



## **Annual Report**

### **ACM Special Interest Group on Symbolic and Algebraic Computation**

#### **SIGSAM**

**July 2010 – June 2011**

**Submitted by: Jeremy Johnson, Chair**

August 23, 2011

#### **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.

Manuel Kauers (Austria) and Ilias S. Kotsireas (Canada) served as co-editors, with an editorial board consisting of Chris Brown (USA), Jean-Guillaume Dumas (France), Massimo Caboara (Italy), Laureano Gonzalez-Vega (Spain), Michael Wester (USA), Lihong Zhi (China), Eugene Zima (Canada). Four issues were published in the period covered by this report. Four issues were published in the period covered by this report (issues 173-176) with two printed copies. The CCA continued with a mix of refereed papers, conference and workshop poster abstracts (including ISSAC, ECCAD, WWCA and a workshop honoring Doron Zeilberger's 60<sup>th</sup> birthday), dissertation abstracts and announcements of interest to the computer algebra community.

#### **Conference and Event Sponsorship**

**ISSAC.** The International Symposium for Symbolic and Algebraic Computation (ISSAC) for 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 and conference discounts were available to ACM and SIGSAM members.

ISSAC 2011 was held June 8-11, San Jose, CA as part of ACM's Federated Computing Research Conference (FCRC). The 2011 Symbolic-Numeric Computation (SNC) conference was held June 7-9 in affiliation with ISSAC and was also part of FCRC 2011. Both conferences were fully sponsored by ACM.

As of this date the books were not closed for the conference; however, preliminary financial analysis at the conference business meeting suggests that the conference will break even or have a small profit. This information was well received due to a concern that there would be lower than normal attendance due to higher than normal conference fees (\$465 and \$280 for early registration for members and students vs. 180€ and 60€ for ISSAC 2010) and consequently the possibility that the conference would lose money. The conference fees are normally lower since the conference is usually held at a university where various costs, including room rental, are waived. Attendance ended up at 50 for SNC and 121 for ISSAC 2011. These numbers were slightly higher than ISSAC 2009 in Seoul (109) but lower than those for ISSAC 2010 (175).

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 potential funds or loss from ISSAC 2011.

ISSAC 2012 will be held July 22-25 in Grenoble France. It is expected that the organizers will seek in cooperation status from ACM SIGSAM and have the proceedings published by ACM. The location for ISSAC 2013 was selected by vote at the ISSAC 2011 business meeting and will be held in Boston (USA). It is anticipated that they will seek ACM sponsorship.

**ECCAD and PASCO.** SIGSAM sponsored the East Coast Computer Algebra Day (ECCAD'11), in cooperation with ACM, on April 9, 2011, at the University of Waterloo in Waterloo ON. Poster abstracts from ECCAD'11 were published in CCA. 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 2011 Distinguished Paper award was given to Wei Li, Xiao-Shan Gao, and Cum-Ming Yuan for their paper “Sparse Differential Resultant”.
- The ISSAC 2011 Distinguished Student Author Award was given to Armin Straub (with Jonathan Borwein) for his paper “Special Values of Generalized Log-sine Integrals”.

**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 normally given in alternating years and was awarded this year at ISSAC 2011. The prize was awarded to “Maple Project at the University of Waterloo”. Keith Geddes and Gaston Gonnet were on hand to receive the prize and graciously donated the prize money back into the Jenks fund. The prize was selected by a committee consisting of Xiao-Shan Gao, Mark Giesbrecht (recused), Erich L. Kaltofen (Chair), Lakshman Y. N., and Robert S. Sutor. **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 was previously held by Gene Cooperman of Northeastern University (USA). Michael Monagan from Simon Fraser University (Canada) will be taking over this position.

## **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 10, 2011, SIGSAM had 251 members, which was a significant drop from the previous year 346. The 2010 membership count was artificially high following ISSAC 2009 where membership was provided to all non-SIGSAM members attending ISSAC. However, the count was still 292 the preceding year and the drop to 251 is a concern. SIGSAM officers will investigate this, do a review of member benefits, and determine a plan going forward to raise membership.

## **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. The advisory board has not been active in the last four years and the SIGSAM officers will look at how best to use the advisory board and a plan to reactivate the board.

## **SIGSAM Finances**

The attached financial report was prepared by Agnes Szanto (SIGSAM Treasurer), which is summarized below. Note that the financial report is conservative in that it accounts for an estimated loss for ISSAC 2011, which appears unlikely.

## **Summary**

We inherited a financially robust SIGSAM, with an opening balance of over \$50,000, well above what is minimally required, thanks to the fiscally conservative policies of our previous leaderships. SIGSAM was financially successful during the 2009-10 and 2010-11 fiscal years. During the 2009-2010 year SIGSAM added around \$3000 to the balance, and we expect the same amount for the 2010-11 fiscal year. The SIGSAM Board is considering to use some of the surplus funds to support student participants of future ISSAC conferences.