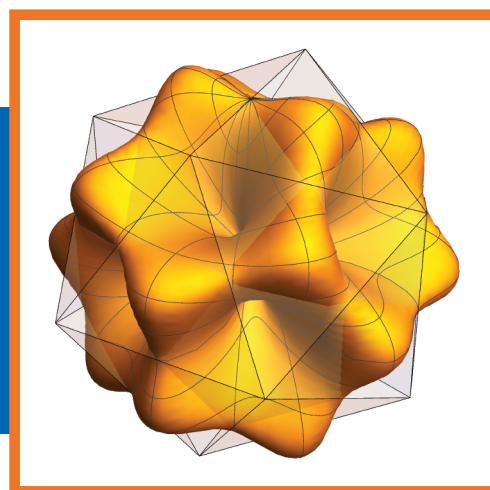


AMS SHORT COURSE

Sum of Squares: Theory and Applications



January 14–15, 2019, Baltimore, MD

(in conjunction with the Joint Mathematics Meetings)

The American Mathematical Society's Short Courses connect mathematicians and students to emergent areas of applied mathematics through a series of survey lectures and activities. Short Courses are designed to introduce state-of-the-art research to a non-specialist audience, fueling their curiosity, discovery, and research.

In 2019, the Short Course lecturers focus on the theory and application of sums of squares (SOS) polynomials. These applications span a wide spectrum of mathematical disciplines from real algebraic geometry to convex geometry, combinatorics, real analysis, theoretical computer science, quantum information and engineering.

Course Organizers:

Pablo A. Parrilo, *Massachusetts Institute of Technology*

Rekha R. Thomas, *University of Washington*

Lecture Topics:

Overview of SOS polynomials,

Greg Blekherman, *Georgia Institute of Technology*

Lifts of Convex Sets,

Hamza Fawzi, *University of Cambridge*

Engineering Applications,

Georgina Hall, *Princeton University*

Theoretical Computer Science,

Ankur Moitra, *Massachusetts Institute of Technology*

Algebraic Geometry,

Mauricio Velasco, *Los Andes University*

Geometry of Spectrahedra,

Cynthia Vinzant, *North Carolina State University*