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26501. Numerical Solutions of Boundary Inverse Problems for the Laplace Equation.

Based on a boundary integral equations formulation, we present numerical solutions for two inverse problems for the Robin boundary value problem for the Laplacian: (1) the inverse problem of recovering the Robin coefficient from a boundary measurement of the solution on a portion of the domain boundary, and (2) the inverse problem of recovering part of the Robin boundary from multiple sets of partial boundary measurements. (Received September 10, 2008)