

## 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:** January 9, 2024 (Tuesday)  
**Time:** 2:00PM-3:00PM (Hong Kong Time)  
**Venue:** AB1 501a

### Ghost Effect from Boltzmann Theory

*Speaker: Professor Yan Guo  
Division of Applied Mathematics  
Brown University*

**Abstract:** We present a recent joint work with Esposito, Marra and Wu to establish the validity for ghost effect arising in the hydrodynamic limit for the Boltzmann theory.

**Bio:** Professor Yan Guo is currently L. Herbert Ballou University Professor of Applied Mathematics at the Division of Applied Mathematics at Brown University. He received his B.S. from Peking University in 1987, and his Ph.D in Mathematics from Brown University in 1993. He was a Courant Instructor at the Courant Institute of Mathematical Sciences for 1993-1995. He joined the faculty of the Division of Applied Mathematics at Brown University as an Assistant Professor in September 1995. He was an Assistant Professor at Princeton University for 1996-1997. He was named a Manning Assistant Professor at Brown for 1998 to 1999, and was promoted to an Associate Professor in 1999 and then Professor in 2004. Professor Guo is a leading expert in kinetic theory and mathematical fluid dynamics. His research is concerned with the rigorous mathematical study of PDEs arising in various scientific applications, such as kinetic and fluid models for plasma physics, vortices in classical field theory, and stability problems in stellar dynamics, and other physical problems. He received an NSF Postdoctoral Fellowship for 1995-1998, an A. P. Sloan Research Fellow for 1998-2000, and a Simons Research Fellow for 2015-2016. He was a plenary lecture speaker in ICCM 2013. He was named as Fellow of AMS in 2017.