NUMERICAL ANALYSIS AND SCIENTIFIC COMPUTING SEMINAR

Multilevel Methods for Ill-Posed Problems

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Abstract: Multilevel methods for the solution of well-posed problems, such as certain boundary value problems for partial differential equations and Fredholm integral equations of the second kind, are popular and their properties are well understood. Much less is known about the behavior of multilevel methods for the solution of linear ill-posed problems, such as Fredholm integral equations of the first kind with a right-hand side that is contaminated by error. We discuss properties of cascadic multilevel methods for the latter kind of problems.

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