



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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On the decay of spectral projections associated to Laplacians on certain Riemannian manifolds.

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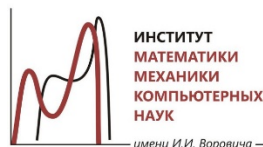
Given a Riemannian manifold  $X$  with Laplace-Beltrami operator  $\Delta$ , let  $P_\lambda f$  be the spectral projections of a function  $f$  on  $X$ . Though in principle it is possible to find functions for which any decay for  $P_\lambda f$  as a function of  $\lambda$  is admissible, it is not the case once we require the function to vanish on an open set or to vanish at a point to infinite order. In this talk we investigate the best possible decay of  $P_\lambda f$  for such functions. Using spherical means and Carleman-Denjoy theorem, we prove versions of Ingham's theorem for compact and noncompact Riemannian symmetric spaces.

\*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](mailto: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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