THE WEIZMANN INSTITUTE OF SCIENCE
FACULTY OF MATHEMATICS AND COMPUTER SCIENCE

Mathematical Analysis and Applications Seminar

Room 1, Ziskind Building
on Tuesday, Jan 31, 2017
at 11:15

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University of Montreal

Sloshing, Steklov and corners

Abstract:
The sloshing problem is a Steklov type eigenvalue problem describing small oscillations of an ideal fluid. We will give an overview of some latest advances in the study of Steklov and sloshing spectral asymptotics, highlighting the effects arising from corners, which appear naturally in the context of sloshing. In particular, we will outline an approach towards proving the conjectures posed by Fox and Kuttler back in 1983 on the asymptotics of sloshing frequencies in two dimensions. The talk is based on a joint work in progress with M. Levitin, L. Parnovski and D. Sher.