



Annual Report

ACM Special Interest Group on Symbolic and Algebraic Computation

SIGSAM

July 2008 – June 2009

Submitted by: Mark Giesbrecht, Chair

August 23, 2009

SIGSAM Communications in Computer Algebra

The Communications in Computer Algebra has been published since 1965 (previously SICSAM Bulletin and SIGSAM Bulletin). After a number of years of being behind by up to two issues, the CCA is now up-to-date and publishing 4 issues per year on time. Two years ago we switched to printing and mailing only two double-issues per year, with the four electronic issues appearing through the digital library and SIGSAM website. This is consistent with the wishes of many of our members, and is financially beneficial.

Conference and Event Sponsorship

ISSAC. The International Symposium for Symbolic and Algebraic Computation (ISSAC) for 2008 was held at the Research Institute for Symbolic Computation (RISC), at the Johannes Kepler University, in Austria. While both RISC and SIGSAM worked hard to achieve a co-sponsorship agreement, it ultimately could not be worked out. However, the organizers of ISSAC 2008 kindly transferred revenue of 1000€ to SIGSAM for future ISSAC conferences. Proceedings were published by ACM Press, and digital proceedings were distributed on DVDs to SIGSAM members.

ISSAC 2009 was held at the Korean Institute of Advanced Studies (KIAS) in Seoul, South Korea from July 28-31, 2009. SIGSAM successfully established a Joint Sponsorship Agreement (with KIAS) and hope that this will be a template for future ISSACS where full ACM sponsorship is not possible or appropriate.

SIGSAM reserves a portion of its funds (referred to as the *ISSAC contingency fund*, and tracked by the SIGSAM treasurer to support the ISSAC conference series. The level of this *contingency fund* is currently USD 7070.99. This level reflects income and expenses for meetings up to and including ISSAC 2008.

ECCAD, SNC, CICM, PLMMS. SIGSAM sponsored the East Coast Computer Algebra Day (ECCAD'09), in cooperation with ACM, on May 2, 2009, at the University of Rhode Island. In Summer 2009, SIGSAM also sponsored SNC'09 (the Symbolic Numeric Computing conference) in cooperation with ACM, and proceedings were published through ACM Press. In Summer 2009, SIGSAM also sponsored CICM 2009, in co-operation with ACM, at Grand Bend, Ontario, Canada from July 5-12, 2009. This federated meeting consisted of two international conferences (Calculus and MKM), as well as the workshops (CCA, DML, MathUI, OpenMath, PenMath, and the W3C Math Working Group meeting).

Awards

SIGSAM sponsors prizes in computer algebra and nominates our best researchers for top-level awards and prizes.

ISSAC Awards. SIGSAM sponsors the ISSAC Distinguished Paper and Distinguished Student Author prizes. This is from an endowment with a value of USD 40,662 as of March 1, 2009.

- The ISSAC 2008 Distinguished Paper award was given to Adam Strzebonski for the paper entitled "*Real Root Isolation for Exp-Log Functions*".
- The ISSAC 2007 Distinguished Student Author Award was given to Adrien Poteaux for the paper "*On the Good Reduction of Puiseux Series and the Complexity of Newton-Puiseux Algorithm over Finite Fields*" (coauthored with Marc Rybowicz).

Jenks Memorial Prize. SIGSAM also sponsors and administers the ACM SIGSAM Richard Dimick Jenks Memorial Prize for Excellence in Software Engineering applied to Computer Algebra. The prize is given out every two years, and in 2008 was awarded to "The GAP Group". This award is granted from an endowment with a value of USD 27,285 as of March 1, 2009.

Paris Kanellakis Award. The Paris Kanellakis Theory and Practice Award honours specific theoretical accomplishments that have had a significant and demonstrable effect on the practice of computing. It is one of the ACM's top prizes. SIGSAM nominated Bruno Buchberger (Johannes Kepler University, Linz, Austria) and he was awarded the 2007 prize in June 2008.

Transactions on Mathematical Software

SIGSAM has a seat on the editorial board of the ACM Transactions on Mathematical Software (TOMS). This position is currently held by Gene Cooperman of Northeastern University (USA).

Viability Review

At the SIG Board meeting on March 27, 2009, SIGSAM was found to be viable and given a renewal for the standard four-year period. For the previous two renewals, SIGSAM had only been given two-year renewals.

SIGSAM Elections

ACM/SIGSAM elections were held following the usual two-year term of office. A full election slate was put forward by the nomination committee consisting of Stephen Watt (Chair), Daniel Lazard, Tateaki Sasaki, B. David Saunders, and Emil Volcheck.

SIGSAM Membership

As of June 30, 2008, SIGSAM had 292 members, down slightly from 303 in June 2008. As a response to these rather flat membership numbers, and smaller than desired overlap between SIGSAM membership and ISSAC attendance, all non-SIGSAM-members attending ISSAC 2009 will be given SIGSAM memberships.

SIGSAM Advisory Board

The Advisory Board advises the Chair on matters of interest to SIGSAM. It consists of the officers, the Past Chair, the newsletter Editor(s) and up to ten Members at Large elected by ballot by the members of SIGSAM at the Annual General Meeting. At ISSAC 2008 Stephen Watt (Canada), Tateaki Sasaki (Japan) and Dongming Wang (China/France) were elected (by acclamation).

SIGSAM Finances

The following information was prepared by Daniel Lichtblau (SIGSAM Treasurer, outgoing) and Mark Giesbrecht (SIGSAM Chair, outgoing).

A summary of SIGSAM's recent financial history, and operational budget for 2008-9, is found in Figure 1 below.

Finances for 2008-9. Financial figures for 2008–9 are preliminary. All known income and expenses have been entered. However, additional changes have been made as late as early August in previous years so it is possible that SIGSAM's year-end fund balance will change slightly in the next few weeks.

Required Fund Balance. ACM expects its SIGs to maintain a “minimum fund balance.” The projected SIGSAM fund balance at the end of 2008–9 will meet this requirement.

	2005-6 Actual	2006-7 Actual	2007-8 Preliminary	2008-9 Budget	2008-9 Preliminary
Revenue					
SIG Dues	9217.18	8133.98	7811.15	9138.00	7784.00
Subscription Revenue	4289.25	18433.84	1677.72	1701.00	1149.00
Publication Sales	1439.25	858.60	824.40	200.00	81.00
Digital Library	10000.00	10000.00	10000.00	10000.00	12548.00
Other Revenue	716.01	1245.31	1372.99	1613.00	4206.00
Total Organizational Revenue	25661.69	23903.68	21686.26	22652.00	26069.00
Conference Revenue	39430.00	60334.83	64567.00	0.00	0.00
Total Revenue	65091.69	84238.51	86253.26	22652.00	26069.00
Expenses					
Publication Expenses	18797.94	7548.97	3633.69	5380.00	2847.00
Allocations	10439.88	10000.00	10000.00	10000.00	10000.00
Service Charge to Conferences	-6421.70	-6637.91	-7994.00	0.00	0.00
Other expense	2516.26	1414.90	1839.74	1983.00	2260.00
Total Organizational Expenses	25332.38	12291.03	7479.43	17363.00	15107.00
Conference Expenses	44196.44	57928.40	53727.01	0.00	0.00
Total Expenses	69528.82	70254.32	61206.44	17363.00	15107.00
Initial Fund Balance	8886.78	4449.65	18433.84	43480.66	40134.00
Net Surplus	-4437.13	14019.08	25046.82	5289.00	10962.00
Ending Fund Balance	4449.65	18433.84	43480.66	48769.66	51096.00

Figure 1: Fund Balance and Projections: 2005–9

Explanation of Categories

Revenue. *SIG Dues* include membership dues that have been transferred to SIGSAM. *Subscription Revenue* includes revenue from subscriptions to SIGSAM publications by non-members and other miscellaneous subscription revenue. *Publication Sales* includes revenue from the sales of newsletters and bulletins, journals and

conference proceedings. *Digital Library* revenue has been transferred by ACM to SIGSAM in compensation for the SIGSAM material provided through this online service. *Conference Revenue* includes revenue from SIGSAM-sponsored meetings – the ISSAC conference held during the reporting period. Since ISSAC 2008 was not sponsored by ISSAC, this is zero. *Other Revenue* includes the voluntary payment of revenue from the organizers of ISSAC 2008, as well as interest payments as well as income from service charges that has been transferred to SIGSAM.

Expenses. *Publication Expenses* includes the cost to produce, store and distribute the ACM Communications in Computer Algebra as well as proceedings that are delivered to ACM instead of the conference site. *Conference Expenses* includes expenses of SIGSAM-sponsored meetings. Allocations include charges to SIGSAM for services provided by ACM staff. *Service Charges to Conferences* are paid by SIGSAM-sponsored meetings (and appear as an expense with a negative value on financial statements). Since ISSAC was not sponsored by ACM in 2008, this is zero. *Other Expenses* include the costs of volunteer travel, elections, special meetings, promotions and projects, and miscellaneous fund transfers and service charges.

Source of Information.

This is a summary of data from the ACM Financial Management Reporting System prepared by the SIGSAM Treasurer. Please send electronic mail to [treasurer SIGSAM@acm.org](mailto:treasurer.SIGSAM@acm.org) for additional information.