



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

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14 October 2021, 6 pm (GMT+3)

The Gelfand-Krein-Levitan problem and passive imaging

Roman Novikov, Centre de Mathématiques Appliquées, École Polytechnique, France & IEPT RAS, Russia, novikov@cmap.polytechnique.fr

We consider the problem of finding coefficients in the Schrödinger equation and the Helmholtz equation from boundary values of the imaginary part of the scattering Green function. Historically, this problem goes back to multidimensional inverse spectral problems posed by Krein, Gelfand, and Levitan in 1952. On the other hand, this problem arises in different passive tomographies (in ultrasonics, ocean acoustics, helioseismology, etc).

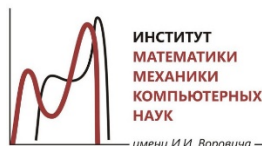
This talk is based, in particular, on the works

1. A.D. Agaltsov, T. Hohage, R.G. Novikov, Monochromatic identities for the Green function and uniqueness results for passive imaging, *SIAM J. Appl. Math.* 78(5), 2865-2890 (2018),
2. A.D. Agaltsov, T. Hohage, R.G. Novikov, Global uniqueness in a passive inverse problem of helioseismology, *Inverse Problems* 36(5), 055004 (21pp) (2020).

*Seminar website: <https://rmc.sfedu.ru/seminar>. The seminar uses Microsoft Teams online platform. Please send questions 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.

Региональный научно-образовательный математический центр
Южный Федеральный Университет
Ростов-на-Дону



Institute of Mathematics, Mechanics and Computer Sciences
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