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

This MATH-IMS Joint 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 focus on all areas of pure mathematics together with theoretical developments and applications.

Date: November 19, 2020 (Thursday)
Time: 10am – 11am (Hong Kong Time)
Zoom Link: https://cuhk.zoom.us/j/98846779826

Geometry and dynamics on K3 surfaces

Speaker: Professor Valentino Tosatti
Northwestern University / McGill University

Abstract: K3 surfaces are a class of compact complex manifolds that enjoys many special properties and play an important role in several areas of mathematics. In this colloquium I will discuss a new interplay between complex geometry and analysis on K3 surfaces equipped with their Calabi-Yau metrics, and dynamics of holomorphic diffeomorphisms of these surfaces, that Simion Filip and I have been investigating recently.

Bio: Prof. Tosatti obtained his PhD in 2009 at Harvard University, under the supervision of Prof. S.-T. Yau. After that, he was a Ritt Assistant Professor at Columbia University until 2012, when he took up an associate professor position at Northwestern University, where he is currently a full professor. Prof. Tosatti's research interests are differential geometry, geometric analysis, complex algebraic geometry and partial differential equations. He has made fundamental contributions in the study of degeneration of Calabi-Yau metrics, and together with his collaborators solved the longstanding Gauduchon conjecture. Prof. Tosatti was awarded the Sloan Fellowship in 2012, Premio Renato Caccioppoli Prize in 2018, and a Fellow of the American Mathematical Society in 2019.