
*Workshop dedicated to the memory of Professor Gabriela Kohr
(3rd edition)*

Geometric Function Theory in Several Complex Variables and Complex Banach Spaces

Cluj-Napoca, Romania

1–3 December 2023

Layer potentials on manifolds with cylindrical ends: the Laplace operator

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Abstract

We study the method of Layer Potentials on manifolds with cylindrical ends. This includes domains in \mathbb{R}^n with outlets at infinity. One of the main difficulties is the characterization of the Fredholm properties of the resulting integral operators, which requires information on the behavior at infinity. Another difficulty is the nature of the inverse of the pseudodifferential operators on these spaces. We apply our results to the study of the Laplacian. This is joint work with Mirela Kohr and Wolfgang Wendland.