High Performance Computing Center

Wichita State University’s High Performance Computing Center (HiPeCC) enables scientific and engineering discoveries through advances in computational science and high performance computing. HiPeCC is a resource to faculty, staff, students and external entities in science, industry and academia. The center provides tools such as high-performance hardware technologies, integrative software technologies and inter-disciplinary expertise.

HiPeCC will assist users in accessing to national supercomputer centers as well as getting started on the Internet2 research network.

Please come to us when your problem is too big for your workstation.

Equipment
- Dell 51 node 2.33 GHz cluster, each node with dual 4-core Intel processors
- Dell 22 node 2.3 GHz cluster, each node with quad 8-core Opteron processors
- NVIDIA 4 Tesla K20 GPU’s, each with 2496 cores

Software
- Compilers: Fortran, C/C++, Java, CUDA
- Finite element analysis: LS-DYNA, PATRAN, ABAQUS
- Quantum chemistry: Gaussian 09, TINKER
- Computational fluid dynamics (CFD): Fluent, SU2
- Finite difference time domain (FDTD): ema3d

Services
- Training/consulting from full-time sysadmin
- Classes: Unix, Fortran, Parallel Programming

Supporting Research In
- Magnetohydrodynamics
- Quantum Neural Networks
- Interior Aircraft Acoustics
- Impact, Damage & Stress Analysis
- KC-135 Fuselage Damage Tolerance
- Composite joints
- Machining Process Analysis
- Adhesive Behavior in Aircraft Applications
- Microfluidics in Complex Geometries
- Gaussian calculations of fluorinated amino acids
- Electromagnetic Characterization of Composite Fuselages

Contact
John Matrow, Director
Jabara Hall 011
1845 Fairmount Hall
Wichita, KS 67260-0032
John.Matrow@wichita.edu
(316) 978-5306