CS/MATH 4414 SPRING 2018

MW 14:30 SURGE 109 CRN 19573/4

ISSUES IN SCIENTIFIC COMPUTING

HARDWARE

SOFTWARE

ALGORITHMS

B−Splines
Nonlinear equations
Quasi−Newton methods
Homotopy methods
Constrained optimization
Sparse iterative methods
Approximation theory

Parallel architecture
Shared memory
Distributed memory
SIMD (Cray, GPGPUs)
Exascale and beyond

Fortran 2008
MPI−2
Mathematica
VTDIRECT95
QNSTOP
ACM TOMS
TEX
HOMPACK90

APPLICATIONS

Depending on students' background and interests

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