

# SIGOPS Annual Report 2012

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Fiscal Year July 2012-June 2013

Submitted by Jeanna Matthews, SIGOPS Chair

## Overview

SIGOPS is a vibrant community of people with interests in “operating systems” in the broadest sense, including topics such as distributed computing, storage systems, security, concurrency, middleware, mobility, virtualization, networking, cloud computing, datacenter software, and Internet services. We sponsor a number of top conferences, provide travel grants to students, present yearly awards, disseminate information to members electronically, and collaborate with other SIGs on important programs for computing professionals.

## Officers

It was the second year for officers: 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. As has been typical, elected officers agreed to continue for a second and final two-year term beginning July 2013. Shan Lu (University of Wisconsin) will replace Muli Ben-Yehuda as Information Director as of August 2013.

## Awards

We have an exciting new award to announce – the SIGOPS Dennis M. Ritchie Doctoral Dissertation Award. SIGOPS has long been lacking a doctoral dissertation award, such as those offered by SIGCOMM, Eurosys, SIGPLAN, and SIGMOD. This new award fills this gap and also honors the contributions to computer science that Dennis Ritchie made during his life. With this award, ACM SIGOPS will encourage the creativity that Ritchie embodied and provide a reminder of Ritchie's legacy and what a difference a person can make in the field of software systems research. The award is funded by AT&T Research and Alcatel-Lucent Bell Labs, companies that both have a strong connection to AT&T Bell Laboratories where Dennis Ritchie did his seminal work. Robbert Van Renesse (Cornell University) led the effort to establish the award. The first award will be presented at SOSP 2013.

Jeff Dean and Sanjay Ghemawat (Google) received the Mark Weiser Award at OSDI 2012 for creativity and innovation in operating systems research. The 2012 Mark Weiser Award selection committee was chaired by Butler Lampson (Microsoft) and also included Peter Chen (University of Michigan) and Thomas Anderson (University of Washington). The committee for 2013 is Peter Chen (chair), Miguel Castro (Microsoft Research) and John Wilkes (Google).

The 2012 SIGOPS Hall of Fame Awards, which recognize the most influential systems papers, were presented at OSDI 2012 for the following papers:

- Brian M. Oki, Barbara H. Liskov. Viewstamped Replication: A New Primary Copy Method to Support Highly-Available Distributed Systems Proceedings of the Seventh Annual ACM Symposium on Principles of Distributed Computing (PODC 1988), Toronto, ON, Canada, Aug 1988, pp 8--17.
- Leslie Lamport. The Part Time Parliament ACM TOCS 16(2), May 1998, 133--169.
- Kai Li, Paul Hudak. Memory Coherence in Shared Virtual Memory Systems ACM TOCS 7(4), Nov 1989, pp 321--359.
- Mendel Rosenblum, John K. Ousterhout. The Design and Implementation of a Log-Structured File System ACM TOCS 10(1), Feb 1992, pp 26--52.

The 2012 Hall of Fame award selection committee was chaired by Peter Druschel (Max Planck Institute). The committee for 2013 will be chaired by Steve Hand (University of Cambridge).

The 2012 Edsger W. Dijkstra Prize in Distributed Computing, co-sponsored by SIGOPS, was awarded to the following two papers:

- Maurice Herlihy and J. Eliot B. Moss. Transactional Memory: Architectural Support for Lock-Free Data Structures. 20th Annual International Symposium on Computer Architecture, pages 289-300, May 1993.
- Nir Shavit and Dan Touitou. Software Transactional Memory. Distributed Computing 10(2):99-116, February 1997. (An earlier version appearing in the 14th ACM Symposium on Principles of Distributed Computing, pages 204-213, August 1995.)

The ASPLOS "Influential Paper Award" was awarded at ASPLOS 2013 to the following paper:

- Ravi Rajwar and James R. Goodman. Transactional lock-free execution of lock-based programs. Proceedings of the 10th international conference on Architectural support for programming languages and operating systems (ASPLOS 2002).

The recipient of the EuroSys ROGER NEEDHAM PhD AWARD(2013)is Asia Slowinska, Vrije Universiteit Amsterdam for her PhD thesis entitled "USING INFORMATION FLOW TRACKING TO PROTECT LEGACY BINARIES".

## Conferences

- Planning for the next *ACM Symposium on Operating Systems (SOSP)*, which is scheduled for November 3-6 2013 in Farmington, Pennsylvania, are well underway. SOSP is 100% sponsored by SIGOPS. Michael Kaminsky (Intel) is serving as the General Chair, and Michael Dahlin (University of Texas) is serving as the Program Chair. Seven workshops will be collocated with SOSP: Workshop on Diversity in Systems Research (Diversity), 9th Workshop on Hot Topics in Dependable Systems (HotDep), 5th Workshop on Power-Aware Computing and Systems (HotPower), 1st Workshop on Interactions of NVM/Flash with Operating Systems and Workloads (INFLOW), 7th Workshop on Large-Scale Distributed Systems and Middleware (LADIS), 7th

Workshop on Programming Languages and Operating Systems (PLOS) and Conference on Timely Results in Operating Systems (TRIOS).

- The Eighth Eurosys Conference (Eurosys 2013) was held in Prague, Czech Republic on April 15-27. Eurosys is 100% sponsored by SIGOPS.
- The Ninth Annual International Conference on Virtual Execution Environments (VEE 2013) was held in Houston, Texas, USA, March 16–17 2013. VEE is sponsored 50% by SIGPLAN and 50% by SIGOPS.
- The 31st Annual ACM SIGACT-SIGOPS Symposium on Principles of Distributed Computing (PODC 2012) was held in Madeira, Portugal on July 16-18, 2012. PODC is sponsored 50% by SIGOPS and 50% by SIGACT.
- The Third ACM Symposium on Cloud Computing (SOCC 2012) was held in San Jose, California on October 14th-17th, 2012. SOCC is sponsored 50% by SIGOPS and 50% by SIGMOD.
- The Eighteenth International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS 2013) was held in Houston, Texas on March 16-20 2013. ASPLOS is sponsored 25% by SIGOPS, 50% by SIGARCH and 25% by SIGPLAN .
- The Tenth ACM SenSys (SenSys 2012) was held Nov 6-9, 2012 in Toronto, Canada. Sensys is sponsored 10% by SIGOPS, SIGARCH, SIGMETRICS and SIGBED, 30% by SIGMOBILE and 30% by SIGCOMM.
- The third *SIGOPS Asia-Pacific Workshop on Systems* (APSys) was held on July 23-14 2012 in Seoul, South Korea. SIGOPS is in-cooperation with APSys.
- Other In-cooperation events included OSDI 2012, TAPP 2013, FAST 2013, NSDI 2013, HotPar 2013, SYSTOR 2013 and Mobisys 2013.

## Scholarships

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.

- SIGOPS is introducing a new professional travel scholarship program for SOSP. These scholarships are intended to increase the diversity of professional attendees at SOSP. Applications from professionals in areas of the world currently under-represented at systems conferences and from faculty who are teaching operating systems at institutions not typically represented at systems conferences are especially encouraged. The first awards will be made for travel to SOSP13.
- SIGOPS provided student travel scholarships for PODC, VEE and APSys.

## Operating System Review

SIGOPS also publishes a quarterly newsletter, *Operating Systems Review (OSR)*, which focuses on specific research topics or research institutions, manages an electronic mailing list, which is used for announcements, and maintains a web site: <http://www.sigops.org/>. Jeanna Matthews and Tom Bressoud continue as co-editors of Operating System Review. John Chandy, Ashvin Goel and Antônio Augusto Fröhlich continue to serve on the OSR Individual Submission Committee with John Chandy as chair. There were 3 issues of OSR in 2012 (January, July and December) including an issue surveying the systems work at NetApp coordinated by John Strunk.

## Membership Services

Professional SIGOPS membership dues remain at \$15, and student membership is just \$5 per year. We offer a “member plus” package (for \$20) for those who wish to receive proceedings for the ASPLOS, Eurosys, and SOSP conferences. For the “member plus” package proceedings will be sent in the format produced for the conference itself. As conferences move away from printed proceedings altogether, printed proceedings may no longer be produced exclusively for the “member plus” recipients. This package is deliberately priced at lower than the cost of a single printed proceeding to allow for this evolution. If or when all three of the conferences in the “member plus” package choose not to produce printed proceedings, we will discontinue this option entirely. ACM is experimenting with a print-on-demand option for proceedings (approximately \$75 per proceedings depending on length).

Strong arguments can be made for going completely “green”, i.e. paperless. SOSP 2011 had no printed proceedings, but did have a CD with proceedings. However, papers were still produced in two formats to support both the printed proceedings package and the digital versions. SOSP 2013 will be the first SIGOPS sponsored venue to have purely online proceedings. CDs will be produced and sent to members subscribing to the “member plus” package. SIGOPS is actively considering whether to continue producing printed proceedings and distributing the OSR newsletter in printed form.

## Open Access Options

SIGOPS has been actively involved in lobbying for changes to the ACM copyright policies. Yannis Ioannidis (SIGMOD) and Jeanna Matthews (SIGOPS) attended the ACM Publications Board meeting in June 2012 proposing that authors retain copyright and grant to ACM a non-exclusive license to publish. A number of people influential in the SIGOPS community provided detailed input into the process including John Wilkes, Tom Anderson, Frans Kaashoek and Mike Freedman. Matthews and Ioannidis have continued to lobby heavily for changes at the ACM Sig Governance Board Meetings. We are happy to report that beginning in 2013, authors are able to choose copyright transfer, an exclusive license without copyright transfer or a non-exclusive license with the payment of an open access fee of roughly \$1100 per paper. For SOSP2013, SIGOPS will pay these open access fees for all papers.