

## Candidate for Chair

Christopher W. Brown  
United States Naval Academy, Annapolis, MD, USA

### **BIOGRAPHY**

#### Academic Background:

Ph.D., University of Delaware, 1999, Computer Science.

#### Professional Experience:

Professor, United States Naval Academy, Annapolis, MD, USA, 1999 – Present.

#### Professional Interest:

Real polynomial constraints and SMT Solving; Quantifier elimination and simplification for real algebra; Server authentication for HTTPS; Intelligent tutoring systems; Cyber security education.

#### ACM Activities:

SIGSAM Bulletin/ACM ACA Editor, ACM SIGSAM, 2004 – 2006.

### **STATEMENT**

As a member of ACM and SIGSAM for nearly 20 years, and an active member of the computer algebra/symbolic computing research community for all that time, I have a sincere appreciation for the important role SIGSAM has to play. By sponsoring conferences, and awards and publishing Communication in Computer Algebra, SIGSAM has played a major role in keeping our community together. So a vibrant, healthy SIGSAM is essential to keeping the computer algebra/symbolic computing research community vibrant and healthy. However, SIGSAM currently faces some challenges that mirror challenges that the wider community faces as well, foremost among them are maintaining (or growing!) membership, and maintaining relevance. I'd like to see SIGSAM work more to connect researchers in computer algebra and symbolic computing with researchers in other disciplines. This kind of interaction can broaden the toolset we bring to problems, and focus our attention on relevant and important problems. It can bring new people into our community, and spread our community's results to wider audiences. The more SIGSAM can play a role in this kind of cross-pollination, the more people will see the organization and its value, and hopefully support it with membership and participation.

## Candidate for Chair

Michael Monagan  
Simon Fraser University, Burnaby, BC Canada

No biographical information or position statement was submitted.

## Candidate for Vice-Chair

Lihong Zhi  
Chinese Academy of Sciences, Beijing, China

### **BIOGRAPHY**

#### Academic Background:

Ph.D., Academy of Mathematics & System Sciences, 1996, Applied Mathematics.

#### Professional Experience:

Professor, Academy of Mathematics and Systems Science, CAS, Beijing, China, 2009 – Present;  
Associate Professor, Academy of Mathematics and Systems Science, CAS, Beijing, China, 2003 – 2008;  
Assistant Professor, Ehime University, Japan, 1998 – 2001.

#### Professional Interest:

Symbolic-Numeric Algorithms for Solving Polynomial Systems; Certified Global Optimization;  
Structured Matrices; Convex Real Algebraic Geometry; Verified Computations.

#### ACM Activities:

Program Committee Member (5 times), ISSAC, 2006 – 2017;  
Member of the Editorial Board, ACM Communications in Computer Algebra, 2009 – 2016;  
Chair, Steering Committee of ISSAC, 2013 – 2014.

#### Membership and Offices in Related Organizations:

Chair, Chinese Society of Computer Mathematics, 2016 – 2020;  
Member of the Steering Council, Chinese Mathematical Society, 2016 – 2020;  
Member, SIAM, 2006 – Present.

#### Awards:

The 7th China Young Female Scientists Award, 2011.

### **STATEMENT**

It is my great pleasure to run for the Vice-Chair position of ACM SIGSAM. I am committed to SIGSAM, having served as a member of the editorial board of the ACM Communications in Computer Algebra (2009 – 2016) and Steering Committee member of ISSAC (2011-2014), both sponsored by ACM SIGSAM. If elected, I will work diligently with the members of the SIGSAM executive committee and help SIGSAM continue to thrive.

## Candidate for Vice-Chair

Elias Tsigaridas  
INRIA, Paris, France

### **BIOGRAPHY**

#### Academic Background:

Ph.D., Dept. of Informatics, University of Athens, 2006, Algebraic Algorithms and Applications to Geometry.

#### Professional Experience:

Permanent Researcher (CR1), INRIA, Paris, France, 2012 – Present;  
Research Associate, Computer Science Dept., Aarhus University, Denmark, 2010 – 2012;  
Postdoctoral Researcher, INRIA, Sophia-Antipolis, France, 2007 – 2010.

#### Professional Interest:

Real Solving of Univariate Polynomials and Polynomial Systems; Computational Geometry; Game Theory; Polynomial Optimization.

#### ACM Activities:

Program Committee Member, SNC, 2014;  
Program Committee Member, ISSAC, 2011.

#### Awards:

Career Integration Grant (EU), 2013;  
ISSAC Distinguished Paper Award, 2010.

### **STATEMENT**

I am deeply honored to have been nominated to run for Vice-Chair of SIGSAM.

I have been a member of SIGSAM for many years. I have greatly benefited from the impact and influence of SIGSAM over the past years. The area of Symbolic and Algebraic Manipulation is an exciting research area with great researchers that contribute to a broad spectrum of science and engineering. I am proud to be a member of this community.

I am asking for your vote in order to serve our community as Vice-Chair of SIGSAM. My main objectives are to further increase the influence of our community, to attract new members that will be involved in all aspects of our activities, and to strengthen the bonds of symbolic computation with other research communities and applications.

## Candidate for Secretary

Clément Pernet  
Université Grenoble Alpes, Grenoble, France

### **BIOGRAPHY**

#### Academic Background:

Habilitation, Université Joseph Fourier, 2014, Computer Algebra.

#### Professional Experience:

Maître de conférence (Associate prof.), Université Grenoble Alpes, Grenoble, France, 2009 – Present;  
Acting Assistant Professor, University of Washington, Seattle, WA, 2008 – 2009;  
Postdoc Researcher, University of Waterloo, Ontario, Canada, 2006 – 2007.

#### Professional Interest:

Exact Linear Algebra; High Performance Computing; Mathematical Software; Coding Theory;  
Interactive Certification.

#### ACM Activities:

Associate Editor (representing SIGSAM), ACM Transaction on Mathematical Software, 2012 – Present;  
Treasurer, ISSAC '12, 2012;  
General Chair, PASCO '15, 2015.

#### Awards:

ACM ISSAC Distinguished Paper Award, 2015.

### **STATEMENT**

As associate professor, my research is primarily dedicated to computer algebra, and more precisely high performance algebraic computing. Over the years, I have experienced the value and strength of working within an international research community gathered around a strong conference, ISSAC, for which SIGSAM plays a central role. After having benefited from this community, I am willing to contribute back. I have already participated in the organization of several conferences (PASCO '10, ISSAC '12, PASCO '15), and actively represent our community within the broader field of Mathematical software, as associate editor of the ACM Transactions on Mathematical Software.

I am honored to have been proposed to run for secretary. I really appreciate the desire of SIGSAM's former chairs to gather an international representation within the SIGSAM officers, which I think will help coordinate with the various national organizations and federate the community worldwide. I am willing to serve as secretary with promptness and rigor and to participate in the discussions with other officers on how SIGSAM could best serve the computer algebra community.

## Candidate for Secretary

Luca De Feo  
Université de Versailles - Saint-Quentin, France

### **BIOGRAPHY**

#### Academic Background:

Ph.D., École Polytechnique, 2010, Fast Algorithms for Towers of Finite Fields and Isogenies.

#### Professional Experience:

Research Fellow, Inria Saclay, France, 2016 – Present;  
Assistant Professor, Université de Versailles - Saint-Quentin, France, 2011 – Present;  
Postdoctoral Fellow, University of Waterloo, Canada, 2011.

#### Professional Interest:

Algebraic Number Theory; Computer Algebra; Cryptography; Security.

#### Membership and Offices in Related Organizations:

Co-Organiser, Journées Nationales du Calcul Formel, 2017 – 2019;  
Member, Program Committee, International Workshop on the Arithmetic of Finite Fields, 2016;  
Member, Program Committee, Yet Another Conference on Cryptography, 2012.

#### Awards:

ISSAC Best Poster Award, 2015;  
ISSAC Student Paper Award, 2009.

### **STATEMENT**

I am honoured to have this opportunity to run for Secretary of SIGSAM. Since the beginning of my Ph.D., SIGSAM has been a very welcoming community for me, and ISSAC my favorite conference. By running for Secretary, I hope to put my energy and my experience at the service of the community, to help promote our field both within ACM, and in the broader Computer Science and Mathematics communities.

I have already gathered a good working knowledge organizing workshops both at the local and the national level, and I am well connected with some neighboring communities (number theory, cryptography). I am a strong advocate of open source software, giving a significant amount of my time to the advancement of computational mathematics, notably through my contributions to SageMath, and my activity within the European project OpenDreamKit. I value research software as much as papers, and I deeply appreciate the support that SIGSAM gives to software development through the Richard D. Jenks prize. If elected Secretary, I will make every effort to encourage and promote the software developed by the community, and will push for even more support from SIGSAM.

## Candidate for Treasurer

Matthew England  
Coventry University, United Kingdom

### **BIOGRAPHY**

#### Academic Background:

Ph.D., Heriot Watt University, 2010, Mathematics.

#### Professional Experience:

Lecturer in Computer Science, Coventry University, UK, 2015 – 2017;

Research Officer, University of Bath, U.K., 2012 – 2015;

Temporary Lecturer in Mathematics, University of Glasgow, UK, 2010 – 2012.

#### Professional Interest:

Symbolic Computation; Computer Algebra Systems; Quantifier Elimination; Polynomial Systems; Cylindrical Algebraic Decomposition.

#### ACM Activities:

Information Director, SIGSAM, 2015 – 2017.

### **STATEMENT**

I am a doctor of Mathematics and a Lecturer in Computer Science, having long worked at the intersection of both. My main topic of research is tools for quantifier elimination, especially cylindrical algebraic decomposition, and as such I have been a contributor to both ISSAC and ACM CCA. I have been a SIGSAM member since I started working in this field in 2012; and since January 2015 I have held the position of SIGSAM Information Director. Within this role I have redesigned the website to its present form and maintained the mailing lists. I also helped organize ISSAC 2015 in Bath. I value SIGSAM as the unifying organisation for our field, providing unique outlets for our research and a valuable point of communication for our community. I would be happy to continue serving in the role of Treasurer.

## Candidate for Treasurer

Daniel S. Roche  
U.S. Naval Academy, Annapolis, MD, USA

### **BIOGRAPHY**

#### Academic Background:

Ph.D., University of Waterloo, 2011, Computer Science.

#### Professional Experience:

Associate Professor, U.S. Naval Academy, Annapolis, MD, 2016 – Present;  
Assistant Professor, U.S. Naval Academy, Annapolis, MD, 2011 – 2016;  
Sessional Instructor, University of Waterloo, Ontario, Canada, 2009 – 2011.

#### Professional Interest:

Symbolic Computation; Computer Algebra; Computer Security; Privacy; Algorithms.

#### Membership and Offices in Related Organizations:

Program Committee, ISSAC, 2017 – Present;  
Steering Committee, ISSAC, 2015 – Present;  
Treasurer, ISSAC, 2013.

### **STATEMENT**

SIGSAM has an important role to play in maintaining the good professional reputation of symbolic computation and computer algebra within the computer science community, and in supporting the careers of scholars in the field to keep our academic community vibrant. I have served as ISSAC treasurer in Boston a few years ago, and so have some familiarity already with ACM bookkeeping and budgets. As treasurer for SIGSAM, I will look for creative ways to guide the organization forward and keep it healthy not just financially but also scientifically.