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Nilson Costa Roberty, Universidade Federal do Rio de Janeiro, Brazil.
email: MISSING

RECONSTRUCTION OF COEFFICIENTS AND SOURCES IN ELLIPTIC SYSTEMS MODELLED WITH MANY BOUNDARY

Inverse problem for determination of unknown parameters related to both intensities and support of sources and materials coefficients in second-order elliptic equations models is posed with over specification of data on the boundary. A discrepancy function based on difference of two mixed problems formulated with a Lipschitz dissection of Cauchy data is introduced. This function controls the measured difference between the two solutions for the same set of Cauchy data. Parameters can be determined by minimization of this function under guess values. The concept of Calderón projector gap is introduced as a tool for checking the consistency of Cauchy data.

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