



Annual Report
**ACM Special Interest Group on Symbolic and Algebraic
Computation**
SIGSAM
July 2009 – June 2010

Submitted by: Jeremy Johnson, Chair
September 3, 2010

SIGSAM Communications in Computer Algebra

The Communications in Computer Algebra has been published since 1965 (previously SICSAM Bulletin and SIGSAM Bulletin). 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. The change to two rather than four printing was made to prevent delays and save money and is consistent with the wishes of many of our members.

After serving as co-editor, with Ilias S. Kotsireas, for many years Austin Lobo stepped down and was replaced by Manuel Kauers from RISC J. Kepler University of Linz, Austria. Manuel was previously on the six member editorial board. His vacated board position was filled by Lihong Zhi, Academia Sinica, Beijing, China.

Conference and Event Sponsorship

ISSAC. The International Symposium for Symbolic and Algebraic Computation (ISSAC) for 2009 was held at the Korean Institute of Advanced Studies (KIAS) in Seoul, South Korea from July 28-31. The conference was co-sponsored by ACM SIGSAM and KIAS, each with a 50% financial sponsorship. The conference received \$57,792 in revenue, including a generous donation from KIAS, and had \$55,176 in expenses for a net surplus of \$2,616. Proceedings were published by ACM Press, and digital proceedings were distributed on DVDs to SIGSAM members. The distributed DVDs contained slides, with author approval, of all of the talks. Poster and Software demo abstracts were published in the CCA.

ISSAC 2010 was held July 25-28, 2010 at the Technische Universität München, in Munich Germany. ISSAC 2010 was sponsored in full by Fachgruppe Computeralgebra, in cooperation with ACM SIGSAM. The proceedings were published by ACM Press.

ISSAC 2011 will be held June 8-11, San Jose, CA. ISSAC will be part of the Federated Computing Research Conference. It will be fully sponsored by ACM.

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 and does not include surplus from ISSAC 2009.

ECCAD, PLMMS, PASCO. SIGSAM sponsored the East Coast Computer Algebra Day (ECCAD'10), in cooperation with ACM, on May 15, 2010, at Emory University in Atlanta Georgia. Poster abstracts from ECCAD'10 were published in CCA. In Summer 2010, SIGSAM sponsored a workshop on Programming Languages for Mechanized Mathematics Systems (PLMMS 2010), co-located with CICM (Conferences on Intelligent Computer Mathematics), in co-operation with ACM, at Paris France on July 8, 2010. Extended abstracts from this workshop were published in CCA. Also in the Summer of 2010, SIGSAM sponsored a conference on Parallel Symbolic Computation (PASCO 2010), in co-operation with ACM, in Grenoble France from July 21-23. Proceedings from this conference were published by ACM Press in the ACM Digital library.

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 2009 Distinguished Paper award was given to Chris Brown, Department of Computer Science, United States Naval Academy, Annapolis, Maryland, USA, for the paper "Fast Simplifications for Tarski Formulas".
- The ISSAC 2009 Distinguished Student Author Award was given to
 - Wolf Daniel Andres, RWTH Aachen, Germany and Jorge Martìn Morales, University of Zaragoza, for the paper "Principal Intersection and Bernstein-Sato Polynomial of Affine Variety" (with V. Levandovskyy, RWTH).
 - Yong Jae Cha, Florida State University, USA, for the paper "Liouvillian Solutions of Irreducible Linear Difference Equations" (with M. van Hoeij, Florida State University).
 - Luca De Feo, 1 École Polytechnique and INRIA, France for the paper "Fast arithmetics in Artin-Schreier towers over finite fields" (with Eric

Schost, ORCCA and CSD, The University of Western Ontario, London, ON Canada).

- The ISSAC 2010 Distinguished Paper award was given to Ioannis Emiris, Bernard Mourrain and Elias Tsigaridas for the paper “The DMM bound: multivariate (aggregate) separation bounds.”
- The ISSAC 2010 Distinguished Student Author Award was given to Pierre-Jean Spaenlehauer for the paper “Computing Loci of Rank Defects of Linear Matrices using Gröbner Bases and Applications to Cryptology” (with Jean-Charles Faugère and Mohab Safey El Din).

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 was last given out in 2008 and was awarded to “The GAP Group”. The prize will be given again at the 2011 ISSAC conference. This award is granted from an endowment with a value of USD 27,285 as of March 1, 2009.

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); however, his term has completed and several candidates are being considered for his replacement.

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

The current ACM/SIGSAM officers requested that they remain for a second term. The reason for the extension was the feeling that a two year term was insufficient, given the start up cost, to accomplish the goals they put forth in their election. The extension is currently being considered by SIGSAM membership.

SIGSAM Membership

As of June 30, 2010, SIGSAM had 346 members, up from slightly from 292 in June 2009. The membership increase was largely due to providing membership to all non-SIGSAM members attending ISSAC 2009 will be given SIGSAM, a conscious effort to increase membership in our main target audience.

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. Two members at large will be replaced at the end of 2010.

SIGSAM Finances

The following financial report was prepared by Agnes Szanto (SIGSAM Treasurer).

Revenue and Expenses for the 2009-10 Fiscal Year

Estimated revenue and expenses for the 2009-10 fiscal year are as follows. The figures given below are based on currently available data from the ACM Financial Management Reporting System. The revenue/expenses of the ISSAC 2009 conference are preliminary estimates only.

Opening Fund Balance as of June 30, 2009					47,826.61
Revenue: July 1, 2009 - June 30, 2010					
			Budget	Actual	Variance
SIG Dues			\$7,797.00	\$9,246.80	\$1,449.80
SIG Non Member Subscriptions			\$1,600	\$1,169.48	-\$430.52
Digital Library			\$10,000.00	\$10,000.00	\$0.00
Proceedings Sales			\$0.00	\$371.20	\$371.20
Conference Revenue			\$27,760.00	\$33,600.50	\$5,840.50
Interest Income			\$1,152.00	\$1,172.00	\$20.00
Expedited Service			\$22.00	\$70.62	\$48.62
Total Revenue			\$48,331.00	\$55,630.60	\$7,299.60
Expenses July 1, 2009 - June 30, 2010					
			Budget	Actual	Variance
Volunteer Travel			\$1,400.00	\$1,170.90	\$229.10
Mailing & Handling			\$50.00	\$24.46	\$25.54
Production Expense			\$3,010.00	\$3,401.11	-\$391.11
Distribution Expense			\$1,634.00	-\$1,052.72	\$2,686.72
Other Pub Expense			\$500.00	\$0.00	\$500.00
Awards			\$500.00	\$0.00	\$500.00
Projects			\$0.00	\$1,140.00	-\$1,140.00
Mtgs & Spec Functions			\$450.00	\$0.00	\$450.00
Conference Expense			\$27,706.00	\$33,620.74	-\$5,914.74
Allocations			\$10,000.00	\$9,999.96	\$0.04
SIG Board Allocation to SIGs			\$498.00	\$498.00	\$0.00
Service Charge to Conferences			-\$3,506.00	\$0.00	-\$3,506.00
Total Expenses			\$42,242.00	\$48,802.45	-\$6,560.45
Fund Balance as of June 30, 2010					\$54,654.76

Budget for the 2010-11 Fiscal Year

The following budget for organizational revenues/expenses has been approved for July 1st 2010 – June 30th 2011. The ISSAC 2010 conference is organized independently from SIGSAM, so the conference budget for the 2010-11 fiscal year is zero.

		HISTORICAL INFORMATION			
Account Name	Full Year BUDGET FY 2011	Full Year Actual FY 2010	Full Year Actual FY 2009	Full Year Actual FY 2008	Full Year Actual FY 2007
REVENUE					
Dues	\$ 7,467	\$ 9,247	\$ 7,785	\$ 8,483	\$ 8,174
Non Member Subscriptions	\$ 768	\$ 1,169	\$ 1,449	\$ 1,812	\$ 1,713
Member Plus Packages		\$ -	\$ -	\$ -	\$ -
Digital Library	\$ 11,185	\$ 10,000	\$ 12,548	\$ 10,000	\$ 10,000
Other Subscriptions	\$ -	\$ -	\$ -	\$ -	\$ 1,953
Newsletter Sales	\$ -	\$ -	\$ -	\$ -	\$ -
Proceedings Sales	\$ -	\$ 371	\$ 81	\$ 768	\$ 859
Journals Sales	\$ 300	\$ -	\$ 5	\$ 56	\$ -
Advertising Sales	\$ -	\$ -	\$ 475	\$ -	\$ -
Interest Income	\$ 1,009	\$ 1,172	\$ 1,438	\$ 1,399	\$ 1,163
Expedited Services	\$ 41	\$ 71	\$ 83	\$ 130	\$ 82
Contributions	\$ -	\$ -	\$ 2,214	\$ -	\$ -
Other Miscellaneous	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL REVENUE	\$ 20,770	\$ 22,030	\$ 26,078	\$ 22,649	\$ 23,945
EXPENSES					
Staff Travel	\$ -	\$ -	\$ -	\$ -	\$ -
Volunteer Travel	\$ 1,400	\$ 1,171	\$ 1,475	\$ 1,403	\$ 375
Communications	\$ -	\$ -	\$ -	\$ -	\$ 370
Mailing and Handouts	\$ -	\$ 24	\$ 24	\$ 33	\$ 19
Stationery and Supplies	\$ 50	\$ -	\$ -	\$ -	\$ -
Printing Services	\$ 500	\$ -	\$ 317	\$ -	\$ 393
Copying and Duplication	\$ -	\$ -	\$ -	\$ -	\$ -
Production Expenses	\$ 4,090	\$ 3,401	\$ 2,998	\$ 4,447	\$ 4,948
Distribution Expenses	\$ 2,476	\$ (1,053)	\$ 2,813	\$ 3,005	\$ 2,301
Storage Expense	\$ -	\$ -	\$ -	\$ -	\$ -
Other Publications	\$ 500	\$ -	\$ -	\$ 300	\$ 300
Awards	\$ 500	\$ -	\$ 329	\$ -	\$ -
Scholarships	\$ -	\$ -	\$ -	\$ -	\$ -
Special Projects	\$ -	\$ -	\$ -	\$ -	\$ -
Payments to Outside	\$ -	\$ 1,140	\$ -	\$ -	\$ -
Meetings and Space	\$ 450	\$ -	\$ -	\$ 273	\$ -
Accounts Receivable	\$ -	\$ -	\$ -	\$ -	\$ -
Other Miscellaneous	\$ -	\$ -	\$ -	\$ -	\$ -
Overhead/Allocations	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000
SGB Allocation	\$ 475	\$ 498	\$ 432	\$ 360	\$ 257
SIG Service Charge	\$ -	\$ -	\$ -	\$ (7,994)	\$ (6,638)
Transfers	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL EXPENSES	\$ 20,441	\$ 15,182	\$ 18,388	\$ 11,827	\$ 12,326
NET	\$ 329	\$ 6,849	\$ 7,691	\$ 10,822	\$ 11,619
FUND BALANCES					
Opening	\$ 54,675	47826			
Ending	\$ 55,004	54675	50% Organization Expenses plus 40% Conference Expenses		
Required	\$ 10,220				
Over/(Under) Required	\$ 44,455				

50% Organization Expenses plus 40%
Conference Expenses

Required Fund Balance

ACM has set a target fund balance for each SIG of the sum of 50% of organization expenses and 40% of conference expenses. For the 2009-10 fiscal year this amounts to \$18,350. If the above estimates are accurate then we are well above the required amount, by about \$36,000. For the 2010-11 fiscal year the required balance decreases to \$10,220, due to no conference expenses next year.

Summary

We inherited a financially robust SIGSAM, with an opening balance of over \$47,000, well above what is minimally required, thanks to the fiscally conservative policies of our previous leaderships. SIGSAM was financially successful also during the 2009-10 fiscal year, adding another almost \$7,000 to the balance, due in part to increased membership revenues, reductions in operational expenses, and an extremely successful ISSAC conference with generous external funding from KIAS and Maple. As a result, there is a significant surplus for the 2009-10 fiscal year.