PROBABILITY SEMINAR SERIES

TOPIC: Geometric Deviation From Levy's Occupation Measure Arcsine Law

SPEAKER: Elton P. Hsu, Northwestern University and University of Science and Technology of China

TIME: 11:00am-12:00pm, Tuesday, November 14, 2017

VENUE: Room 264, Geography Building, Zhongbei Campus
(华东师范大学中山北路校区，地理楼 264 室)

ABSTRACT OF THE TALK

The classical result of Paul Levy starts that for a standard 1 dimensional Brownian motion starting from zero, the time it spends in the positive region obeys the arcsine law. We will study the occupation measure of a Brownian motion on a Riemannian manifold locally on one side of a smooth hypersurface and characterize its deviation from the classical arcsine law in terms of the mean curvature of the hypersurface.

This research is a joint work with Cheng Ouyang (University of Illinois at Chicago).

BIOGRAPHY

Elton P. Hsu is Professor of Mathematics at Northwestern University and Thousand Talents Program Visiting Professor at University of Science and Technology of China. He has been working at Stanford University, Courant Institute of Mathematical Sciences of New York University, University of Illinois, and Northwestern University. He has been editor for numerous world famous academic journals such as Annals of Probability. His research interests lie in probability theory, stochastic analysis, partial differential equations, differential geometry, etc. His research on stochastic analysis emphasizes applications to parabolic equations in a geometric setting.