Matrix Multiplication and PDE via Wavelets

Proposal:

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http://dione.cs.ttu.edu/wavelet/wavelets.pdf

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Abstract:

One overwhelming question drives computational science; how fast can the answer be computed. In this thesis, the questions are for two computational areas of mathematics. One is how

fast can matrix multiplication be computed. Second is how quickly can a partial differential equation be solved. Of course there are already conventional algorithms to compute them. This thesis contributes a simple analysis of the wavelet operator as it applies to these numerical operations.

wavelet demonstration	matrix multiplication demonstration	partial differential equations demonstration