INTERNATIONAL CONFERENCE on RECENT ADVANCES in
PURE AND APPLIED MATHEMATICS (ICRAPAM 2015)
3-6 June 2015, Istanbul Commerce University,
ISTANBUL, TURKEY www.icrapam.org

A third order accuracy difference scheme for the Neumann type overdetermined elliptic problem

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Abstract: Inverse problems for elliptic differential equations with Dirichlet type overdetermination and their approximations have been investigated in [1]-[5]. Overdetermined elliptic problem with Neumann type overdetermination was discussed in [6]. In this paper, we present a third order accuracy difference scheme for inverse problem with Neumann type overdetermination and give stability estmates for its solution.

Keywords: Inverse problem, Overdetermination, Stability, Difference scheme.

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