CSE 706 SEM: Project

The Fellowship of the Grid:

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1   Project Goals

The projection onto the eigenbasis for the laplacian will be calculated with the Fast Fourier Transform. The projection can be used to study multiple phenomena related to multigrid methods. The error will be first projected to show smoother decreasing coefficients of high frequencies. Next, the error will be projected onto coarse space to show that it captures modes with appreciable coefficients. Finally, the corrected solution will be projected to show that mostly high modes are left.