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IDENTIFYING AN UNKNOWN SOURCE IN THE POISSON EQUATION BY A MOLLIFICATION REGULARIZATION METHOD

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Abstract

This paper deals with an inverse problem for identifying an unknown source which depends only on one variable in two-dimensional Poisson equation, with the aid of an extra measurement at an internal point. This problem is ill-posed, we proposed a regularization strategy-mollification method to analyze the stability of the problem. Meanwhile, Numerical experiment is devised to verify the validity of the method.

Key Words : *Ill-posed problems, Mollification; regularization, Error estimate.*

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