



Announcing

A COS 740 Seminar

Friday, May 4, 2007 at 2:00 pm

TEC 202

at The University of Southern Mississippi

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Universidade Federal do Rio de Janeiro

Title: Identification of star shaped sources from boundary measurements

Abstract:

The problem of shape reconstruction of an unknown characteristic source inside a domain is analyzed. We consider a conductivity problem where the heat source is defined as a characteristic function. Restrictions to star-shaped sets arise from a uniqueness theorem by Novikov and are discussed in the context of a Fourier problem. A numerical method based on the reciprocity gap functional for harmonic polynomials and series truncation is proposed to recover the unknown shape from Cauchy noisy data. Extensions to other problems will be discussed. The work is done jointly with J.S. Alves.

Further Information

Further details and information about this and other departmental activities is available online at http://www.math.usm.edu/bulletin_board/.