Saturday, November 15

Time	Event	Title	Location
8:30 a.m. – 10 a.m.	Education	Plenary Session	Ballroom E
10:30 a.m. - noon	Education	Computational Chemistry Education (Beginner, Level 1)	8B
10:30 a.m. - noon	Education	Introducing Computational Science in the Undergraduate Engineering Curriculum	9A
10:30 a.m. - noon	Education	Supercomputing in Plain English, Parallel and Distributed Computing	8C
10:30 a.m. - noon	Education	From Spreadsheets to Clusters: Physics	8A
10:30 a.m. - noon	Education	Many Biological Problems Can Be Studied From Desktop to Grid (Biology)	9C
1:30 p.m. – 3 p.m.	Education	Plenary Session	Ballroom E
4 p.m. – 5 p.m.	Education	Pathways: Parallel and Distributed Computing	8C
4 p.m. – 5 p.m.	Education	Pathways: Physics	8A
4 p.m. – 5 p.m.	Education	Pathways: Learning and Physical Challenges	9B
4 p.m. – 5 p.m.	Education	Pathways: Biology and Nanotechnologies	9C
4 p.m. – 5 p.m.	Education	Pathways: Engineering	9A
4 p.m. – 5 p.m.	Education	Pathways: Computational Chemistry	8B
4 p.m. – 7 p.m.	Education	Education Poster Session	Oak Room, Omni Southpark

Sunday, November 16

Time	Event	Title	Location
8:30 a.m. – 10 a.m.	Education	Plenary Session	Ballroom E
8:30 a.m. – 5 p.m.	Tutorial	S01: Parallel Computing 101	TBD
8:30 a.m. – 5 p.m.	Tutorial	S02: Application Supercomputing and the Many-Core Paradigm Shift	TBD
8:30 a.m. – 5 p.m.	Tutorial	S03: Interoperable Mesh and Geometry Tools for Advanced Petascale Simulation	TBD
8:30 a.m. – 5 p.m.	Tutorial	S04: Parallel I/O in Practice	TBD
8:30 a.m. – 5 p.m.	Tutorial	S05: A Practical Approach to Performance Analysis and Modeling of Large-Scale Systems	TBD
8:30 a.m. – 5 p.m.	Tutorial	S06: Introduction to Scientific Workflow Management	TBD
8:30 a.m. – 5 p.m.	Tutorial	S07: Introduction to Chapel: The Cascade High-Productivity Language	TBD
8:30 a.m. – 5 p.m.	Tutorial	S08: A Hands-on Introduction to OpenMP	TBD
8:30 a.m. – noon	Tutorial	S09: Principles and Practice of Experimental Performance Measurement and Analysis of Applications on Parallel Systems	TBD
8:30 a.m. – noon	Tutorial	S10: InfiniBand and 10-Gigabit Ethernet for Dummies	TBD
8:30 a.m. – 5 p.m.	Workshop	Grid Computing Environments (GCE) 2008	11A/11B
8:30 a.m. – 5 p.m.	Workshop	Workshop on Ultra-Scale Visualization	15
8:30 a.m. – 5 p.m.	Workshop	Power Efficiency and the Path to Exascale Computing	16A/16B
8:30 a.m. – 5 p.m.	Workshop	Node Level Parallelism for Large-Scale Supercomputers	14
8:30 a.m. – 5 p.m.	Workshop	Workshop on High Performance Computational Finance	13A/13B
10:30 a.m. – noon	Education	Supercomputing and K-12 Education	10B
10:30 a.m. – noon	Education	Computational Chemistry Education (Beginner, Level 1)	8B
10:30 a.m. – noon	Education	Introducing Computational Science in the Undergraduate Engineering Curriculum	9A
10:30 a.m. – noon	Education	Supercomputing in Plain English, Parallel and Distributed Computing	8C
10:30 a.m. – noon	Education	From Spreadsheets to Clusters: Physics	8A

Sunday, November 16

Time	Event	Title	Location
10:30 a.m. – noon	Education	Many Biological Problems Can Be Studied from Desktop to Grid (Biology)	9C
1:30 p.m. – 3 p.m.	Education	Plenary Session	Ballroom E
1:30 p.m. – 3 p.m.	Education	Biology	9C
1:30 p.m. – 3 p.m.	Education	Easy Java Simulations and the Open Source Physics Project	8A
1:30 p.m. – 3 p.m.	Education	Intermediate Modeling Skills for Engineers	9A
1:30 p.m. – 3 p.m.	Education	Learning and Physical Challenges	9B
1:30 p.m. – 3 p.m.	Education	Mathematical Modeling Using Real-World Data	10B
1:30 p.m. – 3 p.m.	Education	Molecular Modeling, Computational Chemistry (Level 1)	8B
1:30 p.m. – 3 p.m.	Education	OpenMP Introduction, Parallel and Distributed Computing	8C
1:30 p.m. – 3 p.m.	Tutorial	S11: Designing High-End Computing Systems with InfiniBand and 10-Gigabit Ethernet	TBD
1:30 p.m. – 3 p.m.	Tutorial	S12: Analyzing the Performance of Parallel Applications with Open SpeedShop	TBD
3:30 p.m. – 5 p.m.	Education	Benchmarking and Tuning Methodologies and Tools for Parallel Programs	8C
3:30 p.m. – 5 p.m.	Education	Biology	9C
3:30 p.m. – 5 p.m.	Education	Collaboration Tools: Platforms, Mashups, (K-12 Education)	10B
3:30 p.m. – 5 p.m.	Education	Easy Java Simulations and the Open Source Physics Project (Physics, Part 2)	8A
3:30 p.m. – 5 p.m.	Education	Intermediate Modeling Skills for Engineers, Part 2	9A
3:30 p.m. – 5 p.m.	Education	Learning and Physical Challenges	9B
3:30 p.m. – 5 p.m.	Education	Molecular Modeling with WebMO (Computational Chemistry, Level 2)	8B
6 p.m. – 9 p.m.	Exhibitor Party	"Keep SC Weird"	Four Seasons Hotel

Monday, November 17

Time	Event	Title	Location
8:30 a.m. – 10 a.m.	Education	Plenary Session	Ballroom E
8:30 a.m. – noon	Workshop	Workshop on Many–Task Computing on Grids and Supercomputers (MTAGS)	11A/11B
8:30 a.m. – 5 p.m.	Tutorial	M01: Advanced MPI	TBD
8:30 a.m. – 5 p.m.	Tutorial	M02: High Performance Computing with CUDA	TBD
8:30 a.m. – 5 p.m.	Tutorial	M03: Large-Scale Visualization with ParaView	TBD
8:30 a.m. – 5 p.m.	Tutorial	M04: Programming Using the Partitioned Global Address Space (PGAS) Model	TBD
8:30 a.m. – 5 p.m.	Tutorial	M05: Hybrid Parallel Programming and Multicore Optimization on the Ranger Supercomputer	TBD
8:30 a.m. – 5 p.m.	Tutorial	M06: Productive Performance Engineering of Petascale Applications with POINT	TBD
8:30 a.m. – 5 p.m.	Tutorial	M07: Debugging Parallel and Distributed Applications	TBD
8:30 a.m. – noon	Tutorial	M08: Configuring and Deploying GridFTP for Managing Data Movement in Grid/HPC Environments	TBD
8:30 a.m. – noon	Tutorial	M09: Hybrid MPI and OpenMP Parallel Programming	TBD
8:30 a.m. – noon	Tutorial	M10: HPC with Microsoft Windows HPC Server 2008: A Programmer's Perspective	TBD
8:30 a.m. – 5 p.m.	Workshop	Petascale Data Storage Workshop	14
8:30 a.m. – 5 p.m.	Workshop	Bridging Multicore's Programmability Gap	13A/13B
8:30 a.m. – 5 p.m.	Workshop	Nuclear Energy Advanced Modeling and Simulation: Enhancing Climate and Energy Security Opportunities	13A/13B
8:30 a.m. – 5 p.m.	Workshop	High Performance Reconfigurable Computing Technology and Applications (HPRCTA'08)	Hilton Salon F
8:30 a.m. – 5 p.m.	Workshop	Supercomputing, Multicore Architectures and Biomedical Informatics	15
10:30 a.m. – noon	Education	Molecular Visualization, Computational Chemistry (Level 1)	8B
10:30 a.m. – noon	Education	Introductory Modeling Examples for Engineers	9A

Monday, November 17

Time	Event	Title	Location
10:30 a.m. – noon	Education	A Survey of Computational Physics	8A
10:30 a.m. – noon	Education	MPI – Introduction and Advanced	8C
1:30 p.m. – 3 p.m.	Education	Molecular Modeling, Computational Chemistry (Level 1)	8B
1:30 p.m. – 3 p.m.	Education	Mathematical Modeling Using Real–world Data	10B
1:30 p.m. – 3 p.m.	Education	Easy Java Simulations and the Open Source Physics Project, Part 1	8A
1:30 p.m. – 3 p.m.	Education	Intermediate Modeling Skills for Engineers	9A
1:30 p.m. – 3 p.m.	Education	OpenMP Introduction, Parallel and Distributed Computing	8C
1:30 p.m. – 5 p.m.	Tutorial	M11: Enhancing e–Infrastructures with Advanced Technical Computing: Parallel MATLAB on the Grid	TBD
1:30 p.m. – 5 p.m.	Tutorial	M12: Using and Understanding Parallel NFS (NFSv4.1)	TBD
1:30 p.m. – 5 p.m.	Tutorial	M13: A Tutorial on Sound and Music Computing	8C
1:30 p.m. – 5 p.m.	Workshop	The 3rd Workshop on Workflows in Support of Large–Scale Science (WORKS08)	11A/11B
3:30 p.m. – 5 p.m.	Education	Benchmarking and Tuning Methodologies and Tools for Parallel Programs	8C
3:30 p.m. – 5 p.m.	Education	Easy Java Simulations and the Open Source Physics Project, Part 2	8A
3:30 p.m. – 5 p.m.	Education	Collaboration Tools: Platforms	10B
3:30 p.m. – 5 p.m.	Education	Intermediate Modeling Skills for Engineers (Part 2)	9A
7 p.m. – 9 p.m.	Social Event	SC08 Opening Gala	Exhibit Hall

Tuesday, November 18

Time	Event	Title	Location
8:30 a.m. – 10 a.m.	Keynote	Welcoming Session and Keynote Presentation by Michael Dell	Ballroom D
10 a. m. – 6 p.m.	Exhibits	Industry and Research Exhibits, Day 1	Exhibit Hall
10:30 a.m. – noon	Education	Exploring Computational Science Projects for Undergraduate Engineers	9A
10:30 a.m. – noon	Education	Stochastic Statistics in Physics	8A
10:30 a.m. – noon	Education	Chemistry Databases (Level 1)	8B
10:30 a.m. – noon	Education	GNU and Intel Tools	8C
10:30 a.m. – noon	Education	System Dynamics Modeling of Chemical and Enzyme Kinetics Using Vensim PLE, MATLAB, and GNU Octave	9C
10:30 a.m. – noon	Exhibitor Forum	Interconnects 1: • Ethernet is Ready to Scale • How the Max Planck Institute for Gravitational Physics Built the World's Fastest Ethernet Compute Cluster Using the Woven Systems Ethernet Fabric Solution • Doubling Data Rates and Port Density for InfiniBand	12A/12B
10:30 a.m. – noon	Exhibitor Forum	Software Tools 1: • Tackling HPC's Largest Software Challenge in the Multi/Many–core Era • Parallelizing Mature Algorithms Using OpenMP • Profile Guided Parallelization	19A/19B
10:30 a.m. – noon	Technical Papers	Applications on GPUs: • High Performance Discrete Fourier Transforms on Graphics Processors • Bandwidth Intensive 3-D FFT Kernel for GPUs Using CUDA • Adapting a Message–Driven Parallel Application to GPU-Accelerated Clusters	Ballroom E
10:30 a.m. – noon	Technical Papers	HPC Systems: • Entering the Petaflop Era: The Architecture and Performance of Roadrunner • Stencil Computation Optimization and Auto tuning on State–of–the–Art Multicore Architectures • Scientific Application–Based Performance Comparison of SGI Altix 4700, IBM POWER5+, and SGI Altix ICE 8200 Supercomputers	Ballroom F
10:30 a.m. – noon	Technical Papers	I/O and File Systems: • Dynamically Adapting File Domain Partitioning Methods for Collective I/O Based on Underlying Parallel File System Locking Protocols • Using Server–to–Server Communication in Parallel File Systems to Simplify Consistency and Improve Performance • Scaling Parallel I/O Performance through I/O Delegate and Caching System	Ballroom G

Tuesday, November 18

Time	Event	Title	Location
10:30 a.m. – noon	Storage Challenge	• Data Lifecycle Management Over a Loosely Coupled Distributed Infrastructure for LSST's HPC Applications • GrayWulf: Scalable Clustered Architecture for Data-Intensive Computing • Highly Parallel Data-intensive Applications Using MapReduce on a Parallel Clustered File System	17A/17B
10:30 a.m. – noon	Masterworks	HPC in Humanities and the Arts: • Humanities Scholarship in the Petabyte Age • Concurrencies (2008) for Live Multi–Channel Electronics and Viola	18A/B/C/D
12:15 p.m. – 1:15 p.m.	Birds–of–a–Feather	Testing, Validation, and Verification Strategies for Applications in Hybrid Computing Environments	8B
12:15 p.m. – 1:15 p.m.	Birds–of–a–Feather	Pathways to HPC: Broaden Participation, Increase Impact	9C
12:15 p.m. – 1:15 p.m.	Birds–of–a–Feather	Deploying HPC for Interactive Simulation	9B
12:15 p.m. – 1:15 p.m.	Birds–of–a–Feather	High-Energy Performance for High Performance Computing	Ballroom F
12:15 p.m. – 1:15 p.m.	Birds–of–a–Feather	The 2008 HPC Challenge Awards	14
12:15 p.m. – 1:15 p.m.	Birds–of–a–Feather	TotalView Tips & Tricks	9A
12:15 p.m. – 1:15 p.m.	Birds–of–a–Feather	PBS: Workload Management and Job Scheduling from Desktops to Petaflops	17A/17B
12:15 p.m. – 1:15 p.m.	Birds–of–a–Feather	SP–XXL: Large IBM HPC Systems	8A
12:15 p.m. – 1:15 p.m.	Birds–of–a–Feather	Next-Generation Workload Management for Cloud Computing and Scale–out Environments	15
12:15 p.m. – 1:15 p.m.	Birds–of–a–Feather	DCMF: Lightweight Communication for Petascale Supercomputing	13A/13B
12:15 p.m. – 1:15 p.m.	Birds–of–a–Feather	Building a Diverse HPC Community for SC08	18A/B/C/D
12:15 p.m. – 1:15 p.m.	Birds–of–a–Feather	Network Measurement	10B
12:15 p.m. – 1:15 p.m.	Birds–of–a–Feather	Coordinated Fault Tolerance in High–End Computing Environments	Ballroom G
12:15 p.m. – 1:15 p.m.	Birds–of–a–Feather	OFED 1.4 Release Highlights: Q&A with Lead Developers	Ballroom E
12:15 p.m. – 1:15 p.m.	Birds–of–a–Feather	Tools for High-Productivity Supercomputing	8C
12:15 p.m. – 1:15 p.m.	Birds–of–a–Feather	Opportunities in Federal NITRD High-end Computing Interagency Working Group (HEC–IWG) Agencies	11A/11B

Tuesday, November 18

Time	Event	Title	Location
1:30 p.m. – 3 p.m.	Bandwidth Challenge	• High-Speed Data Gathering, Distribution, and Analysis Using Next Generation Networks • Global Visualcasting – Collaborative Remote Visualization Over High-Speed Networks • Towards Global-scale Cloud Computing: Using Sector and Sphere on the Open Cloud Testbed • Creating a Regional Data Grid Using Commodity Protocols • Distributed Visualization and Data Resources Enabling Remote Interaction and Analysis • Using Phoebus for Optimized Data Dissemination	17A/17B
1:30 p.m. – 3 p.m.	Education	GNU Scientific Library	8C
1:30 p.m. – 3 p.m.	Education	Wave Problems in Quantum Mechanics	8A
1:30 p.m. – 3 p.m.	Education	Collaboration Opportunities Bazaar	10B
1:30 p.m. – 3 p.m.	Education	WebMO 2 (Level 2, Intermediate)	8B
1:30 p.m. – 3 p.m.	Education	Exploring Computational Science Projects for Undergraduate Engineers	9A
1:30 p.m. – 3 p.m.	Education	Enzymology in a Microphysiological Setting Using MCell and DReAMM	9C
1:30 p.m. – 3 p.m.	Exhibitor Forum	Development and Analysis Tools: • Auto Analysis, Optimization and Code Generation for Parallel Computing, Including GPU, Multicore CPU and Other Hardware Architecturess • Multicore Analysis for the Masses • RapidMind: A Unified Programming Model for Multi–Core CPUs and Many–Core Accelerators	19A/19B
1:30 p.m. – 3 p.m.	Exhibitor Forum	Interconnects 2: • Implementing and Debugging Low-Latency QDR InfiniBand Fabrics • Driving InfiniBand Technology to Petascale Computing and Beyond • Petascale Computing Interconnect Challenges	12A/12B
1:30 p.m. – 3 p.m.	Technical Papers	Grid Resource Management: • Efficient Management of Data Center Resources for Massively Multiplayer Online Games • Feedback Controlled Resource Sharing for Predictable eScience • Efficient Auction–based Grid Reservations Using Dynamic Programming	Ballroom G
1:30 p.m. – 3 p.m.	Technical Papers	Large–scale Applications: • A Multi–Level Parallel Simulation Approach to Electron Transport in Nanoscale Transistors • Accelerating Configuration Interaction Calculation for Nuclear Structure • Dendro: Parallel Algorithms for Multigrid and AMR Methods on 2:1 Balanced Octrees	Ballroom E

Tuesday, November 18

Time	Event	Title	Location
1:30 p.m. – 3 p.m.	Technical Papers	Networks: • Performance Optimization of TCP/IP Over 10 Gigabit Ethernet by Precise Instrumentation • Wide-area Performance Profiling of 10GigE and Infiniband Technologies • Asymmetric Interactions in Symmetric Multicore Systems: Analysis, Enhancements, and Evaluation	Ballroom F
1:30 p.m. – 3 p.m.	Masterworks	HPC in Transportation: • Enabling Analysis-Based Tire Development with High Performance Computing • Contributions of CFD to the 787 (and Future Needs)	18A/B/C/D
3:30 p.m. – 5 p.m.	Exhibitor Forum	Petascale Computing: • Fujitsu Solutions and Vision for Petascale Computing • Petascale Delivered: What's Past Is Prologue • Extrapolating the Future–Expected Evolution of HPC Systems	19A/19B
3:30 p.m. – 5 p.m.	Exhibitor Forum	Software Applications and Virtual HPC: • Efficient, Real–time Parallel Computing • High Performance Proteomics Applications Boosted with Convey's New Way of Computing • Virtual HPC with UniCluster Open Source Cluster Stack in the EC2 Cloud	12A/12B
3:30 p.m. – 5 p.m.	Panel	Can Developing Applications for Massively Parallel Systems with Heterogeneous Processors Be Made Easy(er)?	Ballroom G
3:30 p.m. – 5 p.m.	Technical Papers	Large-Scale System Performance: • Performance Prediction of Large–Scale Parallel System and Application Using Macro–Level Simulation • Early Evaluation of BlueGene/P • Lessons Learned at 208K: Toward Debugging Millions of Cores	Ballroom E
3:30 p.m. – 5 p.m.	Technical Papers	Run Time Systems: • Characterizing Application Sensitivity to OS Interference Using Kernel–Level Noise Injection • Toward Loosely–Coupled Programming on Petascale Systems • SMARTMAP: Operating System Support for Efficient Data Sharing Among Processes on a Multi–Core Processor	Ballroom F
3:30 p.m. – 5 p.m.	Technical Papers	Workflows: • A Novel Domain-Oriented Approach for Scientific Grid Workflow Composition • Nimrod/K: Towards Massively Parallel Dynamic Grid Workflows • Applying Double Auctions for Scheduling of Workflows on the Grid	17A/17B
3:30 p.m. – 5 p.m.	Analytics Challenge	• GENIUS: Grid Enabled Neurosurgical Imaging Using Simulation • Controlling Extremely Large Telescopes • Cerebral Methodology-Based Computing for Estimating Validity of Simulation Results • Interactive HPC-driven Visual Analysis for Multiple Genome Datasets	14

Tuesday, November 18

Time	Event	Title	Location
3:30 p.m. – 5 p.m.	Masterworks	HPC in Finance: • High Performance Computing in the Financials: Where Rocket Science Meets "The Street" • Presentation on HPC in Finance	18A/B/C/D
3:30 p.m. – 5 p.m.	Education	Wave Problems in Quantum Mechanics (Part 2)	8A
3:30 p.m. – 5 p.m.	Education	Behaviors of Biological Network Motifs and the Modular Nature of Biological Networks	9C
3:30 p.m. – 5 p.m.	Education	Exploring Computational Science Projects for Undergraduate Engineers (Part 3)	9A
3:30 p.m. – 5 p.m.	Education	WebMO 2 (continued), Computational Chemistry (Level 2)	8B
3:30 p.m. – 5 p.m.	Education	Curriculum Modules Bazaar	10B
3:30 p.m. – 5 p.m.	Education	CUDA and SPRNG Introductions, Parallel and Distributed Computing	8C
3:30 p.m. – 5p.m.	Exhibitor Forum	Software Applications & Virtual HPC: • High-Performance Proteomics Application • Efficient Real-time Computing • Virtual HPC with UniCluster Open Source Cluster Stack in the EC2 Cloud	12A / 12B
3:30 p.m. – 5 p.m.	Exhibitor Forum	Petascale Computing: • Fujitsu Solutions and Vision for Petascale Computing • Petascale Delivered -- What's Past is Prologue • Extrapolating the Future - Expected Evolution of HPC Systems	19A / 19B
5:00 p.m.– 7 p.m.	Posters	Poster Reception and ACM Student Research Competition	Rotunda Lobby
5:30 p.m. – 7 p.m.	Birds–of–a–Feather	Ranger as the Intro for Future Extreme Scale Computing	Ballroom E
5:30 p.m. – 7 p.m.	Birds–of–a–Feather	OpenMP 3.0: Ushering in a New Era of Parallelism	15
5:30 p.m. – 7 p.m.	Birds–of–a–Feather	OSCAR Community Meeting	14
5:30 p.m. – 7 p.m.	Birds–of–a–Feather	Exascale Software Challenges	19A/19B
5:30 p.m. – 7 p.m.	Birds–of–a–Feather	Data Lifecycle Management	Ballroom F
5:30 p.m. – 7 p.m.	Birds–of–a–Feather	TOP500 Supercomputers	18A/B/C/D
5:30 p.m. – 7 p.m.	Birds–of–a–Feather	SPEC MPI2007: A Benchmark to Measure MPI Application Performance	Ballroom G
5:30 p.m. – 7 p.m.	Birds–of–a–Feather	Blue Gene System Management Community Meeting	11A/11B
5:30 p.m. – 7 p.m.	Birds–of–a–Feather	Megajobs: How to Run One Million Jobs	13A / 13B
5:30 p.m. – 7 p.m.	Birds–of–a–Feather	NSF High-End Computing University Research Activity (HECURA)	12A/12B

Wednesday, November 19

Time	Event	Title	Location
8:30 a.m. - 10 a.m.	Invited Speakers	Plenary Sessions: • Developing an Interoperable IT Framework to Enable Personalized Medicine • Parallel Computing Landscape: A View from Berkeley	Ballroom D
10 a.m. - 6 p.m.	Exhibits	Industry and Research Exhibits, Day 2	Exhibit Hall
10:30 a.m. - noon	ACM Student Research Competition	Award Finalists: • Effects of Contention on Message Latencies in Large Supercomputers • CUSA and CUDE: GPU-Accelerated Methods for Estimating Solvent Accessible Surface Area and Desolvation • Characterizing and Optimizing Virtualization Overhead for Portable High Performance Networking • Policy-Driven Data Management for Distributed Scientific Collaborations Using a Rule Engine • Acceleration of Quantum Monte Carlo Applications on Emerging Computing Platforms	17A/17B
10:30 a.m. - noon	Exhibitor Forum	GPU Software Tools: • Beyond x64: PGI Compilers, GPUs, and You • High-Performance Data Analysis Using GPUs • GPU Computing: A New Approach to an Existing Problem	19A/19B
10:30 a.m - noon	Exhibitor Forum	Networking Solutions: • 10G Ethernet: Ready for Major Breakthrough in 2009 for HPC Environments • Networking 2.0: Who's Managing the Next-Generation Network? • Benefits of 10 Gigabit Ethernet in High Performance Computing and Storage Environments	12A/12B
10:30 a.m. - noon	Panels	Will Electric Utilities Give Away Supercomputers with the Purchase of a Power Contract?	Ballroom G
10:30 a.m. - noon	Technical Papers	Processor and Switch Architecture: • A Novel Migration-Based NUCA Design for Chip Multiprocessors • Extending CC-NUMA Systems to Support Write Update Optimizations • High-radix Crossbar Switches Enabled by Proximity Communication	Ballroom F
10:30 a.m. - noon	Technical Papers	Linear Algebra: • Communication-avoiding Gaussian Elimination • Benchmarking GPUs to Tune Dense Linear Algebra	Ballroom E
10:30 a.m. - noon	Masterworks	HPC in Biomedical Informatics 1: • Patient-Specific Cardiovascular Modeling and the Predictive Paradigm in Medicine • Computational Functional Anatomy on the TeraGrid	18A/B/C/D

Wednesday, November 19

Time	Event	Title	Location
12:15 p.m. – 1:45 p.m.	Birds-of-a-Feather	The Growing Need for Resilience in HPC Software	Ballroom E
12:15 p.m. – 1:45 p.m.	Birds-of-a-Feather	Future Networking Schemes in Petascale Clusters and Beyond	Ballroom F
12:15 p.m. – 1:45 p.m.	Birds-of-a-Feather	Requiring Open Source Software in Federal Grants	13A/13B
12:15 p.m. – 1:45 p.m.	Birds-of-a-Feather	Petascale Computing Experiences on Blue Gene/P	17A/17B
12:15 p.m. – 1:45 p.m.	Birds-of-a-Feather	Computing with Massive and Persistent Data	11A/11B
12:15 p.m. – 1:45 p.m.	Birds-of-a-Feather	Open MPI State of the Union	14
12:15 p.m. – 1:45 p.m.	Birds-of-a-Feather	Parallel File Systems	Ballroom G
12:15 p.m. – 1:45 p.m.	Birds-of-a-Feather	Unleashing the Power of the Cell BE for HPC Applications	18A/B/C/D
12:15 p.m. – 1:45 p.m.	Birds-of-a-Feather	Campus Champions: Bringing HPC to Your Campus	15
1:30 p.m. – 3 p.m.	Exhibitor Forum	Building Supercomputers: • Building an Industry Standard Petascale System • Building the Biggest Big Ten Supercomputer in a Day: The Nuts and Bolts from Purdue University and Foundry Networks • Top500 on a Stick	12A/12B
1:30 p.m. – 3 p.m.	Exhibitor Forum	Diversity in Architectures and Deployment: • Cray: Growing a Greener HPC Future • The Heterogeneous Future: Multicore Processors, Adaptable Processors and Graphics Processors • AMD in HPC: Your Processing Powerhouse	19A/19B
1:30 p.m. – 3 p.m.	Invited Speakers	Award Winner Presentations by Seymour Cray Computer Science & Engineering Award Recipient and Sidney Fernbach Memorial Award Recipient	Ballroom D
1:30 p.m. – 3 p.m.	Technical Papers	Bioinformatics: • Massively Parallel Genomic Sequence Search on the Blue Gene/P Architecture • An Efficient Parallel Approach for Identifying Protein Families from Large-Scale Metagenomic Data • EpiSimdemics: An Efficient Algorithm for Simulating the Spread of Infectious Disease over Large Realistic Social Contact Networks	Ballroom E
3:30 p.m. – 5 p.m.	Doctoral Research Showcase	ACM/IEEE HPC Fellows: • Process-level Fault Tolerance for Job Healing in HPC Environments • Communication-Avoiding Linear Algebra • Automatic Parallelization of Dynamic Programming Recurrences in Computational Biology	17A/17B

Wednesday, November 19

Time	Event	Title	Location
3:30 p.m. – 5 p.m.	Exhibitor Forum	Software Tools 2: • Accelerating the Development of Parallel Applications with ReplayEngine • Developing Parallel Applications on OpenSolaris and Linux • Simplifying Complex Software Development Environments at Scale with Allinea Tools	19A/19B
3:30 p.m. – 5 p.m.	Exhibitor Forum	Storage Solutions: • LSI Storage: Ready for Petascale and Beyond • InfiniStor: The Most Feature-Rich Parallel Storage System • Panasas & pNFS: Parallel Storage that Maximizes HPC Application Performance	12A/12B
3:30 p.m. – 5 p.m.	ACM Gordon Bell Finalists	• High-Frequency Simulations of Global Seismic Wave Propagation Using SPECFEM3D_GLOBE on 62K Processors • New Algorithm to Enable 400+ TFlop/s Sustained Performance in Simulations of Disorder Effects in High-Tc Superconductors • Scalable Adaptive Mantle Convection Simulation on Petascale Supercomputers	Ballroom G
3:30 p.m. – 5 p.m.	Technical Papers	Programming Models: • The Role of MPI in Development Time: A Case Study • An Adaptive Cutoff for Task Parallelism • Programming the Intel 80-Core Network-on-a-Chip Terascale Processor	Ballroom F
3:30 p.m. – 5 p.m.	Masterworks	HPC in Biomedical Informatics II: • High Performance Computing in the "Personalization" of Cancer Therapy: Genomics, Proteomics, and Bioinformatics • Computational Opportunities in Genomic Medicine	18A/B/C/D
5:30 p.m. – 7 p.m.	Birds-of-a-Feather	User Experiences with Large SGI Altix ICE	11A/11B
5:30 p.m. – 7 p.m.	Birds-of-a-Feather	The Green500 List	13A/13B
5:30 p.m. – 7 p.m.	Birds-of-a-Feather	OpenSHMEM: SHMEM for the Rest of the World	19A/19B
5:30 p.m. – 7 p.m.	Birds-of-a-Feather	iPlant Collaborative: Cyberinfrastructure for the Grand Challenges of Plant Science	17A/17B
5:30 p.m. – 7 p.m.	Birds-of-a-Feather	The HPC Profile: Standardized Web Services Access to Compute Clusters	18A/B/C/D
5:30 p.m. – 7 p.m.	Birds-of-a-Feather	Roadrunner: First to a Petaflop, First of a New Breed	14
5:30 p.m. – 7 p.m.	Birds-of-a-Feather	PTP: Parallel Tools Platform	15
5:30 p.m. – 7 p.m.	Birds-of-a-Feather	HDF5 Users	Ballroom E
5:30 p.m. – 7 p.m.	Birds-of-a-Feather	pNFS Protocol after Final Draft and Before RFC	Ballroom F
5:30 p.m. – 7 p.m.	Birds-of-a-Feather	MPI Forum: The New MPI 2.1 Standard, and Progress toward MPI 2.2 and 3.0	Ballroom G

Thursday, November 20

Time	Event	Title	Location
8:30 a.m. – 10 a.m.	Invited Speakers	Plenary Sessions: • High–Performance Computing and the Energy Challenge: Issues and Opportunities • Computational Frameworks for Subsurface Energy and Environmental Modeling and Simulation	Ballroom D
10 a.m. – 4 p.m.	Exhibits	Industry and Research Exhibits, Day 3	Exhibit Hall
10:30 a.m. – noon	ACM Gordon Bell Finalist	• 0.374 Pflop/s Trillion–Particle Particle–in–cell Modeling of Laser Plasma Interactions on Roadrunner • 369 Tflop/s Molecular Dynamics Simulations on the Roadrunner General–Purpose Heterogeneous Supercomputer • Linear Scaling Divide–and–Conquer Electronic Structure Calculations for Thousand-atom Nanostructures	Ballroom G
10:30 a.m. – noon	Doctoral Research Showcase	• Accelerating the Convergence Time of Open Shortest Path First (OSPF) Routing Protocol • Improving Throughput of SMT Processors Using Application Signatures and Thread Priorities • A Performance Prediction Framework for Multicore Applications • Improving the Performance of Parallel Scientific Applications Using Cache Injection • Paravirtualization Performance and Programming Support for Next-Generation HPC Systems • Debugging Large–scale Applications with Virtualization	17A/17B
10:30 a.m. – noon	Exhibitor Forum	Storage Solutions and Cables: • SSDs in the Enterprise: Balancing Cost and Performance • Active Copper Cable Assemblies • Silicon Photonics-enabled Optical Active Cables for Data Centers	12A/12B
10:30 a.m. – noon	Exhibitor Forum	Software Applications and Tools: • Supercomputing Engine for Mathematica • General Atomics Technologies Provide Improved Situational Awareness to US Military Analysts • How the Engineering and Science of Computation Provides a Better Return from HPC	19A/19B
10:30 a.m. – noon	Masterworks	HPC in Alternative Energy Technologies: • Simulation at the Petascale and Beyond for Fusion Energy Science • Understanding Complex Biological Systems Using Computation: Enzymes that Deconstruct Biomass	18A/B/C/D

Thursday, November 20

Time	Event	Title	Location
10:30 a.m. – noon	Technical Papers	I/O Performance: • Hiding I/O Latency with Pre–Execution Prefetching for Parallel Applications • Characterizing and Predicting the I/O Performance of HPC Applications Using a Parameterized Synthetic Benchmark • Parallel I/O Prefetching Using MPI File Caching and I/O Signatures	Ballroom E
10:30 a.m. – noon	Technical Papers	Scheduling: • PAM: A Novel Performance/Power Aware Meta–scheduler for Multicore Systems • A Dynamic Scheduler for Balancing HPC Applications • Proactive Process–Level Live Migration in HPC Environments	Ballroom F Ballroom F
12:15 p.m. –1:15 p.m.	Birds–of–a–Feather	PGAS: The Partitioned Global Address Space Programming Model	Ballroom G
12:15 p.m. –1:15 p.m.	Birds–of–a–Feather	The HPC Advisory Council Initiative	18A/B/C/D
12:15 p.m. –1:15 p.m.	Birds–of–a–Feather	Parallel File System Benchmarking and Enhancements	Ballroom F
12:15 p.m. –1:15 p.m.	Birds–of–a–Feather	Traditional & Distributed HPC: What Has Changed? What Remains the Same?	17A/17B
12:15 p.m. –1:15 p.m.	Birds–of–a–Feather	MPICH: A High–Performance Open Source MPI Implementation	Ballroom E
12:15 p.m. –1:15 p.m.	Birds–of–a–Feather	Impact of Supercomputing on Society: Community Outreach at HPC Centers	14
12:15 p.m. –1:15 p.m.	Birds–of–a–Feather	Parallel Computing from Client to Clusters: A Continuous or a Disjoint Space?	11A/11B
12:15 p.m. –1:15 p.m.	Birds–of–a–Feather	The Challenges, Risks, and Successes of Integrating Petascale Systems into Science Environments	15
12:15 p.m. –1:15 p.m.	Birds–of–a–Feather	Rocks Cluster Distribution 13A/13B	
1:30 p.m. – 3 p.m.	Exhibitor Forum	Addressing System Complexity: • SGI ISLE: Delivering the Industrial Strength Linux Environment for High Performance • Reducing Complexity and Increasing Utilization of HPC Environments with System Aggregation • Broadening the HPC Franchise	19A/19B

Thursday, November 20

Time	Event	Title	Location
1:30 p.m. – 3 p.m.	Exhibitor Forum	System and Workload Management Solutions: • Obtaining an Efficient and Budget–Conscious System While Maintaining a Balance Among CPU Performance, Memory Bandwidth, and I/O Performance • End-to-End HPC Management Software Solution • Moab–Managed Clusters: Intelligently Control System Behavior, Speed, Workload Processing, and Reduce Power Usage	12A/12B
1:30 p.m. – 3 p.m.	Masterworks	Green HPC 1: • Zero–emission Data Centers: Concept and First Steps • Moving from Data Center Efficiency to Data Center Productivity and the Role of HPC in the Data Center of the Future	18A/B/C/D
1:30 p.m. – 3 p.m.	Technical Papers	Visualization and Data Management: • BitDew: A Programmable Environment for Large–scale Data Management and Distribution • Massively Parallel Volume Rendering Using 2–3 Swap Image Compositing • High Performance Multivariate Visual Data Exploration for Extremely Large Data	Ballroom G
1:30 p.m. – 3 p.m.	Technical Papers	Performance Tools: • Scalable Load Balance Measurement for SPMD Codes • Capturing Performance Knowledge for Automated Analysis • Analysis of Application Heartbeats: Learning Structural and Temporal Features in Time Series Data for Identification of Performance Problems	Ballroom E
1:30 p.m. – 3 p.m.	Technical Papers	Grid Virtualization and Overlays: • Using Overlays for Efficient Data Transfer Over Shared Wide–Area Networks • The Cost of Doing Science in the Cloud: The Montage Example • Server–Storage Virtualization: Integration and Load Balancing in Data Centers	Ballroom F
1:30 p.m. – 3 p.m.	SC Awards	Presentation of SC Technical Program Awards	Ballroom D

Thursday, November 20

Time	Event	Title	Location
3:30 p.m. – 5 p.m.	Doctoral Research Showcase	• Parallel Program Analysis and Optimization for High Performance Computing • Text Mining on a Grid Environment • Harnessing Associative Computing for Sequence Alignment with Parallel Accelerators • Feedback–Controlled, Virtualized Resource Sharing for Predictable eScience • An Analysis Framework for Performance Data Mining and Knowledge–driven Performance Analysis • A Hybrid Data Prefetching Architecture for Data Access Efficiency	17A/17B
3:30 p.m. – 5 p.m.	Exhibitor Forum	Efficient Power and Interconnects 3: • Efficient, Power Dense, and Flexible Power Conversion Solutions for Blade, Cluster, and Mainframe Servers • Unified Fabrics and Next-Generation Fabric Technologies • QsNetIII: An Adaptive Routed Network for High Performance Computing	12A/12B
3:30 p.m. – 5 p.m.	Masterworks	Green HPC 2: • Save Energy Now in Computer Centers • The Economic Breakdown of Moore's Law	18A/B/C/D
3:30 p.m. – 5 p.m.	Technical Papers	Applications: Models and Analysis: • Materialized Community Ground Models for Large–Scale Earthquake Simulation • A Scalable Parallel Framework for Analyzing Terascale Molecular Dynamics Trajectories • Parallel Exact Inference on the Cell Broadband Engine Processor	Ballroom E
3:30 p.m. – 5 p.m.	Technical Papers	System Performance Optimization: • Positivity, Posynomials, and Tile Size Selection • Global Trees: A Framework for Linked Data Structures on Distributed Memory Parallel Systems • Prefetch Throttling and Data Pinning for Improving Performance of Shared Caches	Ballroom F
3:30 p.m. – 5 p.m.	Panels	Disruptive Technologies: Weapons of Mass Disruption	Ballroom G
5 p.m.– 9 p.m.		Social Event: SC08 Conference Reception	Offsite

Friday, November 21

Time	Event	Title	Location
8:30 a.m. – 10 a.m.	Panels	SC: The Conference	Ballroom F
8:30 a.m. – 10 a.m.	Panels	My Cloud, Your Cloud, Everybody's Cloud	Ballroom E
8:30 a.m. – 5 p.m.	Workshops	The Fourth International Workshop on High Performance Computing for Nanoscience and Technology (HPCNano08)	13A/13B
10:30 a.m. - noon	Panels	The Hungry Music Monster: How High Performance Computing will Change the Face of Music	Ballroom F
10:30 a.m. - noon	Panels	Exa and Yotta-Scale Data - Are We Ready?	Ballroom E