

Panel Discussion

Computer Algebra: What is it Now? and What should it be Tomorrow?

East Coast Computer Algebra Day — April 21, 2007

Panelists: Jeremy Johnson, Erich Kaltofen, Stephen Watt

Hear these prominent researchers in the field of computer algebra and symbolic computation discuss and share their views on these topics and more:

- How do we describe our field? How do we explain it to other scientists?
- What are the strengths and weaknesses of our field? Are we choosing the right questions to answer?
- What are the future directions and challenges of our field?

About the panelists:

Jeremy Johnson is a Professor in the Departments of Computer Science and Electrical and Computer Engineering at Drexel University. He serves as Head of the Computer Science Department. As a student of George Collins, he wrote his doctoral thesis on real root isolation. He now has over fifty publications in computer algebra, signal processing, programming languages, and high performance computing. His research has been funded by significant grants from the NSF, DARPA, and DoE, twice over a million dollars. He helped found the SPIRAL project, which automates the optimization of Digital Signal Processing algorithms. He serves on the ISSAC Steering Committee and helped organize the first ECCAD.

Erich Kaltofen is a Professor of Mathematics, an Associate Member of Computer Science, and a member of the Genomics Faculty at North Carolina State University. He has over one hundred publications and has made important contributions to polynomial factorization, linear algebra, the design of computer algebra systems, among many other topics. He recently held a position as Visiting Scholar at MIT. He gave an invited lecture at ISSAC 2003 and won an ISSAC Distinguished Paper Award in 2005. He chaired ACM SIGSAM from 1993 to 1995. He was an architect of the ISSAC Steering Committee and served as its chair in 2004-2005. He is a member of the Editorial Board of the Journal of Symbolic Computation.

Stephen Watt is a Professor of Computer Science and Honorary Professor of Applied Mathematics at the University of Western Ontario and Director of ORCCA, the Ontario Research Centre for Computer Algebra. He was named Distinguished Research Professor at UWO in 2002. He has over one hundred publications in computer algebra, programming languages, pen-based mathematical computing and mathematical knowledge management, and is one of the authors of Maple, Axiom, Aldor, MathML and InkML. He is a prolific organizer of conferences, including, this year, SNC and PASCO. He serves on the Editorial Board of the Journal of Symbolic Computation and on the Board of Directors of Maplesoft and of the Fields Institute. He chaired ACM SIGSAM from 1995-1997 and served as the initial chair of both the ISSAC Steering Committee and the SNC Steering Committee.

Moderator: Emil Volcheck, Chair, ACM SIGSAM

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