

PIMS - UNBC Distinguished Colloquium Nilima Nigam, Simon Fraser University

April 15, 2021

12:30PM Pacific, Online

Why should we care about Steklov eigenproblems?

Steklov eigenproblems and their variants (where the spectral parameter appears in the boundary condition) arise in a range of useful applications. For instance, understanding some properties of the mixed Steklov-Neumann eigenfunctions tells us why our coffee may spill when we walk. In this talk, I'll present a high-accuracy discretization strategy for computing Steklov eigenpairs, and then show some applications.



Speaker Biography:

Nilima Nigam is a professor in the Department of Mathematics at Simon Fraser University. She received her PhD in Applied Mathematics from the University of Delaware in 1999 and held an Industrial Postdoctoral Fellowship at the Institute for Mathematics and its Applications at the University of Minnesota. Dr. Nigam was an associate professor at the Department of Mathematics and Statistics at McGill University until 2008, when she joined the Department of Mathematics at SFU and held a Tier II Canada Research Chair in Applied Mathematics. Dr. Nigam's research interests are in the areas of partial differential equations and numerical analysis, with applications in computational electromagnetics, mathematical physiology and spectral geometry. Dr. Nigam maintains an active research program and has interdisciplinary collaborations with the Department of Biomedical Physiology and Kinesiology and School of Engineering Science at SFU. Moreover, she has held many roles on committees from NSF, SIAM and CAIMS, and was an associate scientific director at MITACS. She is the recipient of several awards and honours for her outstanding contributions in research, teaching and mentorship. Among these awards are Canada Research Chair in Applied Mathematics, NSERC Discovery Accelerator Supplement and McGill Principal's Prize for Excellence in Teaching.

For more details please see: https://www.pims.math.ca/scientific-event/210415-pudlnn







