

MeshTrends VII Symposium Schedule

10th US National Congress on Computational Mechanics

July 16-19, 2009
Columbus, Ohio

Session 4 (Friday 9:30 AM – 11:50 AM) – Parallel

Session Chairs: Steve Owen, Matt Staten

- 9:30 AM **Keynote Speaker** – Mark Shephard – *Recent Advances and Experiences in Adaptive Mesh Generation and Control for Large Scale Simulations*
- 10:10 AM Eric Shaffer – *Streaming Mesh Processing for Scientific Computation*
- 10:30 AM Joaquim B. Cavalcante-Neto – *Parallel Generation of Two-Dimensional Meshes with Cracks by an Advancing Front Method Based on Spatial Decomposition*
- 10:50 AM Knut Morten Okstad – *Parallel adaptive flow simulations with dynamic load balancing*
- 11:10 AM David Hensinger – *A Parallel Finite-Element Mesh Generation Library*

Session 5 (Friday 2:10 PM – 3:50 PM) – Geometry Issues

Session Chairs: Steve Benzley, Steve Owen

- 2:10 PM Oleksiy Busaryev – *Meshing and Repairing Imperfect Shapes with Delaunay Refinement*
- 2:30 PM Andre Pereira – *Boolean Operations on Multi-Region Solids for Mesh Generation*
- 2:50 PM William Roshan Quadros – *Meshing CAD Models Tolerantly Via Reduction Operations*
- 3:10 PM E. Renaut – *Geometrical Supports for CAD Surfaces*
- 3:30 PM Alain Rassineux – *A surface mesh generation technique based on a decomposition into quasi developable surfaces*

Session 6 (Friday 4:00 PM – 5:40 PM) – Applications

Session Chairs: Glen Hansen, Matt Staten

- 4:00 PM Emanuele Casarotti for Marco Stupazzini – *The "Not honoring" meshing strategy: an efficient way to discretize the computational domain for the study of 3D seismic scenarios*
- 4:20 PM Longmin RAN – *Hex-dominant meshing for basin modeling*
- 4:40 PM Emanuele Casarotti – *Parallel hexahedral meshing of geological volumes for spectral element seismic wave simulations*
- 5:00 PM Peter Bacopoulos – *Physics-Based Mesh Refinement for Shallow Water Flow Simulation in the South Atlantic Bight and Atlantic Intracoastal Waterway*
- 5:20 PM V. Dyedov – *Extensions and Comparisons of Generation of Hybrid Prism-Tetrahedron Meshes with Biomedical Applications*

Session 7 (Saturday 9:30 AM – 11:50 AM) – Tools/Architecture/Quality

Session Chairs: Matt Staten, Steve Owen

- 9:30 AM **Keynote Speaker** – Eric L. Mestean – *Modular Architecture to Support Analyzable Representation Modeling for Complex Analysis Design Processes*
- 10:10 AM Brett Clark – *Past and Future Directions for Geometry and Meshing at Sandia*
- 10:30 AM Nancy Hirschfeld-Kahler – *Rapidly Generating Different Meshing Tools*
- 10:50 AM Suzanne M. Shontz – *An Investigation Into Efficient Local Tetrahedral Mesh Quality Improvement Methods for Various Shape Quality Metrics*
- 11:10 AM Mohamad Ebeida – *Guaranteed-Quality All-Quadrilateral Mesh Generation with Feature Preservation*

Session 8 (Saturday 2:10 PM – 3:50 PM) – Adaptivity

Session Chairs: Mark Shepherd, Matt Staten

- 2:10 PM Rao Garimella – *Conformal Adaptive Mesh Refinement and Coarsening for Unstructured Quadrilateral Meshes*
- 2:30 PM Steven E. Benzley – *Automated All-Quadrilateral Mesh Adaptation Through Refinement and Coarsening*
- 2:50 PM A.C.O. Miranda – *A Methodology For 3D Adaptive Analysis Using Geometric Modeling With Multi-Regions and Parametric Surfaces*
- 3:10 PM Jacques Beaumont – *Dynamic Local Refinement with Elliptic Grid Generators*
- 3:30 PM E. Luke – *Adaptive Mesh Refinement With Surface Projection*

Session 9 (Saturday 4:00 PM – 5:40 PM) – ALE Meshes

Session Chairs: Saikat Dey, Steve Owen

- 4:00 PM **Keynote Speaker** – Glen Hansen – *A Fully Coupled ALE Mesh Adaptation Method*
- 4:40 PM Rao Garimella for Konstantin Lipnikov – *Parallel Subdivision of Multi-Material Meshes for Accurate Solution of the Diffusion Equation*
- 5:00 PM Hamid Sharifi – *Mesh Adaptation Techniques in Fast Dynamics With Applications*

Session 10 (Sunday 9:30 AM – 11:50 AM) – Hexahedra

Session Chair: Jessica Zhang, Matt Staten

- 9:30 AM **Keynote Speaker** – Franck Ledoux – *Generation of Hexahedral Block-Structured Meshes using Fundamental Sheets*
- 10:10 AM Xevi Roca – *Explicit Construction of Block Mesh Duals by Addition of Local Dual Contributions*
- 10:30 AM Steven J. Owen – *Feature Capture for Grid-Based Hexahedral Mesh Generation*
- 10:50 AM Matt Staten – *Mesh Matching – Creating Conformal Hexahedral Meshes From Non-Conforming Interfaces*