THE UNIVERSITY   **OF HONG KONG**

Institute of Mathematical Research
Department of Mathematics

Geometry Seminar

Dualities and index theory in topological matter

Dr. Guo Chuan Thiang
The University of Adelaide, Australia

Abstract

I will explain how *K*-theory and index theory power the most dramatic feature of topological insulators --- a newly-discovered physical system which appears completely boring in its interior, yet acquires amazing "topologically protected" properties on its boundary. One also discovers new *T*-dualities in the form of geometric Fourier transforms, having both computational utility and connections to deep isomorphism conjectures of Baum-Connes.

Date: October 18, 2019 (Friday)

Time: 2:30 – 3:30pm

Venue: Room 210, Run Run Shaw Bldg., HKU

All are welcome