

Visualization and Data Analysis 2002

Call for Participation and Advanced Program

San Jose Convention Center, San Jose CA

January 21-22, 2002

<http://www.futurevisions.net/SPIE/vda2002/>

<http://spie.org/web/meetings/calls/pw01/confs/EI12.html>

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Chairs:

Robert Erbacher, Computer Science Department, *University at Albany - SUNY*

Philip Chen, *Future, Inc.*

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Jonathan C. Roberts, *Computing Laboratory, University of Kent at Canterbury*

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Northwest National Lab), Yingcai Xiao (The University of Akron)

Monday, January 21

Session 1: Large-Scale Data Visualizations

Session Chair: Robert F. Erbacher

8:30 Responsive scalable thin wire visualization: application to large geographic datasets, C. Yap, K. Been, Z. Du

8:50 View-dependent approach to MIP for very large data, N. Shareef, R. Crawfis

Session Break 9:10-9:20

Session 2: Volume Visualization 1

Session Chair: Philip C. Chen

9:20 Naturally convergent and optimal 3D surface mesh generation by concurrent agents, H. Wei, D. Y. Y. Yun

9:40 Using quadratic simplicial elements for hierarchical approximation and visualization, D. F. Wiley, B. Hamann, Univ

H. R. Childs, K. I. Joy, N. L. Max

Coffee Break 10:00-10:20

Session 3: Biomedical Visualization

Session Chair: Matti Gröhn

10:20 Remote transformation and local 3D reconstruction and visualization of biomedical data sets in Java3D, J. Meyer, P. Pinnamaneni, S. Saladi

10:40 Segmentation and 3D visualization of high-resolution human brain cryosections, I. Takanashi, E. B. Lum, K. L. Ma, J. Meyer, B. Hamann, A. J. Olson

11:00 Effective classification of 3D image data using partitioning methods, V. Megalooikonomou, D. Pokrajac, A. Lazarevic, Z. Obradovic

Session Break 11:20-11:30

Session 4: Scientific Visualization

Session Chair: Ed Swan

11:30 Visualization and holography: real virtuality, S. V. Matveyev, S. Klimenko

11:50 Representing thermal vibrations and uncertainty in molecular surfaces, C. H. Lee, A. Varshney, J. Moulton

Lunch Break 12:10-1:50

Session 5: Applications

Session Chair: Craig M. Wittenbrink

1:50 **Invited Paper:** Visualizing and Analyzing Clickstream Data, Stephen G. Eick

2:30 Application of physics engines in virtual worlds, M. Norman, T. Taylor

2:50 Component-oriented approach to adaptive collaborative visualization, J. Gallop, C. Cooper, I. Johnson, D. Duce, G. S. Blair, G. Coulson, T. Fitzpatrick

Coffee Break 3:10-3:30

Session 6: Algorithms

Session Chair: Katy Börner

3:30 Efficient implementations of edge localization algorithms, R. Sundaram

3:50 Fast simulation of atomic-force-microscope imaging of atomic and polygonal surfaces using graphics hardware, G. Varadhan, W. Robinett, D. Erie, R. M. Taylor II

4:10 Contour-based progressive coding of cutting plane data, Y. Guan, R. J. Moorhead II

4:30 Data compression method for tetrahedral meshes, S. K. Ueng, K. Sikorski

Session Break 4:50-5:00

Session 7: Volume Visualization 2

Session Chair: Jonathan C. Roberts

- 5:00 Comprehensible volume LIC rendering based on 3D significance map, L. Chen, I. Fujishiro, Y. Suzuki
- 5:20 Operation level acceleration for volume rendering, J. Song, O. Gwun, H. Jeong
- 5:40 Volume visualization of 5D sedimentation models, R. Vickery, T. Keen, R. Brou, D. Carruth, R. J. Moorhead II, S. Doane
- 7:30 **Viz Dinner: Details to be Announced**

Tuesday, January 22

Session 8: Parallel Visualization

Session Chair: Jonathan C. Roberts

- 9:30 Interactive distributed hardware-accelerated LOC-sprite terrain rendering with stable frame rates, J. E. Swan II, J. Arango, B. K. Nakshatrala
 - 9:50 Distributed feature extraction, D. E. Silver, Y. Kusurkar, J. Chen
 - 10:10 Interactive parallel visualization framework for distributed data, K. A. Perrine, D. R. Jones, P. Hochschild, R. A. Swetz
- Coffee Break 10:30-11:00

Session 9: Internet and Web Visualizations

Session Chair: Matti Gröhn

- 11:00 TugOfWar: a simple 2D web visualization technique, E. A. El-Kwae, L. S. Tsay
- 11:20 Using semantic treemaps to categorize and visualize bookmark files, Y. Feng, K. Börner
- 11:40 Glyph-based generic network visualization, R. F. Erbacher

Lunch Break 12:00-1:40

Session 10: Flow Visualizations

Session Chair: Craig M. Wittenbrink

- 1:40 **Invited Paper:** Discovering the Unexpected Through Visual Analytics, Jim J. Thomas
- 2:20 Distributed computation of planar closed streamlines, T. Wischgoll, G. Scheuermann, H. Hagen
- 2:40 HSV representation of non-Newtonian Lattice-Boltzmann flows, R. Geist, K. Rasche, J. Westall

Coffee Break 3:00-3:20

Session 11: Visualization Techniques

Session Chair: Philip C. Chen

- 3:20 Statistical generation of city models, C. Yap, H. Biermann, A. Hertzmann, C. Li, J. Meyer, H. K. Pao, S. Paxia
- 3:40 Visualization of high-density 3D graphs using nonlinear visual space transformations, M. C. Hao, U. Dayal, D. Coting
- 4:00 Regular spatial separation for exploratory visualization, J. C. Roberts
- 4:20 Automated geodata analysis and metadata generation, D. Balfanz

Session Break 4:40-4:50

Session 12: Interaction

Session Chair: Robert F. Erbacher

- 4:50 Combining physical and semantical navigation in 3D information, C. Russo Dos Santos, P. Gros, P. Abel
- 5:10 Virtual-virtual haptic feedback and why it wasn't enough, M. J. Bailey, D. Clark

Session Break 5:30-5:45

5:45 Panel Session: VizLies

Poster Papers

Monday, January 20, 5:30-7:00 pm

- Improved ray-casting algorithm for volume visualization*, S. N. Yang, T. S. Wu
- Brain Slicer: a high-performance Internet-based neuromedical imaging system*, R. Zhao, T. Tao, M. Gabriel, G. Belford
- Roget2000: a 2D hyperbolic tree visualization of Roget's Thesaurus*, J. Baumgartner, T. A. Waugh
- Footprint algorithm based on the cubic energy*, S. Gu, J. Shi, T. Chen
- Imaging wet gas separation process by capacitance tomography*, W. Yang, V. T. Nguyen, M. Betting, Twister B.V., A. Chondronasios, S. Nuttras, F. Okimoto, Twister B.V., H. McCann
- Combination of content maps by co-word analysis*, A. Zartl, E. Schiebel
- FlySanDiego: a web-aware 3D interactive regional information system*, M. J. Bailey, S. Lukas
- Distributed sound for volumes: data analysis using distributed visualization and sonification*, R. Minghim, V. C. Lucas Salvador, B. Sousa Freitas, M. C. Ferreira de Oliveira, L. Gustavo Nonato
- Non-rigid 3D registration in freehand fetal ultrasound imaging by using feature points*, Z. Zhang, T. H. Tat
- Three-dimensional audio rendering for distributed virtual environment*, Q. Zhang
- GeoCrystal: graphic-interactive access to geodata archives*, S. Göbel, J. Haist, C. Göbel

Call For Papers

Extended abstracts for the SPIE conference on Visualization and Data Analysis 2003 will be due June 30, 2002. Contact Dr. Erbacher at erbacher@cs.albany.edu for more information as it becomes available.