



ЮЖНЫЙ ФЕДЕРАЛЬНЫЙ УНИВЕРСИТЕТ
Региональный математический центр
SOUTHERN FEDERAL UNIVERSITY
Regional Mathematical Center
<https://rmc.sfedu.ru/>, Rostov-on-Don, Russia

International scientific online seminar on
Analysis, Differential Equations and Mathematical Physics

Coordinators: Prof. Alexey Karapetyants, Prof. Vladislav Kravchenko

26th November 2020, 6 pm (UTC+3)

On an interior Calderon operator and a related
Steklov eigenproblem for Maxwell's equations
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A Steklov-type problem for Maxwell's equations will be discussed, which is related to an interior Calderon operator and an appropriate Dirichlet-to-Neumann type map. The corresponding Neumann-to-Dirichlet map turns out to be compact and this provides a Fourier basis of Steklov eigenfunctions for the associated energy spaces. With an approach similar to that developed by Auchmuty for the Laplace operator, we provide natural spectral representations for the appropriate trace spaces, for the Calderon operator itself and for the solutions of the corresponding boundary value problems subject to electric or magnetic boundary conditions on a cavity.

*Seminar website: <https://rmc.sfedu.ru/seminar>. The seminar uses Microsoft Teams online platform. To join the seminar, please send a request to pichugina@sfedu.ru (Olga Pichugina, scientific secretary).

The seminar is organized by the Regional Mathematical Center of the Southern Federal University in collaboration with Institute of Mathematics, Mechanics and Computer Sciences of the Southern Federal University and the special Interest ISAAC-OTHA group in Operator Theory and Harmonic Analysis.

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