



THE WEIZMANN INSTITUTE OF SCIENCE
FACULTY OF MATHEMATICS AND COMPUTER SCIENCE
Geometric Functional Analysis and Probability Seminar

Room 261 ,Ziskind Building
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Recent advances in geometric optimization of eigenvalues of the Laplace-Beltrami
operator on closed surfaces

Abstract:

Since a metric defines the Laplace-Beltrami operator on a closed surface, the eigenvalues of the Laplace-Beltrami operator are functionals on the space of Riemannian metrics on the surface. A metric is called maximal for i -th eigenvalue if the i -th eigenvalue attains its maximum on this metric. It turns out that the question about finding maximal metrics is very deep and related to analysis, topology, algebraic and differential geometry. In this talk several recent advances in this question will be exposed.