Haiyan Tian* (haiyan.tian@usm.edu), 118 College Dr. #5045, Hattiesburg, MS 39406, and Andreas Grunewald, 53113 Bonn, Germany. A direct method for solving an ill-posed inhomogeneous elliptic problem.

A delta-shaped basis method is used for reducing an inhomogeneous elliptic problem to a homogeneous one. The method of fundamental solutions combined with proper regularization technique is then used for the resulting homogeneous problem to obtain a stable solution. (Received September 23, 2010)