

MAFIA - seminář, který se neodmítá

Spectral analysis and applications for some non-selfadjoint models

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Abstract: The properties of some simple non-selfadjoint models, such as the complex Airy operator, Davies operator or the complex cubic oscillator, have been recently investigated in order to highlight some surprising properties of non-selfadjoint (non-normal) operators. For instance, the so-called Davies operator has played an important role in the understanding of the spectral instability phenomenon. In this talk, we will recall the main spectral and pseudospectral properties for these models, and then present a wide range of applications, including problems arising from non-hermitian quantum mechanics, control theory or superconductivity.