MULTIPLE TRACES BOUNDARY INTEGRAL FORMULATION FOR HELMHOLTZ TRANSMISSION PROBLEMS

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ABSTRACT. We present a boundary formulation of the Helmholtz transmission problem over multiple penetrable subdomains that lends itself to operator preconditioning. Using interior Calderón projectors, the problem is cast in variational Galerkin form with a matrix operator whose diagonal is composed of block boundary integral operators. We show uniqueness of solutions, continuity and coercivity of the formulation in *ad hoc* functional spaces.

Keywords: Integral equations,

Mathematics Subject Classifications (2000): please, name your files after the lastname of the first author, that is `lastname.tex`, and send both the .tex and .pdf files.

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