**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

JOIN THE SEMINAR

**30 September 2021, 6 pm (GMT+3)**

## Sets of uniqueness for inframonogenic functions

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As a consequence of the maximum principle, it is obvious that one sphere is a set of uniqueness for harmonic functions. This means that any harmonic function in a domain $\Omega \subset \mathrm{Rm}$, which vanishes on a sphere contained together with its interior in $\Omega$, is identical to zero there. Inframonogenic functions are the solutions of the equation $\partial f \, \partial = 0$ and recently it became clear that they have interesting connections with some topics of linear elasticity theory.

The aim of this talk is to show how, even in absence of the maximum principle, a sphere is a set of uniqueness for inframonogenic functions in Euclidean spaces of odd dimension. In even dimension we provide examples of non-zero inframonogenic functions which vanish on a sphere.

Joint work with: A. Moreno García, T. Moreno García.

*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.

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