Workshop dedicated to the memory of Professor Gabriela Kohr
(2nd edition)
Geometric Function Theory in Several Complex Variables and Complex Banach Spaces

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On the computation of transmission problems

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Abstract

In the works [1] and [2] it is proven, that transmission problems for the anisotropic Stokes systems in Lipschitz domains with transversal interfaces have unique solutions in appropriate Hilbert and Sobolev spaces. In this lecture we consider the construction of harmonic solutions to boundary value problems in Lipschitz domains with transversal interfaces which can be constructed with the help of screen problems under comparability conditions which exclude the singular parts of the screen problems.

1. M. Kohr, S.E. Mikhailow, W.L. Wendland: *Non–homogeneous Drichlet–transmission problems for the anisotropic Stokes and Navier–Stokes systems in Lipschitz domains with tranversal interfaces,* Calculus of Variations and Partial Differential Equations **61** (2022) N06, Nb198, 47 pages.

2. M. Kohr, S.E. Mikhailow, W.L. Wendland: *On some mixed transmission problems for the anisotropic Stokes and Navier–Stokes systems in Lipschitz domains with transversal interfaces.* Journal of Mathematical Analysis and Applications **516** (2022) 126464, 28 pages.