

Science Distinguished Lecture Series

Extremum Problems for Laplacian Eigenvalues



Professor Fanghua Lin

*Silver Professor, Courant Institute of Mathematical Sciences, New York University
Fellow, American Academy of Arts and Sciences*

Date: 5 December 2014 (Friday)

Time: 4:30 pm - 5:30 pm (Preceded by Reception at 4:00 pm)

Venue: 1/F Shiu Pong Hall,
Hong Kong Baptist University

Abstract

Eigenvalue Problems for Laplacians are among most well-known problems in classical analysis, partial differential equations, calculus of variations and mathematical physics. In this lecture I shall discuss a couple very basic extremum problems involving eigenvalues of the Laplacian. Such problems arise in shape optimizations, pattern formations and other studies in science, and solutions to these problems have been challenging for a very long time. In particular, we shall see how classical Rayleigh-Faber-Krahn inequalities and Weyl's asymptotic formula along with theorems concerning nodal domains coming into play in understanding of these problems. The lecture would be a brief and elementary survey of some of recent results.

✦ ✦ ✦ **All are welcome** ✦ ✦ ✦

For enquires please contact Ms. Claudia Chui, 3411 2348.

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