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Proceedings of the

17th ACM Symposium on Operating Systems Principles (SOSP'99)

December 12–15, 1999
Kiawah Island Resort, near Charleston, South Carolina

OPERATING SYSTEMS REVIEW
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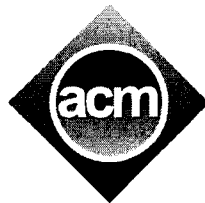
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Seventeenth ACM Symposium on Operating Systems Principles

Message from the General Chair

This year, SOSP is being held at the Kiawah Island Resort, just south of Charleston, South Carolina. The island offers a beautiful setting for our meeting, with plenty of diversions such as a stroll on the beach or a bike ride on the trails that lace the island.

As General Chair it has been my privilege to work with several outstanding people, who have helped to pull this conference together. John Wilkes and his program committee have done an outstanding job, and worked incredibly hard, to produce a first-rate program. John also produced the paper proceedings, and Chris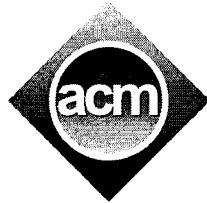 Small arranged the CD-ROM version. Ann Chervenak has worked tirelessly to arrange all the little details necessary to run the show at Kiawah, with help from Ruthie Simmons of the Kiawah conference staff. Amin Vahdat arranged for a smooth registration process, with help from ACM's Haritini Kanthou who built the registration web site. Jeff Chase rounded up student volunteers to help with the registration desk, and selected the wines for our drinking pleasure. Eric Jul and his students Mads Dydensborg and Michael Svendsen arranged all the publicity and managed the web site. Cary Gray managed the finances. Guerney Hunt and his committee had the tough job of choosing which of many worthy students to receive travel scholarships. Jay Lepreau put many of them to work as session scribes, to provide input for a post-conference summary to be published in *Operating Systems Review*. Finally, thanks to all of the authors for their hard work in preparing their submitted papers.

I am also particularly thankful to the industrial sponsors this year: Compaq Research, Hewlett-Packard Laboratories, IBM Research, the Information Sciences Research Center at Lucent Bell Laboratories, Mercury Computer Systems, and Microsoft Research.

These proceedings include a CD-ROM that contains an electronic version of all of the papers, and code or data for some of the papers. An archive of SOSP 17 information, including items like poster abstracts and synopses of the sessions, which are not included in either the paper or CD-ROM proceedings, will be available on the WWW at <http://www.acm.org/sigops/sosp99/>.

Many thanks to everyone!

David Kotz
Dartmouth College

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Student scholarship awards

The student scholarship program for SOSP 17 was provided courtesy of Compaq, Hewlett-Packard, IBM, Microsoft Research and SIGOPS. SIGOPS contributed $20K and each industrial sponsor contributed $10K. The committee was able to grant scholarships to the top 60 of the 97 students who applied.

Scholarships were awarded by a five member committee which was made up of representatives from SIGOPS, industry, and academia. I thank Nina Bhatti (HP Labs), Ken Birman (Cornell University), Garth Gibson (Carnegie Mellon University) and Marc Shapiro (SIGOPS) for serving as members of the scholarship committee.

The goals of the program were to increase student participation, recognize student authors, and support meritorious students. Each committee member evaluated the applicants individually. Applicants were evaluated based on a number of factors including: scholarship, how much the conference would benefit the student, how much the student would contribute to the conference, and need. Scholarship was primarily determined by the student position papers. Student position papers were judged based on relevance to the OS community and relevance to the conference. Students who were primary authors of accepted papers received a high scholarship score. The benefit of the conference to the student was based on the advisor's recommendation and the student's paper. The ability of the student to contribute to the conference was based on their contribution to the research community, progress in their program, and the advisor's recommendation. The assessment of each committee member was weighted equally in ranking the students. The consequences of this ranking were fairly diverse.

Students from thirty-five of the forty universities represented in the applicant pool were supported. Although the majority of the applicants were from North America, European students represented 19.5% (19) of the applicants and received 23.3% (14) of the scholarships. The university with the most supported students was Cambridge with four followed by CMU, DIKU, MIT, Rice, Kentucky, and Washington with three each. All students who were primary authors of accepted papers were funded. Even though the scholarship committee did not have an obligation to spend all of its budget, this year there were more meritorious students who applied than could be funded. Each supported student was granted their estimated airfare, an extra night's stay, and the conference registration fee.

Chair: Guerney Hunt, IBM Research

The scholarship program was made possible by financial support from:

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Message from the Program Chair

It is with great pleasure that I introduce to you this collection of 19 papers chosen by the SOSP program committee. We received 90 full submissions this time; compared to the highly popular 16th SOSP (held in Saint-Malo, France), this is a drop of 17%, but it is roughly the same as the historical average for the prior decade's submissions. 80 of the submissions came from the USA: 60 from the edu domain and 17 from the com domain, although at least one author submitted a paper from both domains. Of the others, there were 4 submissions from each of Korea and Germany. 68 sites submitted just one paper; 11 submitted 3 or more.

The reviewing process was a combination of approaches that had proved successful in the past: in the first pass, every paper was assigned to three program committee members to review, one of whom solicited 2–3 external reviews. Using the first-round reviews as input, we focussed our attention on the most promising half of the papers: all of these were read by the entire committee, including all the papers that ended up in the proceedings. We also appointed a program committee member for each paper to lead the discussion in the program committee meeting, which generated a spirited and highly informed debate. Each accepted paper was then shepherded by a program committee member, to help ensure that the feedback provided by the reviewers was put to the best possible use. All the authors put in great efforts to do so, under very tight deadlines, to achieve the high quality results you see before you.

The reviewing process also represents a huge contribution of time, expertise and effort by the outside reviewers and the program committee: between them, they wrote over 800 reviews containing over 280 thousand words. I cannot think of a better endorsement for our field than the amount of effort that people were willing to put into it.

As always, our choice of what to accept was made difficult by the number, variety and quality of the papers submitted. The inventiveness and range of the submissions remains a strong point of this conference. Several submissions were a joy to read, and the program committee asked me to express their hope that more future submitters would pay greater attention to the guidance offered by Roy Levin and David D. Redell[1], as well as find ways to add more statistical rigor in their submissions (especially repeatability data, and error- or confidence-estimates). Papers that did so were perceived as significantly stronger.

For the first time, we used an electronic submission process (David Nicol's WIMPE). My thanks to David for being so helpful in responding to a stream of requests for help and bug fixes. Dejan Milojicic and Mike Rodriquez helped greatly in bringing up WIMPE in the HP Labs environment. My other HP Labs colleagues deserve a great deal of credit for being so tolerant of my idiosyncrasies throughout the entire process!

To complement the more formal papers, the conference includes the traditional informal work-in-progress session, as well as a poster session, to encourage discussion of less fully-formed results. Data from these will be made available at the conference web site.

The high quality of the SOSP conference is entirely due to the hard work of the authors, the program committee and the reviewers. It has been a pleasure to work with such a dedicated and enthusiastic group of people. I hope you like the result.

John Wilkes
October 1999

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1. Roy Levin and David D. Redell. An evaluation of the ninth SOSP submissions; or how (and how not) to write a good systems paper. *Operating Systems Review* 17(3):35-40 (July 1983).
   Available at: http://www.usenix.org/events/samples/submit/advice.html as of Oct. 1999.

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	http://www.diku.dk/sosp99/
	http://www.cs.dartmouth.edu/SOSP99/
	http://www-sor.inria.fr/mirrors/sosp99/

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