2:00 p.m. | Will Perkins  
Georgia Tech  

Searching for (sharp) thresholds in random structures: where are we now?  
Phase transitions, hard computational problems, and the emergence of intricate structures in random graphs—how are these phenomena connected and how can we understand them?

3:00 p.m. | Hussein Mourtada  
Université Paris Cité  

Hilbert meets Ramanujan: singularity theory and integer partitions  
What can singularities of algebraic varieties say about the various decompositions of a positive integer into a sum of positive integers?

4:00 p.m. | Holly Krieger  
University of Cambridge  

Uniformity when arithmetic meets geometry  
Understanding how algebra and geometry provide uniform control over the number of rational points on a curve.

5:00 p.m. | Ravi Vakil  
Stanford University  

Passing a curve through n points—solution of a 100-year-old problem  
When can you string a curve through a number of points in space? How two young researchers finally settled an ancient problem.  

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Organized by David Eisenbud, University of California, Berkeley