Networks  
   General Chair: Alexei Pozdnoukhov (UC Berkeley, USA)  
  
     
8. MELT 2015: The Fifth International Workshop on Mobile Entity Localization and Tracking in GPS-less Environments  
   General Chair: Egemen Tanin (University of Melbourne, Australia)  
  
  
9. MobiGIS 2015: The Fourth 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)  
  
10. SIGSPATIAL Industrial Workshop 2015: The First ACM SIGSPATIAL Industrial Workshop   
    General Chairs: Egemen Tanin (University of Melbourne, Australia), Goce Trajcevski (Northwestern University, USA)  
   
11. SIGSPATIAL PhD 2015: The Second ACM SIGSPATIAL PhD Symposium  
    General Chairs: Mohamed Sarwat (Arizona State University, USA) and Peter Scheuermann (Northwestern University, USA)  
  
12. UrbanGIS 2015: The First International ACM SIGSPATIAL Workshop on Smart Cities and Urban Analytics  
    General Chairs: Huy T. Vo (City University of New York, USA), Juliana Freire (New York University, USA), and Claudio T. Silva (New York University)  
  
  
This year's conference was generously co-sponsored by NSF, Microsoft, ESRI, Google, Amazon, HERE, Facebook, NVIDEA, and Springer, 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 2016 ACM SIGSPATIAL GIS Conference that will be held in San Francisco, CA on October 31 - November 3, 2016 with 11 workshops on October 31. It has already secured sponsorship from Oracle, Facebook, ESRI, Google, and Microsoft. 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**  
The first four issue of ACM Transactions on Spatial Algorithms and Systems (ACM TSAS)  has appeared in August 2015, November 2015, April 2016, and July 2016. The Editorial Board of ACM TSAS includes Hanan Samet (University of Maryland College Park, USA) as the Editor-in-Chief, four Senior Associate Editors: Ralf Hartmut Güting (University of Hagen, Germany), Dinesh Manocha (University of North Carolina at Chapel Hill, USA), David Mount (University of Maryland College Park, USA), and Peter Widmayer (ETH Zurich, Switzerland), and 30 Associate Editors.  
  
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 appear 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.  
  
  
  
  
**3.  AWARDS**  
In 2015, SIGSPATIAL continued to offer a Best Paper Award. The ad hoc 2015 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:  
  
Efficient Map Reconstruction and Augmentation via Topological Methods  
Suyi Wang (Ohio State University, USA), Yusu Wang (Ohio State  
University, USA), Yanjie Li (Ohio State University, USA)  
  
The Computing Research Association‘s Computing Community Consortium (CCC) sponsored awards for the top three Vision papers under their Blue Sky Ideas Conference Tracks.  
 The prizes were given out in the form of travel reimbursement awards totaling \$1,000, \$750, and \$500 for first, second, and third place, respectively.  
  
First Best Vision Paper Award went to:  
Querying Historical Maps as a Unified, Structured, and Linked Spatiotemporal Source  
Yao-Yi Chiang (University of Southern California)   
  
Second Best Vision Paper Award went to:  
Future Connected Vehicles: Challenges and Opportunities for Spatio-temporal Computing  
Reem Y. Ali (University of Minnesota), Venkata M.V. Gunturi (IIIT Delhi, India), Shashi Shekhar (University of Minnesota), Ahmed Eldawy (University of Minnesota), Mohamed F. Mokbel (University of Minnesota), Andrew J. Kotz (University of Minnesota), and William F. Northrop (University of Minnesota).  
  
Third Best Vision Paper Award  
Privacy-Preserving Inference of Social Relationships from Location Data: A Vision Paper  
Liyue Fan (University of Southern California), Cyrus Shahabi (University of Southern California), Luciano Nocera (University of Southern California), Li Xiong (Emory University), and Ming Li (University of Arizona).  
  
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  
paper presentation.  
  
Best Demo Paper Presentation:  
LIMO: Learning Programming using Interactive Map Activities  
Ruby Tahboub (Purdue University, USA), Jaewoo Shin (Purdue University, USA), Aya Abdelsalam (Purdue University, USA), Jalaleldeen Aref (Purdue University, USA), Walid G. Aref (Purdue University, USA), Sunil Prabhakar (Purdue University, USA)  
  
Best Demo Presentation Runner-up:  
MigrO: A plug-in for the Analysis of Individual Mobility Behavior based on the Stay Region Model  
Maria Luisa Damiani (University of Milan, Italy), Hamza Issa (University of Milan, Italy), Giuseppe Fotino (University of Milan, Italy), Fatima Hachem (University of Milan, Italy), Nathan Ranc (Harvard University, USA), Francesca Cagnacci (Fondazione E. Mach, Italy)  
  
Best Poster Paper Presentation:  
Land Use Classification and Refinement using Convolutional Neural Networks Applied to Ground-Level Images  
Yi Zhu (University of California Merced, USA), Shawn Newsam (University of California Merced, USA)  
  
Best Poster Presentation Runner-up:  
There and Back Again: Using Fréchet-Distance Diagrams to Find Trajectory Turning  
Lukas Beckmann (Universität Würzburg, Germany), Benedikt Budig (Universität Würzburg, Germany), Thomas van Dijk (Universität Würzburg, Germany), Johannes Schamel (Universität Würzburg, Germany)  
  
Best Fast Forward Poster Paper Presentation:  
A Reeb Graph Approach to Tractography  
Jonathan Sun (University of California Santa Barbara, USA), Matthew Cieslak (University of California Santa Barbara, USA), Scott Grafton (University of California Santa Barbara, USA), Subhash Suri (University of California Santa Barbara, USA)  
  
Best Fast Forward Poster Paper Presentation Runner-up:  
Optimal Time-dependent Sequenced Route Queries in Road Networks  
Camila Ferreira Costa (Federal University of Ceará, Brazil), Mario Nascimento (University of Alberta, Canada), Jose Macedo (Federal University of Ceara, Brazil), Yannis Theodoridis (University of Piraeus, Greece), Nikos Pelekis (University of Piraeus, Greece), Javam Machado (UFC, Brazil)  
  
**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 number of workshops that it sponsored in 2015. In 2016, 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 11 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 2016 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 2015.  
  
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 Annual Report**

**July 2015- June 2016**

**Submitted by: Mathew Felthousen, SIGUCCS Chair**

***SIGUCCS* (Special Interest Group for University and College Computing Services) *focuses on issues surrounding the support, delivery and management of information technology services in higher education. These include, but are not limited to: network management, technology systems support, end user services (including training, documentation, consulting), operations, administrative and academic programming services, database management, curricular support, audio-visual services, and educational technology issues. Our primary goal is to provide a forum for the professional development of members through the annual conference, online forums, webinars, publications, and other services.***

SIGUCCS 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 over 50 years. For the past 40+ years SIGUCCS has held at least one conference annually. The Executive Committee members are: Mat Felthousen (Chair), Melissa Bauer (Vice Chair/ Conference Liaison), Beth Rugg (Secretary) Allan Chen (Treasurer), Laurie Fox (Information Director) and Kelly Wainwright (Past Chair). Beth Rugg also serves as the Professional Development Coordinator. Lisa Brown is appointed as the Communications Awards Chair. The 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 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>).

## Professional Development

SIGUCCS’ is committed to the professional development of its members. Professional development is accomplished in several ways: through the annual conference, semi-monthly webinars and our unique mentoring program.

During the annual conference, in addition to the many learning opportunities during the conference, we offered three “deeper dive” pre-conference workshops focused on leadership development and management. 30 people, 14% of overall conference attendance. Since many of our attendees are new to SIGUCCS, the conference and their careers, these workshops provided an opportunity not typically available to front-line staff. For mid-career and senior leaders, these workshops provided small, intimate opportunities for learning and sharing with colleagues across the nation.

We continued to offer our semi-monthly webinars with great success. Between September 2015 and June 2016, we offered 8 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.

We have developed a very successful mentoring program that pairs mentors and mentees together for 9 months. Our 3rd cohort (approximate 38 people) successfully completed the program. An advisory team oversaw this experience and provided support for the “teams” demonstrating the exceptional commitment of our members to this organization. Very few organizations have been able to put together successful programs like ours. We know it is successful because of the high graduation rate and individual feedback.

## Awards and Grants (<http://www.siguccs.org/awards.shtml>)

The SIGUCCS Awards Programs have been in place for nearly two decades. On January 1, 2016, Parrish Nnambi became Chair of the SIGUCCS Awards Selection Committee and Greg Hanek became Past Chair, following the rotation of the committee’s membership as described at <http://www.siguccs.org/awards_committee.shtml>. Two new members, Bob Haring-Smith and Carol Rhodes, replaced Mike Yohe and Jeanne Kellog, who completed their service to the committee at the end of 2015.

**Penny Crane Award for Distinguished Service** (<http://www.siguccs.org/bob-haring-smith.shtml>): 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. Bob Haring-Smith was the recipient for 2015.

**Hall of Fame** (<http://www.siguccs.org/halloffame2015.shtml>): The Hall of Fame awards were first awarded in 2000, and recognize nominated individuals who have contributed their time and energies to benefit SIGUCCS. Jacquelyn Hongosh was inducted into the Hall of Fame in 2015.

**Conference attendance grants** (<http://www.siguccs.org/grants.shtml>): 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. The three awardees of this grant for the SIGUCCS 2015 Annual Conference were Merri Schaffner (University of South Florida), Desiree Gualandri (Cornish College of the Arts), and Dennis Thornstad (Linfield College)

## Communications Awards

We have held the Communications Awards competition since 1996, in conjunction with our Conference. A description of these awards and the 2015 winners can be found at: <http://www.siguccs.org/Conference/2015/awards.php>. The Communications Awards Judging Committee is formed each year from the previous year’s top award winners in each category. 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. A new category for use of Social Media was added in 2015.

## Conferences

The 2015 Annual Conference (<http://www.siguccs.org/Conference/2015/>) was comprised of a Management Symposium and the Service and Support Conference, and was held November 9-13, 2015 at the Hilton St. Petersburg Bayfront in St. Petersburg, FL. The theme was “Make Your Sun Shine”. The conferences occurred consecutively, giving attendees the opportunity to register for either, or both, parts of the conference. Based on feedback from previous conference attendees, we opened the conference with the Service and Support Conference, followed by the Management Symposium. This allowed the majority of the attendees to start out the conference rather than arrive at a conference already in session.

The keynote speakers were:

Service & Support Opening Plenary: Patrick Rhone “Care Enough to Change the World”

Joint Plenary for Service & Support and Management Symposium: David Rendall “The Freak Factor: Discovering Uniqueness by Flaunting Weakness”

Management Symposium Closing Plenary: Becky Vasquez “Bringing out the Leader in You”

Tracks for Service & Support Conference:

Service Development and Management

Leadership and Career Development

Instructional Support and Class Technology

Training, Documentation and Communication

Tracks for Management Symposium

Professional Development, Career Advancement

Resource Management

Leadership, Partnership and Strategic Planning

Preparations are currently underway for SIGUCCS 2016. The conferences have been combined into one 3-day conference beginning with this conference. SIGUCCS 2016 is scheduled for November 6-9, 2016 at the Hilton Embassy Suites in Denver, CO. The theme for this conference is “Choose Your Adventure” to encourage attendees to connect with other higher education technology support professionals from around the world to attend technical sessions, pre-conference seminars, panel discussions and plenary speakers. See <http://www.siguccs.org/Conference/2016/> for more information. Planning has begun for our 2017 Annual Conference, which will be held October 1-4 at The Motif in downtown Seattle. The core committee has been selected and the site visit took place June 30-July 1, 2016.

## 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.

Our social network communities continue to be active, and subscription numbers increased by approximately 20% in each medium.

Twitter: (<http://twitter.com/siguccs>) 308 followers (up from 284)

Facebook Page: (<http://facebook.com/siguccs>) 149 page likes (up from 129)

Facebook Group: (<https://www.facebook.com/groups/siguccsfolks/>) 213 members (up from 164)

LinkedIn Group: (<https://www.linkedin.com/grp/home?gid=1675517>) 5,557 members (up from 4737)

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/>

## Issues

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 Annual Report**

**July 2015 – June 2016**

**Submitted by: Dick C.A. Bulterman, SIGWEB Chair**

***SIGWEB, the ACM Special Interest Group on Hypertext and the Web, is a community of scholars,***

***researchers, and professionals who study and use the concepts and technologies of linked***

***information that were originally conceived as hypertext and are most famously realized on the***

***Web. The SIGWEB community’s interests range widely and include hypertext in all its forms,***

***social networks, knowledge management, document engineering, digital libraries, and the Web***

***as both an information tool and a social force. SIGWEB encourages innovative research, open***

***discussion of new ideas and the development of methodologies and standards through***

***conferences and a variety of communication resources for its members and the world.***

**Recent Highlights**

SIGWEB continues to offer its members a compelling series of conferences that are supported in

whole or in part by the SIG. Each of these conferences remain well-attended, although directed

attention will be required to make sure that each of the meetings remains scientifically relevant

(and thus viable in the long term).

SIGWEB expanded its supported conference offerings by adding UMAP (the ACM Conference on

User Modeling and Personalization) to the set of six conferences we already managed. UMAP is

supported together with SIGCHI and was co-located this year in Halifax, Canada together with

Hypertext 2016.

Financially, only one of our conferences suffered a small loss. This loss has been more than

compensated by other conferences supported by SIGWEB.

Our membership remains relatively constant, although the mix between new and existing

members seems to increasingly favor new members. This is a point of action for the SIG.

The past year has been one of moderate transition, as new officers have taken over the roles of

Chair, Vice-Chair and Secretary/Treasurer. Of these, only the Chair has had previous experience

as a SIG officer. The Officers have met face-to-face with the executive committee to establish

goals for the coming year and the coming three years.

**Volunteer Involvement**

SIGWEB realizes that involving volunteers in SIG activities is a non-trivial task. Many of our

members have been with the community for many years and have become accustomed to

operating within a ‘well-oiled’ environment. At the SIG business meetings held at each of our

fully-supported conferences, it is clear that motivating our membership to take leadership roles

is both an opportunity and a challenge.

The primary road that we offer for volunteer involvement is through the organization of our

conferences and symposia. For Hypertext and DocEng (two of our three 100% supported

conferences), strong mechanisms are in place to help ensure long-term viability. For WebScience,

which is supported for 100% by SIGWEB but managed together with the Web Science Trust,

concerted attention will be required to help with long-term planning and organization. Our cosponsored

conferences (CIKM, JCDL, WISDM) are mature conference support structures are inplace, in cooperation with SIGIR, SIGCHI and IEEE.

In terms of participation at events, we actively support child care at conference and provide

funding for student (and possibly senior) travel.

In order to increase volunteer involvement, we have started a program in which local groups can

get seed funding for new initiatives to explore new scientific areas of interest. The expectation is

that some of these new areas can mature and either join existing conferences (as new tracks or

workshops), or evolve into new symposia.

In the internal organization of the SIG, we have recruited new members for the executive

committee, have assigned new persons to be liaisons at our conferences and have attracted new

members to operational functions within the SIG.

**Concerns and Opportunities**

In this first year of being chair, I will travel to all of our 100%-sponsored conferences to speak

with members of our community directly. The goal of these sessions is introduce both SIGWEB

and ACM to conference participants and to engage in a discussion on what the SIG (and what

ACM) can do to help advance the state of the art within our interest domain, as well as to advance

the careers of our members.

There is a tremendous opportunity to reach out to new members. As with other SIGs, the

advantages of SIG membership are not well understood by many conference participants: the

Web and social media are assisting them in establishing a feeling of community better than the

SIG can; the financial advantages of SIG membership are not directly felt by participants (for

whom conference registration is covered by grants and is only a small portion to the full travel

expense of coming to a scientific meeting); the advantages of ACM DL access typically are not

considered as special (since their host institutions nearly always already offer library-based

institutional subscriptions).

The challenge before SIGWEB (and ACM) is to design a total benefits package that makes a

compelling personal offer for new membership. This package should include sufficient financial

and scientific incentives (such as having advance registration discounts only available to existing

SIG members, plus unlocking special features of the DL that are available to members on top of

any benefits from existing [institutional] subscriptions), and it should provide incentives for

continued long-term membership (such as access to funds to support local events or perhaps

scaled discounts to SIG conferences).

We realize that these concerns are not unique to SIGWEB and look forward to actively

coordinating our efforts with other SIGs.

**Closing Comments**

Financially, SIGWEB is in an excellent position to develop and experiment with new initiatives to

help promote a vibrant scientific community within our domain. We have excellent conferences,

we have existing partnerships with other SIGs and we have an extensive network of in-coop

conferences that help ensure future viability. At the same time, we recognize the challenges of

running a volunteer organization in an age of soloists. We are actively looking for ways to expand

the value proposition of SIGWEB. We see the future with confidence.