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Layer potentials on manifolds with cylindrical ends

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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. Joint work with Marius Mitrea, Mirela Kohr and Wolfgang L. Wendland. We apply our results to the study of the Laplacian and of the Stokes system.