

Three Excursions around Laplacians

Thursday, April 6, 2017

5:30 – 6:30pm

1147 Mathematical Sciences Building

Reception to Follow



Abstract:

I will take you to three excursions around Laplacians, ubiquitous operators in mathematics and its applications. The first excursion is to show you how the Laplace operator in rectangular domains in \mathbf{R}^2 helps image compression such as the JPEG. The second excursion is to show you the world of complicated non-rectangular domains in \mathbf{R}^d and how to compute Laplacian eigenfunctions and obtain information about the geometry of the domains and the statistics of data recorded on such domains. Our third excursion is to introduce you to the wonderful world of graphs and show you what the Laplacians on graphs can do for many applications while paying attention to some dangerous slips.



Speaker:

Naoki Saito

UC Davis

Professor of Mathematics

Chair of GGAM, 2007-2012

JSIAM Best Author Award from the

Japan Society for Industrial and

Applied Mathematics (JSIAM), Sep.

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