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Numerical Analysis of Diffusion Coefficient Identification for Elliptic Problems

by

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Time: 4:00 – 5:00 pm

Venue: Y5-305 (Yeung Kin Man Academic Building)

ABSTRACT

Parameter identifications for differential equations represent a wide class of inverse problems. Conventionally, this class of inverse problems could be solved via an optimization approach, which is then discretized (using finite difference method, finite element methods, or deep neural networks) for practical implementation. Then one important issue is to derive a priori error estimates for the numerical reconstruction of the desired parameter. In this talk, we present our recent efforts to derive convergence rates for discrete schemes for recovering a spatially dependent diffusion coefficient in an elliptic problem, by suitably exploiting relevant stability results.



~ALL ARE WELCOME~

