Mathematics, Statistics, and Computer Science   **@ UIC**

Analysis and Applied Mathematics Seminar

Perturbation theory for embedded eigenvalues: Rayleigh-Schrödinger expansion, spectral concentration and metastable states.

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Abstract: Perturbation theory for embedded eigenvalues and exponential decay for resulting metastable states are considered. The relations between the formal Rayleigh-Schrödinger expansion, spectral concentration and decay law for metastable states are discussed in the smooth setting. The main result is that if the FGR constant vanishes then the first order correction in the Rayleigh-Schrödinger expansion is well defined and the exponential decay law for the corresponding metastable state has both the decay rate and error term of order ϵ^4 where ϵ is the perturbation strength.

Monday, September 28 at 4:00 PM in SEO 636