

# INTERNATIONAL BIWEEKLY ONLINE SEMINAR ON ANALYSIS, DIFFERENTIAL EQUATIONS AND MATHEMATICAL PHYSICS

---

Coordinators: Prof. Alexey Karapetyants, Prof. Vladislav Kravchenko

[JOIN THE SEMINAR](#)

**8 December 2022, 6 pm (UTC+3)**

Discrete spectrum of polynomially compact pseudodifferential operators and applications to the Neumann-Poincare operator in 3D elasticity

**Grigori Rozenblum**, Chalmers University of Technology, Sweden, The Euler International Mathematical Institute, Russia, and University of Science and Technology "Sirius", Russia

[grigori@chalmers.se](mailto:grigori@chalmers.se)

We present a new method for finding eigenvalue asymptotics for polynomially compact, zero order, pseudodifferential operators. As an application we find asymptotics of the spectrum of the Neumann-Poincare (double layer potential) integral operator of the 3D linear elasticity. We find relations of the geometrical characteristics of surface and the spectrum of the NP operator.

\*Seminar website: <https://msrn.sfedu.ru/sl>. The seminar uses Microsoft Teams online platform. Please send questions to [ademp.seminar@gmail.com](mailto:ademp.seminar@gmail.com) (Tatiana Andreeva, scientific secretary).

---

The seminar is organized by the coordinators Alexey Karapetyants and Vladislav Kravchenko within the activities of 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 OTHA research group in Operator Theory and Harmonic Analysis.

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

**Regional Mathematical Center**  
<https://rmc.sfedu.ru/>



**Institute of Mathematics, Mechanics  
and Computer Sciences**  
<http://www.mmcs.sfedu.ru/>



**OTHA research network in  
Operator Theory and Harmonic Analysis**  
<http://msrn.sfedu.ru/>