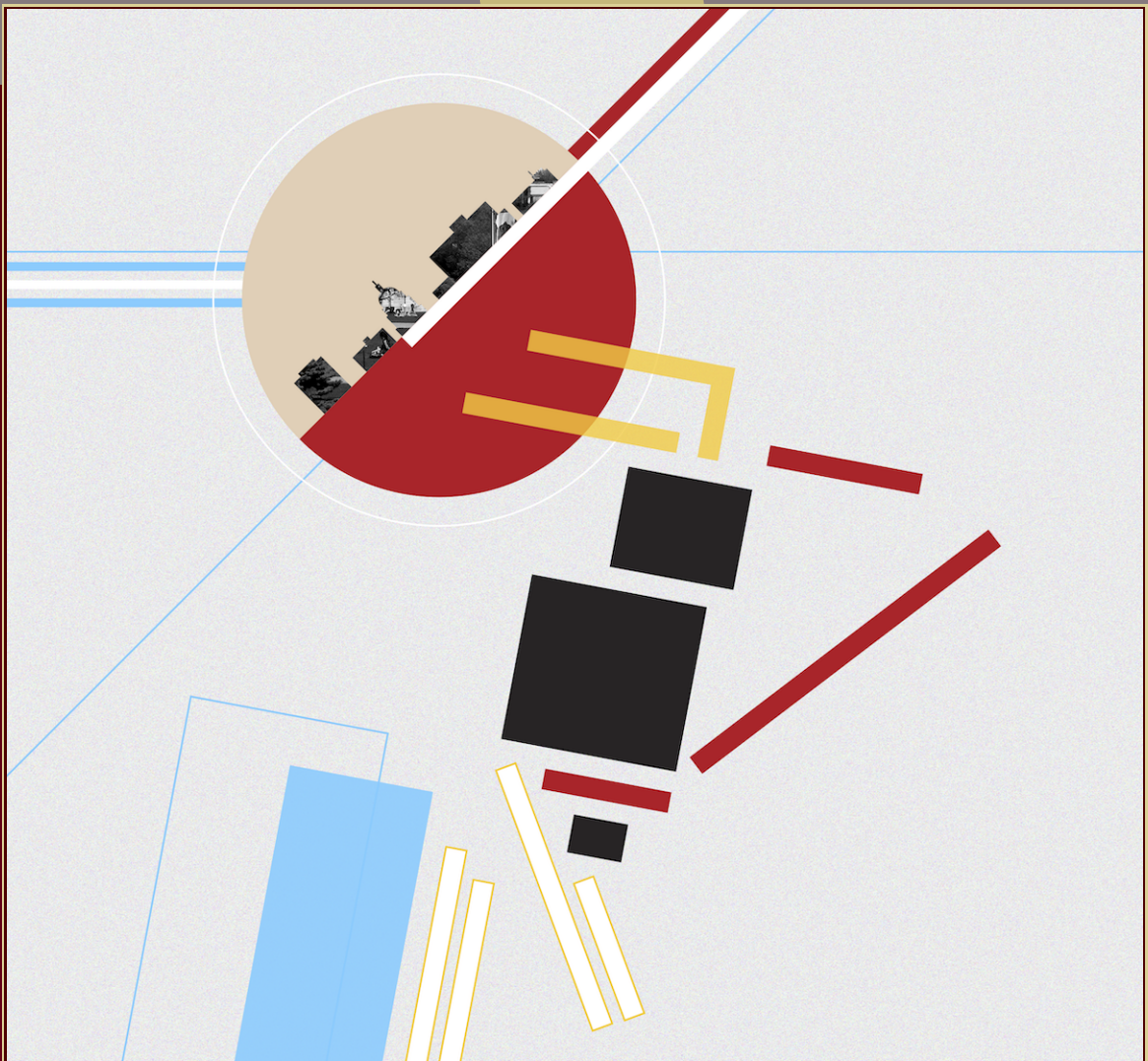


ANTS XIII

Proceedings of the Thirteenth Algorithmic Number Theory Symposium

Preface

Renate Scheidler and Jonathan Sorenson



Preface

The biennial, international Algorithmic Number Theory Symposium (ANTS) provides the premier international forum for state-of-the-art research in computational and algorithmic number theory. This conference is devoted to algorithmic aspects of all branches of number theory, including elementary number theory, algebraic number theory, analytic number theory, geometry of numbers, arithmetic algebraic geometry, finite fields, and cryptography.

ANTS-XIII, the thirteenth meeting in the Algorithmic Number Theory Symposia series, was held July 16-20, 2018, at the University of Wisconsin-Madison. This volume contains the 28 contributed papers that were presented at the conference; each paper was presented by one of the paper's authors. These 28 papers were selected from 48 submissions through a double-blind refereeing process, where the program committee solicited a minimum of two expert referees for each paper.

In addition to the contributed papers, the conference featured five invited plenary speakers, a poster session on the afternoon of July 17, and a rump session on the afternoon of July 19.

The organizing committee encouraged participation by women and underrepresented minorities. The 109 people who attended represented 13 countries. About 38% of the attendees were graduate or undergraduate students, and about 26% identified as female.

Details about ANTS-XIII, such as the conference schedule, talk slides, abstracts of talks and posters, and more can be found on the conference website at <http://www.math.grinnell.edu/~paulhusj/ants2018/>.

Plenary speakers

Jennifer Balakrishnan (Boston University, USA)

Noam Elkies (Harvard University, USA)

Steven Galbraith (University of Auckland, New Zealand)

Melanie Matchett Wood (University of Wisconsin-Madison, USA)

Emmanuel Thomé (INRIA, Nancy, France)

Selfridge Prize

At each ANTS meeting since 2006, the Selfridge Prize in Number Theory has been awarded for the best submitted paper as judged by the program committee; the prize carries a cash award funded by the Number Theory Foundation. The winners of the 2018 Selfridge Prize are Michael Musty (Dartmouth College, USA), Sam Schiavone (Dartmouth College, USA), Jeroen Sijsling (Universität Ulm, Germany), and John Voight (Dartmouth College, USA) for their paper “A database of Belyi maps”.

Poster Session Prize

The poster session was held Tuesday, July 17 from 2:30 to 3:45 PM. There were 19 poster presentations. Thanks to a generous gift from the American Mathematical Society, the top poster at the conference, as chosen by participant vote, was awarded a US\$150 gift certificate to the AMS bookstore. This award went to Travis Scholl (University of Washington, USA), for his poster “Abelian varieties with few isogenies and cryptography.”

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The organizers also wish to thank everyone who contributed their time and expertise on a volunteer basis, including members of the program committee, anonymous referees, session chairs, and graduate students who helped with the registration table. Thank you to Daniel J. Bernstein (University of Illinois at Chicago, USA) and Tanje Lange (Technische Universiteit Eindhoven, The Netherlands) for organizing and running the Rump Session. Thanks to all the staff members at the co-organizers' home institutions who provided support.

The cover image is based on a design by Linh Chi Bui.

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Thirteenth Algorithmic Number Theory Symposium

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This volume is the proceedings of the thirteenth ANTS meeting, held July 16-20, 2018, at the University of Wisconsin-Madison. It includes revised and edited versions of 28 refereed papers presented at the conference.

Edited by Renate Scheidler and Jonathan Sorenson

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