MATH-IMS Joint Pure Mathematics Colloquium Series
The Chinese University of Hong Kong

This Colloquium Series in Pure Mathematics is organized by the Department of Mathematics and the Institute of Mathematical Sciences (IMS) at The Chinese University of Hong Kong. The series focuses on all areas of pure mathematics together with theoretical developments and applications.

Date: March 25, 2022 (Friday)
Time: 4:00PM-5:00PM (Hong Kong Time)
Zoom Link: https://cuhk.zoom.us/j/98846779826

Real Gromov-Witten theory

Speaker: Professor Penka Georgieva
Sorbonne University

Abstract: For a symplectic manifold with an anti-symplectic involution one can consider J-holomorphic maps invariant under the involution. These maps give rise to real Gromov-Witten invariants and are related to real enumerative geometry in the same spirit as their more classical counterparts; in physics they are related to orientifold theories. In this talk I will give an overview of the developments in real Gromov-Witten theory and discuss some properties of the invariants.

Bio: Prof. Georgieva received her PhD degree from Stanford University in 2011 under the supervision of Prof. Eleny Ionel. After graduation, she was an instructor at Princeton University from 2011 to 2014, a postdoc at the French National Centre for Scientific Research (CNRS), before she joined l'Institut de Mathématiques de Jussieu-Paris Rive Gauche, Sorbonne University where she is now a full professor. Prof. Georgieva's research interests include enumerative geometry, symplectic topology, real algebraic geometry, moduli spaces and Gromov-Witten theory, in particular on open and real Gromov-Witten invariants. She is an invited speaker at the upcoming 2022 International Congress of Mathematicians.