THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY

Department of Mathematics

SEMINAR ON DATA SCIENCE AND APPLIED MATHEMATICS

Geometric Methods for Optimal Transportation

By

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Abstract

Optimal transport maps play fundamental roles in many engineering and medical fields. Due to the highly non-linear nature of the Monge-Amepre equation, the computation of optimal transport maps is very challenging. In this talk, we briefly introduce the concepts and theories of optimal transportation, then explain several algorithms based on Alexandrov theory and Minkowski theory and geometric variational theory. Some applications will be briefly introduced as well.

Biography

David Xianfeng GU is a New York Empire Innovation Professor at the Department of Computer Science, Stony Brook University. He received his PhD degree from the Department of Computer Science, Harvard University in 2003, supervised by the Fields Medalist Prof. Shing-Tung Yau, and BS degree from Tsinghua University, Beijing, China in 1995. His research focuses on applying modern geometry in engineering and medical fields. He is a recipient of Morningside Gold Medal of Applied Mathematics 2013 and National Science Foundation (NSF) Faculty Early Career Award 2005.

Date : 10 March 2022 (Thursday)

Time : 9:00am

Zoom Meeting : https://hkust.zoom.us/j/5616960008 **(Passcode: hkust)**

All are Welcome!