NYU-ECNU Institute of Mathematical Sciences at NYU Shanghai

LITERATURE AND WORKING SEMINAR

Topic: **Extreme Problems for Dirichlet Eigenvalues.**

Speaker: **Prof. Lin Fanghua**

Time: 14:30-16:30, 24 October 2013

Venue: Room 157, Geography Building, 3663 Zhongshan Road North, Shanghai (华东师范大学中山北路校区，地理楼157 室)

ABSTRACT OF THE TALK

Given a bounded domain in the Euclidean space, we divide it into N disjoint subdomains. We then study how to minimize the vector norm of the vector formed from taking the first eigenvalues of the N subdomains as the N components of the vector.

This problem was studied by many authors. I shall discuss two most interesting special cases: the L1-norm and L-infinity norm cases. The former was studied systematically by Caffarelli and myself and the latter by P. Beredo and B. Helffer, among many others. I shall however, discuss the case when N becomes very large. It is related to many fundamental questions in both physics and mathematics.

BIOGRAPHY

Lin Fanghua is the Silver Professor at the Courant Institute of Mathematical Sciences.