

Introduction to Multigrid Methods II

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Abstract

This is a continuation of the previous talk. It was called (you guessed it!) "Introduction to Multigrid Methods I" and had the following abstract: Multigrid methods are used to more efficiently solve partial differential equations. Discretization of partial differential equations results in a linear system of equations whose coefficient matrix is sparse. Such systems can be solved using iterative methods. Although iterative methods initially reduce the error rapidly, after a few iterations the speed of error reduction slows down significantly. Multigrid methods are designed to compensate for this problem. In this talk, I plan to discuss some background material and introduce the idea of multigrid methods.