Geometric Functional Analysis and Probability Seminar

Room 261, Ziskind Building
on Thursday, Mar 03, 2016
at 11:05

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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 attends 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.