ISSUES IN SCIENTIFIC COMPUTING

ALGORITHMS

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

HARDWARE

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

SOFTWARE

- Fortran 2008
- MPI–2
- Mathematica
- VTDIRECT95
- QNSTOP
- ACM TOMS
- TEX
- HOMPACK90

APPLICATIONS

Depending on students’ background and interests

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