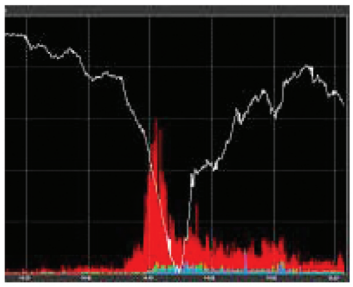
INSTITUTE FOR PURE AND APPLIED MATHEMATICS

Los Angeles, California



Broad Perspectives and New Directions in Financial Mathematics

March 9 – June 12, 2015

ORGANIZING COMMITTEE: **René Carmona** (Princeton University), **George Papanicolaou** (Stanford University) and Thaleia Zariphopoulou (Univ. of Texas at Austin)

Scientific Overview

The financial crisis of 2007-2008 has dramatically changed research in quantitative finance. The perfect replication paradigm, at the root of the success of the Black and Scholes model, became unsound in light of the dire illiquidity problems that caused several major collapses. As a result, the center of gravity of research in quantitative finance has shifted away from pricing and hedging and from the credit markets. While these problems remain of great importance, new problems are now taking center stage.

This IPAM program will address the stability of the network of financial institutions, the impact of high frequency and algorithmic trading, the financialization of the commodity markets, and the huge challenges raised by the size and the speed of trade data. This program will bring together academic mathematicians, economists, regulators, and experts from the finance industry to seed research – even if speculative – in these areas.

Workshop Schedule

- Financial Mathematics Tutorials. March 10 - 13, 2015.
- Workshop I: Systemic Risk and Financial Networks. March 23 - 27, 2015.
- Workshop II: The Mathematics of High Frequency Financial Markets. April 13 - 17, 2015.
- Workshop III: Commodity Markets and their Financialization. May 4 - 8, 2015.
- Workshop IV: Forensic Analysis of Financial Data. May 18 - 22, 2015.
- Culminating Workshop at Lake Arrowhead Conference Center. June 8 - 12, 2015.

Participation

This long program will involve a community of senior and junior researchers. Full and partial support for participants is available. We are especially interested in applicants who intend to participate in the entire program, but will consider applications for shorter periods. Funding is available for participants at all academic levels, though recent PhDs, graduate students, and researchers in the early stages of their careers are especially encouraged to apply. Encouraging the careers of women and minority mathematicians and scientists is an important component of IPAM's mission and we welcome their applications. Applications will be accepted through Tuesday, December 9, 2014 but decisions will be made starting in July. More information and an application are available online.

www.ipam.ucla.edu/programs/fm2015

NSF UCLA ipam