SC08 Education Program

November 15 – 18, 2008
Austin Convention Center
Austin, Texas

***Tentative agenda, as of 11/05/08**

***Ballrooms D & E are on 4th floor**

***Rooms 8ABC, 9ABC, & 10AB are on 3rd floor**

Jump to Friday | Saturday | Sunday | Monday | Tuesday

Friday, November 14

5:00 pm - 9:00 pm Registration and Welcome Reception, Omni Southpark Hotel, Lobby Foyer

Saturday, November 15

7:00 am - 8:30 am Breakfast, Ballroom D

8:30 am - 10:00 am Welcome & Opening Keynote, Ballroom E

- ***Welcome:*** Pat Teller (SC08 General Conference Chair, University of Texas at El Paso), Paul Gray (SC08 Education Program Chair, University of Northern Iowa)
- ***The Importance of Cyberinfrastructure for Research and Education:*** Edward Seidel (Director, NSF Office of Cyberinfrastructure)

10:00 am - 10:30 am Break

10:30 am - 12:00 pm Parallel Sessions

- K-12 Education, Room 10B: ***STEM and the Computational Science Initiative*** – Bonnie Sutton (The George Lucas Educational Foundation), Ray Rose (Mentornet), Manorama Talaiver (Institute for Teaching through Technology & Innovative Practices)
- Computational Physics Education, Room 8A: ***Physics: From Spreadsheets to Clusters*** – Robert Panoff (Shodor)
- Computational Chemistry Education, Room 8B: ***Computational Chemistry Education (Level 1, Beginner)*** – Clyde Metz (College of Charleston), Shawn Sendlinger (North Carolina Central University)
- Parallel, Distributed, & Grid Education, Room 8C: ***Supercomputing in Plain English*** – Henry Neeman (University of Oklahoma), Charlie Peck (Earlham College)
- Engineering Education, Room 9A: ***Introducing Computational Science in the Undergraduate Engineering Curriculum*** – Steve Gordon (Ohio Supercomputer Center), Ashok Krishnamurthy (Ohio Supercomputer Center), Steve Stevenson (Clemson University)
- Learning and Physical Challenges Education, Room 9B: ***Introduction to Scientific Visualization*** – Jana Lollis (North Carolina School for the Deaf), Jonathan Stuart–Moore (Shodor)
- Computational Biology Education, Room 9C: ***Many Biological Problems Can Be Taught from Desktop to Grid*** – Jeff Krause (Shodor)

12:00 pm - 1:30 pm Lunch, Ballroom D

1:30 pm - 3:00 pm Education Plenary Session, Ballroom E: ***Education Panel: Building on Success*** – Wolfgang Christian (Davidson College), Jeff Krause (Shodor), Henry Neeman (University of Oklahoma), Susan Ragan (Maryland Virtual High School), Kent Robertson (Shodor), Shawn Sendlinger (North Carolina Central University), Joe Smith (Forest Hills Central High School)

2:30 pm - 3:00 pm Panoff and Verona Awards Presentation, Ballroom E

3:00 pm - 3:30 pm Break

3:30 pm - 4:00 pm Pathways, Ballroom E: ***Pathways*** – Paul Gray (University of Northern Iowa)

4:00 pm - 5:00 pm Parallel Sessions

- K-12 Education, Room 10B: ***Pathways*** – Bonnie Sutton (The George Educational Lucas Educational Foundation), Thomas Loughran (University of Notre Dame), Susan Ragan (Maryland Virtual High School)
- Computational Physics Education, Room 8A: ***Pathways*** – Dave Joiner (Kean University)
- Computational Chemistry Education, Room 8B: ***Pathways*** – Clyde Metz (College of Charleston), Shawn Sendlinger (North Carolina Central University)
- Parallel, Distributed, & Grid Education, Room 8C: ***Pathways*** – Charlie Peck (Earlham College)
- Engineering Education, Room 9A: ***Pathways*** – Steve Gordon (Ohio Supercomputer Center)
- Learning and Physical Challenges Education, Room 9B: ***Pathways*** – Robert Panoff (Shodor)
- Computational Biology Education, Room 9C: ***Pathways*** – Eric Jakobsson (University of Illinois at Urbana-Champaign, National Center for Supercomputing Applications), Jeff Krause (Shodor)

5:00 pm - 6:00 pm BOFS

7:00 pm - 9:00 pm Education Poster Reception, Omni Southpark, Oaks Room

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Sunday, November 16

7:00 am - 8:30 am Breakfast, Ballroom D

8:30 am - 10:00 am Education Plenary Session, Ballroom E: ***Using the Next Generation of Information Technology to Launch a Process of Continuous Improvement in Education*** – Henry Kelly (Federation of American Scientists)

10:00 am - 10:30 am Break

10:30 am - 12:00 pm Parallel Sessions

- K-12 Education, Room 10B: ***Building a Mathematical Model from Experimental Data*** – Susan Ragan (Maryland Virtual High School), Scott Sinex (Prince George's Community College, Maryland Virtual High School)
- Computational Physics Education, Room 8A: ***A Survey of Computational Physics*** – Rubin Landau (Oregon State University)
- Computational Chemistry Education, Room 8B: ***Molecular Visualization (Level 1, Beginner)*** – Clyde Metz (College of Charleston), Shawn Sendlinger (North Carolina Central University)
- Parallel, Distributed, & Grid Education, Room 8C: ***MPI: Introduction and Advanced*** – Tom Murphy (Contra Costa College), Kay Wanous (University of Northern Iowa)
- Engineering Education, Room 9A: ***Introductory Modeling Examples for Engineers, Engineering*** – James Giuliani (Ohio Supercomputer Center), Steve Gordon (Ohio Supercomputer Center), Steve Stevenson (Clemson University)
- Learning and Physical Challenges Education, Room 9B: ***Introduction of DEAF STEM, Learning and Physical Challenges Education*** – Kent Robertson (Shodor)
- Computational Biology Education, Room 9C: ***Finding the Common Roots of Probability and Calculus: Applications to Modeling Population Dynamics*** – Eric Jakobsson (University of Illinois at Urbana-Champaign, National Center for Supercomputing Applications)

12:00 pm - 1:30 pm Lunch, Ballroom D

1:30 pm - 3:00 pm Parallel Sessions

- K-12 Education, Room 10B: ***Mathematical Modeling using Real-World Data*** – Steve Gordon (Ohio Supercomputer Center), Susan Ragan (Maryland Virtual High School), Scott Sinex (Prince George's Community College, Maryland Virtual High School)
- Computational Physics Education, Room 8A: ***Easy Java Simulations and the Open Source Physics Project (Part 1)*** – Mario Belloni (Davidson College), Wolfgang Christian (Davidson College)

- Computational Chemistry Education, Room 8B: ***Molecular Modeling (Level 1, Beginner)*** – Shawn Sendlinger (North Carolina Central University)
- Parallel, Distributed, and Grid Education, Room 8C: ***OpenMP: Introduction*** – Christian Trefftz (Grand Valley State University), Greg Wolffe (Grand Valley State University)
- Engineering Education, Room 9A: ***Intermediate Modeling Skills for Engineers: Image Processing Examples with MATLAB (Part 1)*** – Ashok Krishnamurthy (Ohio Supercomputer Center)
- Learning and Physical Challenges Education, Room 9B: ***ASL-STEM Forum: Building Sign Language for Science and Technology through an Electronic Community*** – Richard Ladner (University of Washington)
- Computational Biology Education, Room 9C: ***Distributed Discrete-Event Epidemic Simulations with EPISIMS*** – Doug Roberts (RTI International)

3:00 pm - 3:30 pm Break

3:30 pm - 5:00 pm Parallel Sessions

- K-12 Education, Room 10B: ***CMIST – Connecting Concepts Across the Curriculum*** – Jenda Domaracki (Pittsburgh Supercomputing Center), Pallavi Ishwad (Pittsburgh Supercomputing Center)
- Computational Physics Education, Room 8A: ***Easy Java Simulations and the Open Source Physics Project (Part 2)*** – Mario Belloni (Davidson College), Wolfgang Christian (Davidson College)
- Computational Chemistry Education, Room 8B: ***Molecular Modeling with WebMO (Level 2, Intermediate)*** – Clyde Metz (College of Charleston), Shawn Sendlinger (North Carolina Central University)
- Parallel, Distributed, & Grid Education, Room 8C: ***Benchmarking and Tuning Methodologies and Tools for Parallel Programs*** – Paul Gray (University of Northern Iowa), Charlie Peck (Earlham College)
- Engineering Education, Room 9A: ***Intermediate Modeling Skills for Engineers: CFD Examples (Part 2)*** – James Giuliani (Ohio Supercomputer Center)
- Distance Education, Room 9B: ***New Technologies for Distance Education*** – Kathy Hoellen (Clemson University), Suzie Medders (Clemson University)
- Computational Biology Education, Room 9C: ***Agent-Based Modeling of Disease Spread with MATLAB's Parallel Computing Toolbox and gridMathemetica*** – Diglio Simoni (RTI International)

5:00 pm - 6:00 pm BOFS

6:00 pm - 9:00 pm Exhibitors' Party, Four Seasons Hotel (98 San Jacinto Boulevard)

7:00 pm - 12:00 am Student Reception, Sponsored by Sun, Karma Lounge (119 West 8th Street)

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Monday, November 17

7:00 am - 8:30 am Breakfast, Ballroom D

8:30 am - 10:00 am Education Plenary Session, Room: ***Universal Computational Science Education: Challenges and Opportunities*** – Valerie Taylor (Texas A&M University)

8:30 am - 5:00 pm Student Competition, SC08 Education Booth, 1st Floor

10:00 am - 10:30 am Break

10:30 am - 12:00 pm Parallel Sessions

- K-12 Education, Room 10B: ***Collaboration Tools for K–12 eScience*** – Adam Frey (Wikispaces), Thomas Loughran (University of Notre Dame)
- Computational Physics Education, Room 8A: ***Digital Libraries and HPC Physics Education*** – Mario Belloni (Davidson College), Norman Chonacky (Yale University), Wolfgang Christian (Davidson College), Richard Gass (University of Cincinnati), Dave Joiner (Kean University), Rubin Landau (Oregon State University), Robert Panoff (Shodor)
- Computational Chemistry Education, Room 8B: ***Molecular Dynamics (Level 1, Beginner)*** – Clyde Metz (College of Charleston), Shawn Sendlinger (North Carolina Central University)
- Parallel, Distributed, & Grid Education, Room 8C: ***TeraGrid & HPC University Resources*** – Brad Armosky

(Texas Advanced Computing Center), Scott Lathrop (Blue Waters and TeraGrid)

- Engineering Education, Room 9A: ***Intermediate Modeling Skills for Engineers: Mechanical Engineering Examples (Part 3)*** – Dan Warner (Clemson University)
- Learning and Physical Challenges Education, Room 9B: ***Video in the 21st Century Classroom*** – Kent Robertson (Shodor)
- Computational Biology Education, Room 9C: ***The Biology and Algorithms of Sequence Alignment and Phylogenetic Tree Construction*** – Gloria Rendon (National Center for Supercomputing Applications, University of Illinois at Urbana-Champaign)

12:00 pm - 1:30 pm Lunch, Ballroom D

1:00 pm - 4:00 pm Job Fair, Room TBD

1:30 pm - 3:00 pm Parallel Sessions

- K-12 Education, Room 10B: ***Turning Multivariable Models into Interactive Animated Simulations*** – Susan Ragan (Maryland Virtual High School), Scott Sinex (Prince George's Community College, Maryland Virtual High School)
- Computational Physics Education, Room 8A: ***N-body Physics Problems Solved with Message Passing (Part 1)*** – Norman Chonacky (Yale University), Dave Joiner (Kean University)
- Computational Chemistry Education, Room 8B: ***Chemical Kinetics (Level 1, Beginner)*** – Clyde Metz (College of Charleston)
- Parallel, Distributed, & Grid Education, Room 8C: ***Using Open Science Grid Resources*** – Alina Bejan (University of Chicago)
- Engineering Education, Room 9A: ***Using Parallel MATLAB to Solve More Complex Engineering Problems (Part 1)*** – Ashok Krishnamurthy (Ohio Supercomputer Center), Siddarth Samsi (Ohio Supercomputer Center)
- Learning and Physical Challenges Education, Room 9B: ***Introduction to VoiceThreads for Teachers & Students*** – Kent Robertson (Shodor)
- Computational Biology Education, Room 9C: ***One to Many and Many to Many Sequence Comparisons: BLAST-ing to Metagenomics*** – Ananth Kalyanaraman (Washington State University)

3:00 pm - 3:30 pm Break

3:30 pm - 5:00 pm Parallel Sessions

- K-12 Education, Room 10B: ***Advanced Models*** – Susan Ragan (Maryland Virtual High School), Scott Sinex (Prince George's Community College, Maryland Virtual High School)
- Computational Physics Education, Room 8A: ***N-body Physics Problems Solved with Message Passing (Part 2)*** – Norman Chonacky (Yale University), Dave Joiner (Kean University)
- Computational Chemistry Education, Room 8B: ***Chemical Kinetics with Excel and Vensim PLE (Level 2, Intermediate)*** – Clyde Metz (College of Charleston), Shawn Sendlinger (North Carolina Central University)
- Parallel, Distributed, & Grid Education, Room 8C: ***Modeling and Simulation*** – Andrew Fitz-Gibbon (Earlham College), Brad Johnson-Stalhunt (Earlham College)
- Engineering Education, Room 9A: ***Using Parallel MATLAB to Solve More Complex Engineering Problems (Part 2)*** – Ashok Krishnamurthy (Ohio Supercomputer Center), Siddarth Samsi (Ohio Supercomputer Center)
- Parallel, Distributed, & Grid Education, Room 9B: ***CUDA Introductions*** – Christian Trefftz (Grand Valley State University), Greg Wolffe (Grand Valley State University)
- Computational Biology Education, Room 9C: ***Pattern Discovery and Pattern Matching in Biological Sequences: Finding Meaning by Finding Motifs and Domains*** – Eric Jakobsson (University of Illinois at Urbana-Champaign, National Center for Supercomputing Applications), Jeff Krause (Shodor)

5:30 pm - 7:00 pm Birds of a Feather, Rooms 8ABC, 9ABC, 10B

- BOFS, Room 10B: ***There is No More Sequential Programming. Why Are We Still Teaching It?*** – Wen-Mei Hwu (University of Illinois at Urbana-Champaign), David Kirk (NVIDIA Chief Scientist), Christoph Lameter (Kernel Developer, The Linux Foundation), Charlie Peck (Earlham College), Michael Wrinn (Senior Architect, Intel Software College)

7:00 pm - 9:00 pm Exhibit Hall Opening Gala

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Tuesday, November 18

7:00 am - 8:30 am Breakfast, Room 16AB

8:30 am - 10:00 am SC08 Conference Keynote Presentation, Ballroom D: ***Higher Performance: Supercomputing in the Connected Era*** – Michael Dell (CEO, Dell Inc.)

10:00 am - 10:30 am Break

10:30 am - 12:00 pm Parallel Sessions

- K-12 Education, Room 10B: ***Discovering Data in the Classroom*** – Diane Baxter (San Diego Supercomputing Center), Jeff Sale (San Diego Supercomputing Center)
- Computational Physics Education, Room 8A: ***Stochastic Statistics in Physics*** – Norman Chonacky (Yale University), David Joiner (Kean University)
- Computational Chemistry Education, Room 8B: ***Chemistry Education Software (Level 1, Beginner)*** – Clyde Metz (College of Charleston), Shawn Sendlinger (North Carolina Central University)
- Parallel, Distributed, & Grid Education, Room 8C: ***GNU,Intel, & TotalView Tools*** – Paul Gray (University of Northern Iowa), Charlie Peck (Earlham College)
- Engineering Education, Room 9A: ***Exploring Computational Science Projects for Undergraduate Engineers (Part 1)*** – Steve Gordon (Ohio Supercomputer Center), James Giuliani (Ohio Supercomputer Center), Siddarth Samsi (Ohio Supercomputer Center), Steve Stevenson (Clemson University), Dan Warner (Clemson University)
- Learning and Physical Challenges Education, Room 9B: ***Introduction to Computational Science*** – Robert Panoff (Shodor)
- Computational Biology Education, Room 9C: ***System Dynamics Modeling of Chemical and Enzyme Kinetics Using Vensim PLE, MATLAB, and GNU Octave*** – Jeff Krause (Shodor)

12:00 pm - 1:30 pm Lunch, UCES & Student Competition Awards Presentation, Room 16AB

1:30 pm - 3:00 pm Parallel Sessions

- K-12 Education, Room 10B: ***Mash–ups for K–12 eScience*** – Tim Hardt (Washington High School), Jeff Sale (San Diego Supercomputing Center), Stephanie Stevenson (Fort Caroline Middle School)
- Computational Physics Education, Room 8A: ***Wave Problems in Quantum Mechanics (Part 1)*** – Richard Gass (University of Cincinnati)
- Computational Chemistry Education, Room 8B: ***Chemistry Databases (Level 1, Beginner)*** – Clyde Metz (College of Charleston), Shawn Sendlinger (North Carolina Central University)
- Parallel, Distributed, & Grid Education, Room 8C: ***GNU & Intel Scientific Libraries*** – Charlie Peck (Earlham College)
- Engineering Education, Room 9A: ***Exploring Computational Science Projects for Undergraduate Engineers (Part 2)*** – Steve Gordon (Ohio Supercomputer Center), James Giuliani (Ohio Supercomputer Center), Siddarth Samsi (Ohio Supercomputer Center), Steve Stevenson (Clemson University), Dan Warner (Clemson University)
- Learning and Physical Challenges Education, Room 9B: ***System & Agent Modeling for Learning and Physical Challenges Education*** – Robert Panoff (Shodor), Kent Robertson (Shodor)
- Computational Biology Education, Room 9C: ***Realistic Simulation and Visualization of Enzyme Reactions with Mcell and DReAMM*** – Joel Stiles (National Resource for Biomedical Supercomputing, Pittsburgh Supercomputing Center)

3:00 pm - 3:30 pm Break

3:30 pm - 5:00 pm Parallel Sessions

- K-12 Education, Room 10B: ***Collaboration Bazaar*** – Thomas Loughran (University of Notre Dame)
- Computational Physics Education, Room 8A: ***Wave Problems in Quantum Mechanics (Part 2)*** – Richard Gass (University of Cincinnati)

- Computational Chemistry Education, Room 8B: ***Computational Chemistry Education - Revisited*** – Clyde Metz (College of Charleston), Shawn Sendlinger (North Carolina Central University)
- Parallel, Distributed, & Grid Education, Room 8C: ***SPRNG Introductions*** – Michael Mascagni (Florida State University)
- Engineering Education, Room 9A: ***Exploring Computational Science Projects for Undergraduate Engineers (Part 3)*** – Steve Gordon (Ohio Supercomputer Center), James Giuliani (Ohio Supercomputer Center), Siddarth Samsi (Ohio Supercomputer Center), Steve Stevenson (Clemson University), Dan Warner (Clemson University)
- Learning and Physical Challenges Education, Room 9B: ***Wikis In, Out of, and Between Classrooms*** – Kent Robertson (Shodor)
- Computational Biology Education, Room 9C: ***Behaviors of Biological Network Motifs and the Modular Nature of Biological Networks*** – Jeff Krause (Shodor)

5:00 pm SC08 Education Program Adjourns

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