

UNIVERSIDADE FEDERAL DE SÃO CARLOS
DEPARTAMENTO DE MATEMÁTICA

COLÓQUIOS DO VERÃO

José Nazareno Vieira Gomes
(UFAM)

Falará sobre

On Eigenvalue Generic Properties of the Laplace-Neumann Operator

We establish the existence of analytic curves of eigenvalues for the Laplace-Neumann operator through an analytic variation of the metric of a compact Riemannian manifold M with boundary by means of a new approach rather than Kato's method for unbounded operators. We obtain an expression for the derivative of the curve of eigenvalues, which is used as a device to prove that the eigenvalues of the Laplace-Neumann operator are generically simple in the space \mathcal{M}^k of all C^k Riemannian metrics on M . This implies the existence of a residual set of metrics in \mathcal{M}^k , which make the spectrum of the Laplace-Neumann operator simple. We also give a precise information about the complementary of this residual set, as well as about the structure of the set of the deformation of a Riemannian metric which preserves double eigenvalues.

Data: 16 de janeiro de 2019

Horário: 16h

Local: Auditório do DM