

Insalate di Matematica presents

Introduction to Perturbation Theory for spectrum of differential linear operators

Laura Abatangelo

Università degli Studi di Milano-Bicocca

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In this talk we introduce the perturbation theory for spectrum of operators in Hilbert spaces, in particular uniformly elliptic differential operators in compact frameworks. In the first part we will look at the basic result that convergence of resolvent operators implies spectral stability. In the second part, we will address regular domain perturbations and see results on derivatives of eigenvalues with respect to the perturbation's parameter.

Keywords:

**resolvent operators • eigenvalues of operators • variable domains
• asymptotics of eigenvalues**

"Obvious" is the most dangerous word in mathematics.
- Eric Temple Bell