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# SIGMOBILE Annual Reports

## SIGMOBILE FY'09 Annual Report

July 2008 - June 2009

Submitted by: **David B. Johnson**, SIGMOBILE Chair

## Introduction

ACM SIGMOBILE is the Special Interest Group on Mobility of Systems, Users, Data, and Computing. SIGMOBILE's specialty is mobility. Its scope includes all aspects of mobile computing and communications, such as mobile systems and applications, wireless networking protocols and algorithms, and mobile information access and management. SIGMOBILE is a strong, vibrant SIG, with growing membership, healthy finances, well-respected, successful conferences, workshops, and publications, and valuable services for its members and the community.

## SIGMOBILE Officers

SIGMOBILE's elected officers consist of its Chair, Vice Chair, Secretary, and Treasurer. The terms in office of the officers over this past year ran from July 1, 2005 through June 30, 2009, and this year, SIGMOBILE held elections for new officers. The outgoing elected officers are *Prof. David B. Johnson* (Rice University, USA), Chair; *Dr. Jason K. Redi* (BBN Technologies, USA), Vice Chair; *Prof. Chiara Petrioli* (University of Rome "La Sapienza," Italy) Secretary; and *Prof. Tracy Camp* (Colorado School of Mines, USA), Treasurer.

In the SIGMOBILE elections, three candidates ran for Chair, two ran for Vice Chair, two ran for Secretary, and two ran for Treasurer. It is with great pleasure that I announce here the newly elected officers for SIGMOBILE, who took office July 1, 2009:

- Chair: *Dr. Roy Want* (Intel, US);
- Vice Chair: *Prof. Robert Steele* (University of Sydney, Australia);
- Secretary: *Prof. Ramesh Govindan* (University of Southern California, US); and
- Treasurer: *Prof. Lili Qiu* (University of Texas at Austin, US).

I hope all SIGMOBILE members will join me in congratulating the incoming new SIGMOBILE officers! I think the SIG will be in great hands as we move forward. I also want to thank all of the candidates for being willing to serve SIGMOBILE and all of the SIGMOBILE members who voted in these elections for letting your voices be heard.

In addition to the elected officers, SIGMOBILE's Executive Committee also includes its Past Chair, now *Prof. David B. Johnson* (Rice University, USA); and the Editor-in-Chief for SIGMOBILE's journal/newsletter for our members (*Mobile Computing and Communications Review* or MC<sup>2</sup>R), *Prof. Srikanth Krishnamurthy* (University of California, Riverside, USA). SIGMOBILE's leadership also currently includes three appointed positions: *Prof. Robert Steele* (University of Sydney, Australia), Information Director; *Prof. Ahmed Helmy* (University of Florida, Gainesville, USA), Workshop Coordinator; and *Dr. Guanling Chen* (University of Massachusetts Lowell, USA), Digital Library Coordinator.

## New Developments This Year

This year, SIGMOBILE began sponsoring the annual Ubicomp conference, the International Conference on Ubiquitous Computing. Held first in 1999 as the International Symposium on Handheld and Ubiquitous Computing (HUC '99), Ubicomp has become the premier forum for novel research contributions that advance the state of the art in the design, development, deployment, evaluation, and understanding of ubiquitous computing systems. Ubiquitous computing is an interdisciplinary field of research and development that utilizes and integrates pervasive, wireless, embedded, wearable and/or mobile technologies to bridge the gaps between the digital and physical worlds. Ubicomp has previously been held as an independent conference; beginning with Ubicomp 2009, Ubicomp is now co-sponsored by ACM SIGMOBILE and SIGCHI.

Also this year, SIGMOBILE provided financial support for CRAWDAD, the Community Resource for Archiving Wireless Data At Dartmouth. CRAWDAD is a wireless network data resource, hosted at Dartmouth College, significantly benefiting SIGMOBILE members and the SIGMOBILE community. CRAWDAD archives wireless trace data from many contributors and develops better tools for collecting, anonymizing, and analyzing the data. This project is important since research in wireless networks has been seriously starved for data; the data archived by CRAWDAD helps us to identify and understand the real problems in wireless networking, to evaluate possible solutions, and to evaluate new applications and services. CRAWDAD was founded in 2005 with support from the NSF CRI program but requires ongoing funding to serve the community. SIGMOBILE is pleased to help support this important initiative.

Likewise this year, SIGMOBILE provided financial support to the Illinois Wireless Summer School, organized by the University of Illinois. The primary target audience for this summer school in wireless networking is graduate and undergraduate students from all universities, and it is also open to faculty and to researchers from industry and government organizations. The topics to be covered include antennas, physical layer issues, wireless networking protocols, wireless security, and wireless standards. This summer school is also supported by NSF, Rockwell Collins, Qualcomm, Microsoft Research, and NEC Laboratories America. The school will be held August 3-7, 2009, at the University of Illinois at Urbana-Champaign; about 190 attendees are currently registered to attend.

Finally, over the past year, SIGMOBILE has gone through the process of revising our Bylaws. The SIGMOBILE Bylaws were originally written when SIGMOBILE was founded in 1996, now 13 years ago, and have not been changed since. Over the years, a number of needed minor changes to them have become apparent. Below is a summary of the changes in these revised Bylaws:

- Made things gender-neutral (mainly, "Chairman" becomes "Chair").
- Cleaned up some typos (like a footnote left from some model bylaws that ours were based on 13 years ago).
- Made it consistent that Secretary and Treasurer are separate positions. This was correct in some places, but other places referred to Secretary-Treasurer as if it were a single position. They have always been separate positions in SIGMOBILE.
- Removed details of the MobiCom Steering Committee. MobiCom is only one of the five annual conferences SIGMOBILE sponsors or co-sponsors, and details for each conference should be in a separate set of bylaws for that conference, not in the SIG's bylaws.
- Clarified and updated the statement of our scope.
- Fixed things to conform to changes in ACM in the 13 years since our original SIGMOBILE Bylaws were written.

After submitting the revised SIGMOBILE Bylaws to ACM in March, from April through May, voting on them among the members of the ACM SIG Governing Board Executive Committee (SGB EC) took place. After receiving unanimous approval from the SGB EC, SIGMOBILE members were given the opportunity to raise any objections to the proposed revised Bylaws. On June 11, after receiving no objections from SIGMOBILE members, the revised Bylaws were submitted to the ACM Executive Committee, which approved the changes effective July 22, 2009.

## SIGMOBILE Conferences and Workshops

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

- *MobiCom*: The Annual International Conference on Mobile Computing and Networking, covers all areas of mobile computing and mobile and wireless networking at the link layer and above. MobiCom has been held every year since 1995.
- *MobiHoc*: The ACM International Symposium on Mobile Ad Hoc Networking and Computing, addresses the challenges emerging from wireless ad hoc networking and computing, with the focus being on issues at and above the MAC layer. MobiHoc has been held every year since 2000.
- *MobiSys*: The International Conference on Mobile Systems, Applications, and Services, addresses broad systems research issues in mobile computing and mobile networking, particularly valuing the practical experience gained from designing, building, and using mobile systems, applications, and services. MobiSys has been held every year since 2003.
- *SenSys*: The ACM Conference on Embedded Networked Sensor Systems, focuses on systems issues in the emerging area of embedded, networked sensors, spanning multiple disciplines, including wireless communication, networking, operating systems, architecture, low-power circuits, distributed algorithms, data processing, scheduling, sensors, energy harvesting, and signal processing. SenSys has been held every year since 2003.
- *Ubicomp*: The International Conference on Ubiquitous Computing, addresses the interdisciplinary field of ubiquitous computing, which utilizes and integrates pervasive, wireless, embedded, wearable and/or mobile technologies to bridge the gaps between

the digital and physical worlds. Ubicomp has been held every year since 1999, and SIGMOBILE begins sponsoring it for 2009.

MobiCom 2008, *the 14th Annual International Conference on Mobile Computing and Networking*, was held September 14-19, 2009, in San Francisco, California, USA. *Prof. J.J. Garcia-Luna-Aceves* (University of California, Santa Cruz, USA, and Palo Alto Research Center, USA) served as the General Chair, and *Prof. Raghupathy (Siva) Sivakumar* (Georgia Tech, USA) and *Prof. Peter Steenkiste* (Carnegie Mellon University, USA) served as the Program Co-Chairs.

The MobiCom 2008 technical program featured two keynote talks, one by *Prof. John S. Baras* (University of Maryland, USA), entitled "Multi-Hop Mobile Wireless Network Design: Implicit Cross-Layer Loss Models and Performance Sensitivities," and a second by *Preston Marshall* (DARPA, USA), entitled "From Self-Forming Mobile Networks to Self-Forming Mobile Content Services." MobiCom 2008 also featured one day of tutorials and two days of workshops. The tutorials, on September 14, featured 2 half-day tutorials:

- Modeling and Mitigating Interference in Multi-Hop Wireless Networks: *Prof. Douglas M. Blough* (Georgia Institute of Technology, USA), *Prof. Samir R. Das* (Stony Brook University, USA), and *Dr. Paolo Santi* (IIT - CNR, Italy)
- Wireless Network Coding: *Prof. Dina Katabi* and *Sachin Katti* (MIT, USA)

The workshops, on September 15 and 19, featured 6 full-day workshops:

- WUWNET 2008: The Third ACM International Workshop on UnderWater Networks
- VANET 2008: The Fifth ACM International Workshop on VehiculAr Inter-NETworking
- CHANTS 2008: The Third Workshop on Challenged Networks
- WiNTECH 2008: The Third ACM International Workshop on Wireless Network Testbeds, Experimental evaluation and CHaracterization
- MELT 2008: The First ACM International Workshop on Mobile Entity Localization and Tracking in GPS-less Environments
- WiNS-DR 2008: The Workshop on Wireless Networks and Systems for Developing Regions

In addition, continuing a tradition started at MobiCom 2005, again for 2008, the conference hosted an ACM Student Research Competition (SRC).

MobiCom 2008 also featured an N<sup>2</sup> Women lunch. Networking Networking Women is a discipline-specific community for researchers in the communications and networking research fields. The main goal of N<sup>2</sup> Women is to foster connections among the under-represented women in computer networking and related research fields. N<sup>2</sup> Women was founded in 2006, with its first meeting at MobiHoc 2006, and is a program of SIGMOBILE; N<sup>2</sup> Women is also supported by the IEEE Communications Society and Microsoft Research. This N<sup>2</sup> Women lunch also included a panel on "Academia or Industry: Making an Informed Choice," with panelists *Prof. Sarah Kate Wilson* (Santa Clara University, USA), *Prof. Lili Qiu* (University of Texas at Austin, USA), *Prof. Robin Kravets* (University of Illinois at Urbana-Champaign, USA), and *Dr. Sujata Banerjee* (HP Labs, USA).

MobiCom 2009 will be held September 20-25, 2009, in Beijing, China. For MobiCom 2010, we are planning again to co-locate this conference together with MobiHoc 2010, as we did with MobiCom 2007 and MobiHoc 2007. The joint event is planned for sometime in August or September 2010.

SenSys 2008, *the 6th ACM Conference on Embedded Networked Sensor Systems*, was held November 5-7, 2008, in Raleigh, North Carolina, USA. *Prof. Tarek Abdelzaher* (University of Illinois at Urbana-Champaign, USA) served as the General Chair, and *Prof. Margaret Martonosi* (Princeton University, USA) and *Dr. Adam Wolisz* (Technical University of Berlin, Germany) served as the Program Co-Chairs. SenSys is co-sponsored by SIGMOBILE and SIGCOMM (30% each); and SIGARCH, SIGOPS, SIGMETRICS, and SIGBED (10% each).

The SenSys 2008 technical program featured a keynote talk by *Dr. Phillip Gibbons* (Intel Research, USA) entitled "The Thrills and Spills of Sensornet." The program also included two full-day workshops on November 4:

- UrbanSense 2008: International Workshop on Urban, Community, and Social Applications of Networked Sensing Systems
- ImageSense 2008: Workshop on Applications, Systems, and Algorithms for Image Sensing

In addition, the SenSys 2008 program included an N<sup>2</sup> Women breakfast on November 6, for those interested in the issue of under-represented women in computer networking and related research fields. This breakfast also included two guest speakers: *Prof. Nirupama Bulusu* (Portland State University, USA) and *Prof. Polly Huang* (National Taiwan University, Taiwan).

SenSys 2009 will be held November 4-6, 2009, in Berkeley, California, USA.

MobiHoc 2009, *the 10th ACM International Symposium on Mobile Ad Hoc Networking and Computing*, was held May 18-21, 2009, in New Orleans, Louisiana, USA. *Prof. Edward W.*

*Knighly* (Rice University, USA) served as the General Chair, and *Prof. Carla-Fabiana Chiasserini* (Politecnico di Torino, Italy) and *Prof. Xiaojun Lin* (Purdue University, USA) served as the Program Co-Chairs.

The MobiHoc 2009 technical program featured a keynote talk by *Prof. Nick McKeown* (Stanford University, USA) entitled "Software Defined Mobile Networks." MobiHoc 2009 also included three full-day workshops:

- FOWANC 2009: Foundations of Wireless Ad Hoc and Sensor Networking and Computing
- WiMD 2009: Medical-grade Wireless Networks
- Wireless S<sup>3</sup>: The First Wireless of the Students, by the Students, for the Students Workshop

MobiHoc 2009 also featured an N<sup>2</sup> Women breakfast on May 20. This breakfast also included a guest speaker, *Prof. Jun-Hong Cui* (University of Connecticut, USA).

As noted above, for MobiHoc 2010 we are planning again to co-locate this conference together with MobiCom 2010, as we did with MobiCom 2007 and MobiHoc 2007. The joint event is planned for sometime in August or September 2010.

MobiSys 2009, *the 7th International Conference on Mobile Systems, Applications, and Services*, was held June 22-25, 2009, in Kraków, Poland. *Prof. Adam Wolisz* (Technical University of Berlin, Germany) and *Prof. Krzysztof Zieliński* (AGH University of Science and Technology, Poland) served as the General Co-Chairs, and *Prof. Jason Flinn* (University of Michigan, USA) and *Dr. Anthony LaMarca* (Intel Research Seattle, USA) served as the Program Co-Chairs.

The MobiSys 2009 technical program featured a keynote talk by *Bruce Tuch* entitled "Wi-Fi to 4G: The Business/Technology Success and Failures Leading to Product Acceptance." Mr. Tuch was the technical leader and innovator of WaveLAN, the first high speed wireless Local Area Network product, introduced in 1991, and is one of the founders and contributors of the IEEE 802.11 (Wi-Fi) standards group. The MobiSys program also featured 3 workshops on June 17:

- MobiArch 2009: The 4th ACM International Workshop on Mobility in the Evolving Internet Architecture
- HotPlanet 2009: The 1st ACM International Workshop on Hot Topics of Planet-scale Mobility Measurements
- PhD Forum on Mobile Systems, Applications, and Services

In addition, the MobiSys 2009 program included an N<sup>2</sup> Women lunch on June 23.

One paper, in particular, presented at MobiSys 2009 attracted special attention from the press. The paper "SoundSense: Scalable Sound Sensing for People-Centric Applications on Mobile Phones" by *Hong Lu, Wei Pan, Nicholas D. Lane, Tanzeem Choudhury, and Andrew T. Campbell* (Dartmouth College, USA) was featured in a June 22, 2009 article on the *Technology Review* magazine web site (<http://www.technologyreview.com/communications/22907/>). This article, "Cell Phones That Listen and Learn: New software tracks a user's behavior by monitoring everyday sounds," summarizes the work and points out that it was presented in a paper at MobiSys this year. This research and the MobiSys presentation were also featured in a July 10 posting on Slashdot entitled "Cell Phones That Learn the Sounds of Your Life" (<http://mobile.slashdot.org/story/09/07/10/1835252/Cell-Phones-That-Learn-the-Sounds-of-Your-Life>).

MobiSys 2010 is being planned for June 2010 in Palo Alto, California, USA.

In addition to the conferences and co-located workshops above, SIGMOBILE also sponsors the HotMobile (previously known as WMCSA) workshop as a stand-alone event, not co-located with a conference. The HotMobile workshop series focuses on mobile applications, systems, and environments, as well as their underlying state-of-the-art technologies, in a small workshop format that makes it ideal for presenting and discussing new directions or controversial approaches. This workshop was previously sponsored each year by the IEEE Computer Society but has been sponsored instead by SIGMOBILE since HotMobile 2008.

HotMobile 2009, *the 10th Workshop on Mobile Computing Systems and Applications*, was held February 23-24, 2009, in Santa Cruz, California, USA. *Dr. April Slayden Mitchell* (Hewlett-Packard Labs, US) served as the General Chair, and *Prof. Jason Hong* (Carnegie Mellon University, USA) served as the Program Chair. The HotMobile 2008 technical program featured a keynote talk by *Dr. Bob Iannucci* (Senior Vice President and special technology advisor, Nokia Corporation, USA). HotMobile 2009 also included a Doctoral Consortium, providing feedback on students' current research and guidance on future research directions, offering each student comments and fresh perspectives on their work from faculty and students outside their own institution, and promoting the development of a supportive community of scholars and a spirit of collaborative research.

HotMobile 2010 will be held February 22-23, 2010, in Annapolis, Maryland, USA.

SIGMOBILE continues to be fortunate to receive strong support for its conferences and workshops from leading-edge companies and organizations from around the world. This year,

the organizations that have contributed to SIGMOBILE conferences and workshops, helping to ensure their success, include Arch Rock, Cisco, the Cooperating Objects Network of Excellence, Crossbow Technology, Daimler, Dartmouth College Institute for Security Technology Studies, GM, Hewlett-Packard, IBM, Intel, Istituto di Informatica e Telematica, Madison Ventures, Microsoft Research, NEC Laboratories America, NSF, Nokia, and PARC. SIGMOBILE sincerely thanks each of them for their support.

Each year, SIGMOBILE is also "in-cooperation" with a number of different events sponsored by other organizations. Events offered "in-cooperation with" SIGMOBILE allow SIGMOBILE members to register at the same discounted rate as for members of other sponsoring organizations for the event, providing a significant savings to SIGMOBILE members. During this past year (July 2008 through June 2009), SIGMOBILE was in-cooperation with the following events:

- Mobiquitous 2008: The Fifth Annual International Conference on Mobile and Ubiquitous Systems: Computing, Networking and Services, Dublin, Ireland, July 21-25, 2008
- QShine 2008: The Fifth International Conference on Heterogeneous Networking for Quality, Reliability, Security and Robustness, Hong Kong, China, July 28-31, 2008
- MobileHCI 2008: The 10th International Conference on Human-Computer Interaction with Mobile Devices and Services, Amsterdam, Netherlands, September 2-5, 2008
- Ubicomp 2008: The Tenth International Conference on Ubiquitous Computing, Seoul, South Korea, September 21-24, 2008
- WICON 2008: The Fourth International Wireless Internet Conference, Lahaina, Hawaii, USA, November 17-19, 2008
- MUM 2008: 7th International ACM Conference on Mobile and Ubiquitous Multimedia, Norrland, Sweden, December 3-5, 2008
- COMSNETS 2009: The First International Conference on COMMunication Systems and NETWORKS, Bangalore, India, January 5-10, 2009
- IWCMC 2009: The 5th International Wireless Communications and Mobile Computing Conference, Leipzig, Germany, June 21-24, 2009

## SIGMOBILE Publications

In addition to the proceedings for each of the conferences and workshops that SIGMOBILE sponsors, SIGMOBILE also publishes a peer-reviewed, quarterly journal/newsletter for SIGMOBILE members, *Mobile Computing and Communications Review* (MC2R). Others may also subscribe to MC2R, and MC2R is available in the ACM Digital Library.

The Editor-in-Chief for MC2R is *Prof. Srikanth Krishnamurthy* (University of California, Riverside, USA). The Associate Editors for MC2R are *Prof. Sneha Kumar Kasera* (University of Utah, USA) and *Prof. Lili Qiu* (University of Texas at Austin, USA). The current Area Editors for MC2R are *Prof. Suman Banerjee* (University of Wisconsin, Madison, USA), *Prof. Christian Bettstetter* (University of Klagenfurt, Germany), *Prof. Srdjan Capkun* (ETH, Zurich, Switzerland), *Prof. Sunghyun Choi* (Seoul National University, Korea), *Prof. Eylem Ekici* (Ohio State University, USA), *Prof. Adrian Friday* (Lancaster University, UK), *Prof. Wendi Heinzelman* (University of Rochester, USA), *Prof. Bhaskar Krishnamachari* (University of Southern California, USA), *Prof. Prashant Krishnamurthy* (University of Pittsburgh, USA), *Prof. Mingyan Liu* (University of Michigan, USA), *Prof. Haiyun Luo* (University of Illinois at Urbana-Champaign, USA), *Dr. Ratul Mahajan* (Microsoft Research, USA), *Prof. Panos Papadimitratos* (EPFL, Switzerland), *Prof. Vikram Srinivasan* (National University of Singapore, Singapore), *Prof. Andreas Terzis* (Johns Hopkins University, USA), *Dr. Alec Wolman* (Microsoft Research, USA), and *Prof. Yongguang Zhang* (Microsoft Research Asia, China). In addition, MC2R currently has two Feature Editors: *Dr. Ian Chakeres* (The Boeing Company, USA), reporting on activities in the IETF MANET Working Group, and *Prof. James C. Lin* (The University of Illinois at Chicago, USA), reporting on health aspects of wireless communication.

MC2R publishes articles that provide a balance between state-of-the-art research and practice, with a thorough pre-publication review of every article by experts in the field. Beyond papers reporting the latest research results in all areas related to SIGMOBILE's scope, MC2R keeps the SIGMOBILE community apprised of relevant happenings in the area, by providing regular features on the status of major international mobile computing and communications standards, such as those from IETF, ITU, ISO, and IEEE. The journal also provides a variety of additional resources, such as bibliographies of recent publications in other journals, paper and book reviews, workshop and conference reports, calls for papers, information on research groups from throughout the world, bibliographies and locations of technical reports, and other general news in the field.

MC2R places a strong emphasis on quick publication of interesting completed or work-in-progress technical work; the average turnaround time for papers published in MC2R is about 6 months. Papers in MC2R are selected mainly from an ongoing open call for papers, plus special sections based on conferences and workshops, occasional special topic issues, and some invited papers. The acceptance rate for papers submitted through the open call for papers is quite selective, remaining under about 20%. All aspects of the journal's operation are run entirely by volunteers, including final assembly of each issue.

SIGMOBILE also publishes a monthly *E-Mail Newsletter* for its members. This electronic

newsletter was started in 2004 and is edited by SIGMOBILE's Information Director, *Prof. Robert Steele* (University of, Sydney, Australia). The newsletter includes SIGMOBILE announcements, pointers to relevant mainstream news articles of interest to SIGMOBILE members, a calendar of upcoming events of interest to our members, and pointers to developer news for active developers in the area of mobile computing and wireless networking.

As an additional resource for our members and the community, SIGMOBILE maintains an extensive web site at <http://www.sigmobile.org>, including information about SIGMOBILE and its activities, information about our journal/newsletter MC2R, and information about membership in SIGMOBILE. This web site also contains archived copies of most SIGMOBILE conference web sites, including all previous years of MobiCom, MobiHoc, and MobiSys.

## SIGMOBILE Local Chapters

There are currently two Local Chapters of SIGMOBILE chartered with ACM:

- *Nanyang Technological University Student Chapter*: This is a Student Chapter of SIGMOBILE, organized within the Nanyang Technological University (NTU) ACM club in Singapore.
- *Sydney Professional Chapter*: This is a Professional Chapter of SIGMOBILE, organized in Sydney, Australia.

Local Chapters provide a local focus to activities related to the area of SIGMOBILE, including mobile computing and wireless and mobile networking, and continue the work of SIGMOBILE within their local regions.

We encourage interested groups around the world to form a SIGMOBILE chapter in their local community, school, city, or region. For details about the benefits and procedures for forming a Local SIGMOBILE Chapter, see <http://www.sigmobile.org/chapters/>.

## SIGMOBILE Membership

SIGMOBILE provides substantial benefits to our members, including:

- The quarterly journal and newsletter *Mobile Computing and Communications Review* (MC2R), serving both as a newsletter keeping SIGMOBILE members informed, and as a scientific journal publishing high-quality peer-reviewed research papers on mobile computing and wireless and mobile networking.
- A monthly e-mail SIGMOBILE newsletter, including SIGMOBILE announcements, pointers to relevant mainstream news articles of interest to SIGMOBILE members, a calendar of upcoming events of interest to our members, and pointers to developer news for active developers in the area of mobile computing and wireless networking.
- Qualify for the lowest registration rates at conferences and workshops sponsored by SIGMOBILE, and for the many events that are "in cooperation" with SIGMOBILE. SIGMOBILE sponsors five conferences each year (MobiCom, MobiHoc, MobiSys, SenSys, and Ubicomp).
- Opportunities to share ideas, learn new results and practices, network with colleagues, and be active in a vibrant community of colleagues in all areas of mobility of systems, users, data, and computing.
- Through the Member Value Plus program, automatically receive a CDROM after each of SIGMOBILE's five conferences, containing the full conference Proceedings.

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

- Organization and sponsorship of five annual conferences (MobiCom, MobiHoc, MobiSys, SenSys, Ubicomp), and promotion of emerging new areas through sponsorship of numerous workshops each year.
- A range of full-day and half-day tutorials at many SIGMOBILE conferences, offering attendees an easy way to broaden their knowledge.
- Announcements via a moderated email distribution list about events of interest to those in the mobile computing and wireless networking community, such as conference Calls for Papers and Calls for Participation.
- The SIGMOBILE Outstanding Contribution Award, given to recognize an individual who has made a significant and lasting contribution to the research on mobile computing and communications and wireless networking.
- The SIGMOBILE Distinguished Service Award, given to recognize an individual who has made exceptional contributions to ACM SIGMOBILE, its conferences, publications, or its local activities.
- Other awards including Best Paper awards and often also Best Demo or Best Presentation awards at SIGMOBILE conferences and workshops.
- Support for students at SIGMOBILE conferences and workshops, through reduced registration fees, student travel awards for some conferences, student poster sessions, and hosting the ACM Student Research Competition at some conferences.
- Continuing financial support and hosting meetings for the group "Networking Networking

Women" (N<sup>2</sup> Women), whose goal is to foster connections among the under-represented women in computer networking and related research fields.

- Financial support for CRAWDAD, the Community Resource for Archiving Wireless Data At Dartmouth, which archives wireless trace data and develops better tools for collecting, anonymizing, and analyzing the data.
- Financial support for the Illinois Wireless Summer School in 2009, scheduled to occur August 3-7, 2009, which provides an opportunity for students interested in wireless systems to learn more and interact with top professionals in the field.
- The SIGMOBILE web site at <http://www.sigmobile.org>, including a wealth of information for the community, such as complete details on SIGMOBILE conferences and workshops; information on SIGMOBILE membership, chapters, awards, and publications; and a Ph.D. thesis collection.

## SIGMOBILE Awards

In the ACM Student Research Competition (SRC) held at MobiCom 2008, in the Graduate Category, the winners were:

- First Place: *Stratis Ioannidis* (University of Toronto, Canada), "On the Distribution of Content Updates over a Mobile Social Network"
- Second Place: *Samuel Nelson* (University of Illinois at Urbana-Champaign, USA), "Encounter-Based Routing in DTNs"
- Third Place: *Dimitrios Koutsonikolas* (Purdue University, USA), "XCOR: Synergistic Interflow Network Coding and Opportunistic Routing"

In the Undergraduate Category, the winners were:

- First Place: *Martin Azizyan* (Duke University, USA), "SurroundSense: Mobile Phone Localization Using Ambient Sound and Light"
- Second Place: *Tal Russak* (Cornell University, USA), "Burstiness and Scaling in Low-Power Wireless Simulation"

The top 3 winners at each individual SRC over the past year are invited by ACM to the SRC Grand Finals each year. After winning First Place at the MobiCom 2008 SRC, *Stratis Ioannidis* also won First Place at the ACM SRC Grand Finals this year. Congratulations to Stratis! Stratis is a Ph.D. student at the University of Toronto, working with his advisor, *Prof. Peter Marbach*. His research presented at the SRC is joint work with *Augustin Chaintreau* and *Laurent Massoulié*.

This win at the 2009 SRC Grand Finals reinforces the strong record for winners of the MobiCom SRC when competing at the Grand Finals. At MobiCom 2005, *Yaling Yang* (University of Illinois at Urbana-Champaign, USA) won Third Place and then went on to win Second Place at the 2006 SRC Grand Finals, also in the Graduate Student division. These winners at MobiCom 2005 and 2008 also speak very well of the quality of work being presented at the MobiCom SRCs.

At MobiCom 2008, the Best Paper Award was presented to *Joshua Robinson* (Rice University, USA), *Ram Swaminathan* (HP Labs, USA), and *Edward Knightly* (Rice University, USA) for their paper "Assessment of Urban-Scale Wireless Networks with a Small Number of Measurements." The MobiCom Best Paper Award is presented each year to the authors of the best paper from among all papers submitted to the conference that year; the MobiCom Technical Program Committee forms the Selection Committee for this award.

At SenSys 2008, the Best Paper Award was presented to *Younghun Kim*, *Thomas Schmid*, *Zainul Charbiwala*, *Jonathan Friedman*, and *Mani Srivastava* (University of California, Los Angeles, USA) for their paper "NAWMS: Nonintrusive Autonomous Water Monitoring System." In addition, the Best Demonstration Award was presented to *Michael Buettner*, *Richa Prasad*, *Alanson Sample*, *Daniel Yeager*, *Ben Greenstein*, and *Joshua Smith* (Intel Research Seattle, USA); and *David Wetherall* (Intel Research Seattle and University of Washington, USA) for their demonstration "RFID Sensor Networks with the Intel WISP."

Also at SenSys 2008, there was a two-way tie for the Best Poster Award: to *Jorge Ortiz* and *David Culler* (University of California, Berkeley, USA) for their poster "Exploring Diversity: Evaluating the Cost of Frequency Diversity in Communication and Routing"; and to *Mathilde Durvy*, *Julien Abeillé*, and *Patrick Wetterwald* (Cisco Systems, USA); *Colin O'Flynn* (NewAE, USA); *Blake Leverett*, *Eric Gnoske*, and *Michael Vidales* (Atmel Corporation, USA); *Geoff Mulligan* (Proto6 LLC, USA); and *Nicolas Tsiftes*, *Niclas Finne*, and *Adam Dunkels* (Swedish Institute of Computer Science, Sweden) for their poster "Making Sensor Networks IPv6 Ready."

At HotMobile 2009, the Best Poster Award was presented to *Hassan Ghasemzadeh* (University of Texas at Dallas, USA) for the poster "Body Sensor Networks: Signal Processing for Power Optimization." Also, there were two Best Presentation Awards given: to *Nicholas Palmer* (Vrije Universiteit, The Netherlands), for his presentation "Ibis for Mobility: Solving Challenges of Mobile Computing Using Grid Techniques," and to *Jonathan Lester* (University of Washington, USA) for his presentation "BALANCE: Towards a Usable Pervasive Wellness Application with Accurate Activity Inference."

Finally, SIGMOBILE is proud to announce that *Prof. Deborah Estrin* (University of California, Los Angeles, USA) has been elected to the National Academy of Engineering. Deborah was selected by ACM's Committee on Women in Computing (ACM-W) in 2006 as the recipient of the first Athena Lecturer Award, after being nominated by SIGMOBILE. She presented her Athena Lecture, entitled "Wireless Sensing Systems: From Ecosystems to Human Systems," at MobiCom 2006. SIGMOBILE congratulates Deborah on her continued success with her election this year to the National Academy of Engineering!

## Future Challenges

Throughout most of SIGMOBILE's history, our membership has continued to grow steadily. Last year, however, it had begun to look like this trend had slowed or slightly reversed, joining the trend experienced by most other SIGs in having declining membership. I am happy to report, however, that any decline has now reversed, with SIGMOBILE's membership growing about 5% this year. We have been attempting to better promote, particularly among conference attendees, the value of SIGMOBILE membership — and the affordability of SIGMOBILE membership. It is too early to tell if this campaign is really working, and we will continue to monitor trends in SIGMOBILE membership, but we are encouraged by the latest membership numbers. We will also continue to look for additional ways to serve our members and to encourage the many researchers, practitioners, users, students, and others in the broader community to join SIGMOBILE.

Another challenge for the future is the effect on conference attendance of three different concerns expressed by some in our community and beyond. First, given concerns over the state of the economy, now and in the future, some potential conference attendees may be scaling back on the amount of travel they can include in their budgets. Second, given the increased security measures introduced in all aspects of travel, including security screening and baggage handling inconveniences at airports and new restrictions and increased processing times required in obtaining visas, some potential conference attendees may be questioning whether to attend conferences or may be unable to attend. Third, given increased concerns about the environment and the "carbon footprint" of travel, some potential conference attendees may begin opting to avoid the travel to conferences and to only read the proceedings electronically afterwards. It is unclear the extent to which any of these concerns have affected conference attendance currently, but the number of times different members in our community have raised these issues with me continues to increase.

## Summary

SIGMOBILE continues to be a strong, successful SIG. Our conferences, workshops, and publications are well respected and well supported, our finances are healthy, and our membership is growing and active. This is my last annual report here, as my term as SIGMOBILE Chair has ended. But it is with great confidence that I pass the leadership of SIGMOBILE on to the newly elected SIGMOBILE Chair and the other newly elected SIGMOBILE officers. Congratulations again to Roy, Robert, Ramesh, and Lili on their election. I'm sure SIGMOBILE will be in good hands as we move forward.

