

The 44th International Symposium on Symbolic and Algebraic Computation

ISSAC 2019

15-18 July 2019

Beihang University, Beijing, China

General Chairs

James Davenport Dongming Wang

Program Committee Chair

Manuel Kauers

Local Arrangements Chairs

Chenqi Mou Zhikun She

Treasurer Xiaohong Jia

Publicity Chair Matthew England



Invited Talks

- **Bill Chen**, Nankai University, Tianjin, China.
The Art of Telescoping --- Theory and Applications
- **Lorenzo Robbiano**, University of Genova, Genova, Italy.
Linear Algebra, Old and New
- **Virginia Vassilevska Williams**, MIT, USA.
Limits on All Known (and Some Unknown) Approaches to Matrix Multiplication

Conference topics

All areas of computer algebra and symbolic computation including, but are not limited to:

Algorithmic aspects:

Exact and symbolic linear, polynomial and differential algebra
Symbolic-numeric, homotopy, perturbation & series methods
Computational algebraic geometry, group theory and number theory, quantifier elimination and logic
Computer arithmetic
Summation, recurrence equations, integration
Solution of ODEs & PDEs
Symbolic methods in other areas of mathematics
Complexity of algebraic algorithms and algebraic complexity

Software aspects:

Design of symbolic computation packages and systems
Language design and type systems for symbolic computation
Data representation
Considerations for modern hardware
Algorithm implementation and performance tuning
Mathematical user interfaces
Use with systems for, e.g., digital libraries, courseware, simulation and optimization, automated theorem-proving, computer-aided design, and automatic differentiation.

Application aspects:

Applications that stretch the current limits of computer algebra algorithms or systems, use computer algebra in new areas or new ways, or apply it in situations with broad impact.

