Workshop dedicated to the memory of Professor Gabriela Kohr
Geometric Function Theory in Several Complex Variables and Complex Banach Spaces

Cluj-Napoca, Romania 1 – 3 December 2021

Microscopic behaviour of the solutions of a transmission problem for the Helmholtz equation. A functional analytic approach

Massimo Lanza de Cristoforis
University of Padova, Italy

Abstract

We consider a transmission problem for the Helmholtz equation in a domain with a small inclusion of size $\epsilon > 0$ and we analyze the microscopic behavior of the solutions, *i.e.*, the behavior of the rescaled solutions, as $\epsilon > 0$ tends to zero by an approach that is alternative to that of asymptotic expansions.

Joint work with Tuğba Akyel, Maltepe University, Istanbul.