

Meeting on Computational and Analytic Problems in Spectral Theory

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Abstract of Talk

A VERSION OF THE RADÓ-KNESER-CHOQUET THEOREM FOR SOLUTIONS OF THE HELMHOLTZ EQUATION IN 3D

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In this talk I will discuss a method to prove the absence of critical points for the Helmholtz equation in 3D. The key element of the approach is the use of multiple frequencies in a fixed range, and the proof is based on the spectral analysis of the associated problem. This question is strictly connected with the Radó-Kneser-Choquet theorem, whose direct extension to the Helmholtz equation or to three dimensions is not possible.