
**16th ACM SIGSPATIAL International Conference on
Advances in Geographic Information Systems
(ACM GIS 2008)**

Irvine, CA, USA
November 5-7, 2008

General Chairs

* Hanan Samet * Cyrus Shahabi * Ouri Wolfson

Program Chair

* Walid G. Aref

Program Co-chairs

* Mohamed Mokbel * Markus Schneider

Corporate Sponsors

* ESRI * Google * Microsoft * Oak Ridge National Laboratory

Invited Lectures

* Vinton Cerf, VP of Google, USA and 2004 ACM Turing Award Winner
* Jack Dangermond, Founder and President of ESRI, USA

ACM GIS 2008: Program Schedule

Day 1: Wednesday, Nov 5, 2008

7:00-8:00 Breakfast and Registration

8:00-8:10 Welcome

8:10-9:25 Paper Session 1: Geo Sensing

Session Chair: Mohamed Mokbel (University of Minnesota, USA)

SenseWeb: Sharing and Exploring Sensor Streams over Geocentric Interfaces

Aman Kansal (Microsoft Research, USA), Liqian Luo (Microsoft Research, USA), Suman Nath (Microsoft Research, USA), Feng Zhao (Microsoft Research, USA)

Detecting Basic Topological Changes in Sensor Networks by Local Aggregation

Jixiang Jiang (University of Maine, USA), Michael Worboys (University of Maine, USA)

Using Tomography for Ubiquitous Sensing

Stacy Patterson (University of California at Santa Barbara, USA), Bassam Bamieh (University of California at Santa Barbara, USA), Amr El Abbadi (University of California at Santa Barbara, USA)

9:25-10:25 Invited Lecture:

GIS: Geography in Action

Jack Dangermond, Founder and President of ESRI, USA

Session Chair: Erik Hoel (ESRI, USA)

10:25-10:50 Coffee Break

10:50-12:30 Paper Session 2: Modeling

Session Chair: Agnès Voisard (Fraunhofer ISST and FU Berlin, Germany)

A Topology-based Semantic Location Model for Indoor Application

Dandan Li (Hong Kong University of Science and Technology, Hong Kong),
Dik Lun Lee (Hong Kong University of Science and Technology, Hong Kong)

Fast and Extensible Building Modeling from Airborne LiDAR Data

Qian-Yi Zhou (University of Southern California, USA), Ulrich Neumann
(University of Southern California, USA)

An Operation-Independent Approach to Extend 2D Spatial Operations to 3D and Moving Objects

Farid Karimipour (Technical University of Vienna, Austria), Andrew Frank
(Technical University of Vienna, Austria), Mahmoud Reza Delavar
(University of Tehran, Iran)

A Conceptual Spatial Model Supporting Topologically-consistent Multiple Representations

Donatella Gubiani (University of Udine, Italy), Angelo Montanari
(University of Udine, Italy)

12:30-14:00 Lunch (On your own)

14:00-15:30 Fast Forward Preview Session (37 Posters, 8 Ph.D. Showcases)

Session Chair: Jagan Sankaranarayanan (University of Maryland at College Park, USA)

15:30-16:00 Coffee Break

16:00-18:05 Paper Session 3: Route Finding and Road Networks

Session Chair: Michael T. Goodrich (University of California at Irvine, USA)

The Multi-Rule Partial Sequenced Route Query

Haiquan Chen (Auburn University, USA), Wei-Shinn Ku (Auburn University, USA),
Min-Te Sun (National Central University, Taiwan), Roger Zimmermann
(National University of Singapore, Singapore)

Heuristic Algorithms for Route-Search Queries over Geographical Data

Yaron Kanza (Technion, Israel), Eliyahu Safra (ESRI, USA), Yehoshua
Sagiv (The Hebrew University of Jerusalem, Israel), Yerach Doytsher
(Technion, Israel)

Continuous Proximity Monitoring in Road Networks

Hans-Peter Kriegel (Ludwig-Maximilians-University Munich, Germany), Peer
Kröger (Ludwig-Maximilians-University Munich, Germany), Matthias Renz
(Ludwig-Maximilians-University Munich, Germany)

An ACS Cooperative Learning Approach for Route Finding in Natural Environment

David Brosset (Naval Academy Research Institute, USA), Christophe
Claramunt (Naval Academy Research Institute, USA), Eric Saux (Naval

Academy Research Institute, USA)

Similarity-Based Prediction of Travel Times for Vehicles Traveling on Known Routes

Dalia Tiesyte (Aalborg University, Denmark), Christian S. Jensen (Aalborg University, Denmark)

18:30-23:00 Poster Reception, Demo Session, Ph.D. Showcase

Day 2: Thursday, Nov 6, 2008

7:00-8:00 Breakfast

8:00-9:15 Paper Session 4: Terrain and Road Network Algorithms

Session Chair: Robert Laurini (INSA-Lyon, France)

Sparse Terrain Pyramids

Leila De Floriani (University of Genova, Italy), Kenneth Weiss (University of Maryland at College Park, USA)

Studying (Non-Planar) Road Networks Through an Algorithmic Lens

David Eppstein (University of California, at Irvine, USA), Michael Goodrich (University of California at Irvine, USA)

Parallel ODETLAP for Terrain Compression and Reconstruction

Jared Stookey (Rensselaer Polytechnic Institute, USA), Zhongyi Xie (Rensselaer Polytechnic Institute, USA), W. Randolph Franklin (Rensselaer Polytechnic Institute, USA), Dan Tracy (Rensselaer Polytechnic Institute, USA), Barb Cutler (Rensselaer Polytechnic Institute, USA), Marcus V. A. Andrade (Universidade Federal de Viçosa, Brazil)

9:15-10:15 Invited Lecture:

The Geo-Internet and How We May Use it

Vinton Cerf, VP of Google, USA and 2004 ACM Turing Award Winner

Session Chair: Hanan Samet (University of Maryland at College Park, USA)

10:15-10:40 Coffee Break

10:40-12:20 Paper Session 5: Geo Web

Session Chair: Christophe Claramunt (Naval Academy Research Institute, France)

NewsStand: A New View on News

Benjamin Teitler (University of Maryland at College Park, USA), Michael Lieberman (University of Maryland at College Park, USA), Daniele Panozzo (University of Maryland at College Park, USA), Jagan Sankaranarayanan (University of Maryland at College Park, USA), Hanan Samet (University of Maryland at College Park, USA), Jon Sperling (Department of Housing and Urban Development, Office of Policy Development and Research, USA)

Measuring Geographic Information on the Web

Robert Pasley (University of Sheffield, UK), Paul Clough (University of Sheffield, UK), Florian Twaroch (Cardiff University, UK), Ross Purves (University of Zurich, Switzerland)

Qualitative Geocoding of Persistent Web Page

Albert Angel (University of Toronto, Canada), Alexandros Efentakis (RA Computer Technology Institute, Greece), Chara Lontou (National Technical University of Athens, Greece), Dieter Pfoser (Research Academic Computer Technology Institute, Greece)

Autonomous Navigation of Mobile Agents Using RFID-Enabled Space Partitions

Muhammad Atif Mehmood (University of Melbourne, Australia), Lars Kulik (University of Melbourne, Australia), Egemen Tanin (University of Melbourne, Australia)

12:20-13:45 Lunch (On your own)

13:45-15:50 Paper Session 6: Imagery and Geovisualization

Session Chair: Franz Leberl (Graz University of Technology, Austria)

Automatic Extraction of Road Intersection Position, Connectivity, and Orientation from Raster Maps

Yao-Yi Chiang (University of Southern California, USA), Craig Knoblock (University of Southern California, USA)

Validation of Vector Data using Oblique Images

Pragyana Mishra (Microsoft Corporation, USA), Eyal Ofek (Microsoft Corporation, USA), Gur Kimchi (Microsoft Corporation, USA)

Low-Cost Orthographic Imagery

Peter Pesti (Georgia Tech, USA), Jeremy Elson (Microsoft Research, USA), Jon Howell (Microsoft Research, USA), Drew Steedly (Microsoft Research, USA), Matt Uyttendaele (Microsoft Research, USA)

Combining 3-D Geovisualization with Force Feedback Driven User Interaction

Adam Faeth (Iowa State University, USA), Mike Oren (Iowa State University, USA), Chris Harding (Iowa State University, USA)

Integrating Gazetteers and Remote Sensed Imagery

Shawn Newsam (University of California at Merced, USA), Yi Yang (University of California at Merced, USA)

15:50-16:15 Coffee Break

16:15-17:55 Paper Session 7: OLAP and Co-location Mining

Session Chair: Pusheng Zhang (Microsoft Corporation, USA)

Piet-QL: a Query Language for GIS-OLAP Integration

Leticia Gomez (Instituto Tecnológico de Buenos Aires, Argentina), Alejandro Vaisman (Universidad de Buenos Aires, Argentina and University of Hasselt, Belgium), Sebastian Zich (Universidad de Buenos Aires, Argentina)

Embedding and Extending GIS for Exploratory Analysis of Large-Scale Species Distribution Data

Jianting Zhang (The City College of the City University of New York, USA), Le Gruenwald (University of Oklahoma, USA)

Density based Co-Location Pattern Discovery

Xiangye Xiao (Hong Kong University of Science and Technology, Hong Kong), Xing Xie (Microsoft Research Asia, China), Qiong Luo (Hong Kong University of Science and Technology, Hong Kong), Wei-Ying Ma (Microsoft Research Asia, China)

Finding Regional Co-Location Patterns for Sets of Continuous Variables in Spatial Datasets

Christoph Eick (University of Houston, USA), Rachana Parmar (University of Houston, USA), Wei Ding (University of Houston, USA), Tomasz Stepinski (Lunar and Planetary Institute, Houston, USA), Jean-Phillippe Nicot (Bureau of Economic Geology, University of Texas, Austin, USA)

18:00-19:00 Sponsor Demo Session

19:30-23:30 Banquet

Day 3: Friday, Nov 7, 2008

7:00-8:00 Breakfast

8:00-10:05 Paper Session 8: Trajectories

Session Chair: Ralf Hartmut Güting (Fernuniversität Hagen, Germany)

Scalable Processing of Trajectory-Based Queries in Space-Partitioned Moving Objects Databases

Ralph Lange (Universität Stuttgart, Germany), Frank Dürr (Universität Stuttgart, Germany), Kurt Rothermel (Universität Stuttgart, Germany)

Towards a Geometric Interpretation of Double-Cross Matrix-based Similarity of Polylines

Bart Kuijpers (Hasselt University & Transnational University of Limburg, Belgium), Bart Moelans (Hasselt University & Transnational University of Limburg, Belgium)

Detecting Single File Movement

Kevin Buchin (Utrecht University, The Netherlands), Maike Buchin (Utrecht University, The Netherlands), Joachim Gudmundsson (NICTA, Sydney, Australia)

Mining User Similarity Based on Location History

Quannan Li (Microsoft Research Asia, China), Yu Zheng (Microsoft Research Asia, China), Xing Xie (Microsoft Research Asia, China), Yukun Chen (Microsoft Research Asia, China), Wenyu Liu (Huazhong University of Science and Technology, China)

Feed-links for Network Extensions

Boris Aronov (Polytechnic University, New York, USA), Kevin Buchin (Utrecht University, The Netherlands), Maike Buchin (Utrecht University, The Netherlands), Bart Jansen (Utrecht University, The Netherlands), Tom de Jong (Utrecht University, The Netherlands), Marc van Kreveld (Utrecht University, The Netherlands), Maarten Löffler (Utrecht University, The Netherlands), Jun Luo (Utrecht University, The Netherlands), Rodrigo I. Silveira (Utrecht University, The Netherlands), Bettina Speckmann (TU Eindhoven, The Netherlands)

10:05-10:35 Coffee Break

10:35-12:40 Paper Session 9: Systems and Algorithms

Session Chair: Egemen Tanin (University of Melbourne, Australia)

An Inconsistency Tolerant Approach to Querying Spatial Databases

M. Andrea Rodríguez (Universidad de Concepción, Chile), Leopoldo Bertossi (University of Carleton, Canada), Mónica Caniupan (Universidad del Biobío, Chile)

Should SDBMS Support the Join Index?: A Case Study from Spatial Statistical Analysis

Pradeep Mohan (University of Minnesota at Twin Cities, USA), Shashi Shekhar (University of Minnesota at Twin Cities, USA), Ned Levine (Ned Levine and Associates, Houston, USA), Ronald Wilson (National Institute of Justice, USA), Betsy George (University of Minnesota at Twin Cities, USA), Mete Celik (University of Minnesota at Twin Cities, USA)

Spatial Queries in Disconnected Mobile Networks

Xinjuan Zhu (Xian Polytechnic University, China), Bo Xu (University of Illinois at Chicago, USA), Ouri Wolfson (University of Illinois at Chicago, USA)

Efficient Algorithms for Reverse Proximity Query Problems

Yokesh Kumar (University of Minnesota at Twin Cities, USA), Ravi Janardan (University of Minnesota at Twin Cities, USA), Prosenjit Gupta (International Institute of Information Technology, USA)

Dual-heap kNN: k-Nearest Neighbor Search for Spatial Data Retrieval in Embedded DBMS

Hideki Hayashi (Hitachi Central Research Laboratory, Japan), Daisuke Ito (Hitachi Central Research Laboratory, Japan), Masaaki Tanizaki (Hitachi Central Research Laboratory, Japan), Kohji Kimura (Hitachi Software Division, Japan), Hisanori Kajiyama (Hitachi Software Engineering Co, Japan)

12:40-13:00 Closing Remarks and Adjournment of Symposium

Poster Papers: Program Schedule

Fast Forward Preview Session: 14:00-15:30, Wednesday, Nov 5, 2008

Poster Reception: 18:30-23:00, Wednesday, Nov 5, 2008

- 1. Efficient Search of Moving Objects on a Planar Graph**
Thuy Le (University of New Brunswick, Canada), Bradford Nickerson (University of New Brunswick, Canada)
- 2. Geometric Algorithms on an Ellipsoid Earth Model**
Michael Kallay (Microsoft Corporation, USA)
- 3. Approaches for Determining the Geographic Footprint of Arbitrary Terms for Retrieval and Visualization**
Andreas Henrich (University of Bamberg, Germany), Volker Lüdecke (University of Bamberg, Germany), Daniel Blank (University of Bamberg, Germany)
- 4. Bridging the Gap Between Geospatial Resource Providers and Model Developers**
Gilberto Zonta Pastorello Jr (IC-UNICAMP, Brazil), Rodrigo Dias Arruda Senra (IC-UNICAMP, Brazil), Claudia Bauzer Medeiros (IC-UNICAMP, Brazil)
- 5. An Online Approach Based on Localized Weighted Learning for Short-term Traffic Flow Prediction**
Meng Shuai (Beijing University, China), Wen Pu (Beijing University, China), Kunqing Xie (Beijing University, China), Guojie Song (Beijing University, China), Xiujun Ma (Beijing University, China)
- 6. Privacy-Preserving Trajectory Collection**
Gyozo Gidofalvi (Uppsala University, Sweden), Xuegang Huang (Aalborg University, Denmark), Torben Bach Pedersen (Aalborg University, Denmark)
- 7. Discovering Controlling Factors of Geospatial Variables**
Tomasz Stepinski (Lunar and Planetary Institute, USA), Wei Ding (University of Massachusetts at Boston, USA), Christoph Eick (University of Houston, USA)
- 8. An Automatic Approach to Integrate Routing-relevant Information from Different Resources**
Meng Zhang (Technical University of Munich, Germany), Lu Liu (Technical University of Munich, Germany), Hongbo Gong (Technical University of Munich, Germany), Liqiu Meng (Technical University of Munich, Germany)
- 9. Geo-ontology Enrichment through Reverse Engineering**
Guillermo Hess (UFRGS, Brazil), Cirano Iochpe (UFRGS, Brazil)
- 10. Snapshot Location-based Query Processing on Moving Objects in Road Networks**
Haojun Wang (University of Southern California, USA), Roger Zimmermann (National University of Singapore, Singapore)
- 11. Content-based Ontology Matching for GIS Datasets**
Jeffrey Partyka (University of Texas at Dallas, USA), Neda Alipanah (University of Texas at Dallas, USA), Latifur Khan (University of Texas at Dallas, USA), Bhavani Thuraisingham (University of Texas at Dallas, USA)

Dallas, USA), Shashi Shekhar (University of Minnesota at Twin Cities, USA)

12. The DAEDALUS Framework: Progressive Querying and Mining of Movement Data

Riccardo Ortale (ICAR-CNR, Italy), Ettore Ritacco (ICAR-CNR, Italy), Nikos Pelekis (University of Piraeus, Italy), Roberto Trasarti (ISTI-CNR, Italy), Gianni Costa (ICAR-CNR, Italy), Fosca Giannotti (ISTI-CNR, Italy), Giuseppe Manco (ICAR-CNR, Italy), Chiara Renso (ISTI-CNR, Italy), Yannis Theodoridis (University of Piraeus, Greece)

13. Morphological Analysis of Terrains Based on Discrete Curvature and Distortion

Mohammed Mostefa Mesmoudi (University of Paris, France), Leila De Floriani (University of Genova, Italy), Paola Magillo (University of Genova, Italy)

14. Applying Hierarchical Graphs to Pedestrian Indoor Navigation

Edgar-Philipp Stoffel (Ludwig-Maximilians University of Munich, Germany), Korbinian Schoder (Ludwig-Maximilians University of Munich, Germany), Hans Jürgen Ohlbach (Ludwig--Maximilians University of Munich, Germany)

15. Composing Geoinformatics Workflows with User Preferences

David Chiu (Ohio State University, USA), Sagar Deshpande (Ohio State University, USA), Gagan Agrawal (Ohio State University, USA), Rongxing Li (Ohio State University, USA)

16. Path Planning on a Compressed Terrain

Daniel Tracy (Rensselaer Polytechnic Institute, USA), W. Randolph Franklin (Rensselaer Polytechnic Institute, USA), Barbara Cutler (Rensselaer Polytechnic Institute, USA), Franklin Luk (Rensselaer Polytechnic Institute, USA), Marcus Andrade (Federal University of Vicosa, USA), Metin Inanc (Rensselaer Polytechnic Institute, USA), Zhongyi Xie (Rensselaer Polytechnic Institute, USA), Jake Stookey (Rensselaer Polytechnic Institute, USA)

17. Computing Information Gain for Spatial Data Support

Tao Hong (University of Nebraska at Lincoln, USA), Ashok Samal (University of Nebraska at Lincoln, USA), Leen-Kiat Soh (University of Nebraska at Lincoln, USA)

18. Efficient Data Modeling and Querying System for Multi-Dimensional Spatial Data

Wei Li (University of Massachusetts at Lowell, USA), Cindy Chen (University of Massachusetts at Lowell, USA)

19. Two-Site Voronoi Diagrams in Geographic Networks

Matthew Dickerson (Middlebury College, USA), Michael Goodrich (University of California at Irvine, USA)

20. Data Mining for Visual Exploration and Detection of Ecosystem Disturbances

Haibin Cheng (Michigan State University, USA), Pang-Ning Tan

(Michigan State University, USA), Christopher Potter (NASA Ames Research Center, USA), Steven Klooster (California State University at Monterey Bay, USA)

21. Charting New Ground: Modeling User Behavior in Interactive Geovisualization

David Wilson (University of North Carolina at Charlotte, USA), Heather Richter Lipford (University of North Carolina at Charlotte, USA), Erin Carroll (University of North Carolina at Charlotte), USA, Pamela Karr (University of North Carolina at Charlotte, USA), Nadia Najjar (University of North Carolina at Charlotte, USA)

22. Quantifying Spatial Prepositions: An Experimental Study

Mark M. Hall (Cardiff University, UK), Christopher B. Jones (Cardiff University, UK)

23. Multigranular Spatio-temporal Models: Implementation Challenges

Elena Camossi (University College Dublin, Ireland), Michela Bertolotto (University College Dublin, Ireland), Elisa Bertino (Purdue University, USA)

24. An Ontology Framework for Quality of Geographic Information

Richard Onchaga (International Institute for Geo-Information and Earth Observation (ITC), The Netherlands), Ing Widya (University of Twente, The Netherlands), Javier Morales (International Institute for Geo-Information and Earth Observation (ITC), The Netherlands), L.J.M. Nieuwenhuis (University of Twente, The Netherlands)

25. Mobile Continuous Nearest-neighbor Queries on Air

KwangJin Park (Wonkwang University, Korea), Patrick Valduriez (INRIA and LINA, France), Hyunseung Choo (Sungkyunkwan University, Korea)

26. A Situation-centric Approach to Meteorological Services in the SITUMET Platform

Stefan Pfennigschmidt (Fraunhofer Institute for Software and Systems Engineering, Germany), Agnès Voisard (Fraunhofer Institute for Software and Systems Engineering and Free University Berlin, Germany)

27. Pedestrian Flow Prediction in Extensive Road Networks using Biased Observational Data

Simon Scheider (University of Münster, Germany), Michael May (Fraunhofer IAIS Schloss Birlinghoven, Germany), Roberto Rösler (Fraunhofer IAIS Schloss Birlinghoven, Germany), Daniel Schulz (Fraunhofer IAIS Schloss Birlinghoven, Germany), Dirk Hecker (Fraunhofer IAIS Schloss Birlinghoven, Germany)

28. Dynamic Travel Time Provision for Road Networks

Dieter Pfoser (Research Academic Computer Technology Institute, Greece), Sotiris Brakatsoulas (Research Academic Computer Technology Institute, Greece), Petra Brosch (Technical University of Vienna, Austria), Martina Umlauft (Technical University of Vienna, Austria), Nektaria Tryfona (TALENT, Greece), Giorgos Tsironis (TALENT, Greece)

29. Clustering of German Municipalities Based on Mobility Characteristics

Andrea Zanda (Universidad Politécnica de Madrid, Spain), Christine Körner (Fraunhofer IAIS, Germany), Fosca Giannotti (ISTI-CNR, Italy), Daniel Schulz (Fraunhofer IAIS, Germany), Michael May (Fraunhofer IAIS, Germany)

30. Towards Provenance-Aware Geographic Information Systems

Shaowen Wang (University of Illinois at Urbana-Champaign, USA), Anand Padmanabhan (University of Illinois at Urbana-Champaign, USA), James Myers (University of Illinois at Urbana-Champaign, USA), Wenwu Tang (University of Illinois at Urbana-Champaign, USA), Yong Liu (University of Illinois at Urbana-Champaign, USA)

31. Indexing Planar Point Quartets via Geometric Attributes

Charles B. Cranston (University of Maryland at College Park, USA), Hanan Samet (University of Maryland at College Park, USA)

32. Tracking Deformable 2D Objects in Wireless Sensor Networks

Guang Jin (University of Maine, USA), Silvia Nittel (University of Maine, USA)

33. Geospatial Information Integration Based on the Conceptualization of Geographic Domain

Miguel Torres (IPN, Mexico), Rolando Quintero (IPN, Mexico), Serguei Levachkine (IPN, Mexico), Marco Moreno (IPN, Mexico), Giovanni Guzman (IPN, Mexico)

34. GEDMWA: Geospatial Exploratory Data Mining Web Agent

Edward Pultar (University of California at Santa Barbara, USA), Martin Raubal (University of California at Santa Barbara, USA), Michael Goodchild (University of California at Santa Barbara, USA)

35. Optimal Incremental Multi-step Nearest-Neighbor Search

Ming Zhang (University of Calgary, Canada), Reda Alhajj (University of Calgary, Canada), Jon Rokne (University of Calgary, Canada)

36. Selective Data Replication for Distributed Geographical Data Sets

Xuan Gu (University of Canterbury, New Zealand), Richard Pascoe (University of Canterbury, New Zealand)

37. Geographical Analysis of Hierarchical Business Structures by Interactive Drill Down

Klaus Boehm (University of Applied Sciences at Mainz, Germany), Eva Daub (University of Applied Sciences at Mainz, Germany)

Ph.D. Showcase Papers: Program Schedule

Fast Forward Preview Session: 14:00-15:30, Wednesday, Nov 5, 2008

Ph.D. Showcase: 18:30-23:00, Wednesday, Nov 5, 2008

1. Enriching the Spatial Reasoning System RCC8

Ahed Alboody (Université Paul Sabatier, France) (Ph.D. Student), Jordi Inglada (Centre National d'Études Spatiales, France) (Advisor),

Florence Sedes (Université Paul Sabatier, France) (Advisor)

- 2. Query Optimization for Spatio-temporal Data Stream Management Systems**
Hicham G. Elmongui (Purdue University, USA)

- 3. Specification of a Framework for Semantic Annotation of Geospatial Data on the Web**

Carla Macario (IC-UNICAMP, Brazil) (Ph.D. Student), Claudia Medeiros (IC-UNICAMP, Brazil) (Advisor)

- 4. Change Analysis in Spatial Datasets by Interestingness Comparison**

Vadeerat Rinsurongkawong (University of Houston, USA) (Ph.D. Student), Christoph Eick (University of Houston, USA) (Advisor)

- 5. Data Mining of Maps and their Automatic Region/Time/Theme Classification**

Judith Gelernter (Carnegie Mellon University, USA)

- 6. Mapping of Large Magnitude Discontinuous Sea Ice Motion**

Mani Thomas (University of Delaware, USA) (Ph.D. Student), Chandra Kambhamettu (University of Delaware, USA) (Primary Advisor), Cathleen Geiger (University of Delaware, USA) (Secondary Advisor)

- 7. Evaluating Hydrology Preservation of Simplified Terrain Representations**

Christopher Stuetzle (Rensselaer Polytechnic Institute, USA) (Ph.D. Student), W. Randolph Franklin (Rensselaer Polytechnic Institute, USA) (Advisor), Barbara Cutler (Rensselaer Polytechnic Institute, USA) (Advisor), Jonathan Muckell (Rensselaer Polytechnic Institute, USA) (Collaborator), Marcus Andrade (Univ. Fed. Vicosa, Brazil, and Rensselaer Polytechnic Institute, USA) (Collaborator), Jared Stookey (Rensselaer Polytechnic Institute, USA) (Collaborator), Metin Inanc (Rensselaer Polytechnic Institute, USA) (Collaborator), Zhongyi Xie (Rensselaer Polytechnic Institute, USA) (Collaborator)

- 8. pRPL: An Open-source General-purpose Parallel Raster Processing Programming Library**

Qingfeng Guan (University of California at Santa Barbara, USA)

Demo Papers: Program Schedule

Demo Session: 18:30-23:00, Wednesday, Nov 5, 2008

- 1. Computing Isocrones in Multimodal, Schedule-Based Transport Networks**

Veronika Bauer (Free University of Bolzano, Italy), Johann Gamper (Free University of Bolzano, Italy), Roberto Loperfido (Municipality of Bolzano, Italy), Sylvia Profanter (Municipality of Bolzano, Italy), Stefan Putzer (Creaform, Italy), Igor Timko (Free University of Bolzano, Italy)

- 2. Efficient Generation of Area Thematic Maps in KML**

Bruce Ralston (University of Tennessee, USA), Josh Streufert

(University of Tennessee, USA)

3. Web-in-Car: A Web Search Method Not Requiring Keyword Input for Car Navigation Systems

Kazutoshi Sumiya (University of Hyogo, Japan), Takuma Segawa (Micware, Japan), Kazuya Sugihara (Micware, Japan), Kenji Narushima (Micware, Japan)

4. Monitoring Continuous Queries over Streaming Locations

Kostas Patroumpas (National Technical University of Athens, Greece), Evi Kefallinou (National Technical University of Athens, Greece), Timos Sellis (National Technical University of Athens, Greece)

5. Near-Real-Time Spatiotemporal Precipitation Virtual Sensor Creation based on NEXRAD Level II Data in a Semantically-enhanced Digital Watershed

Yong Liu (University of Illinois at Urbana-Champaign, USA), David Hill (University of Illinois at Urbana-Champaign, USA), Alejandro Rodriguez (University of Illinois at Urbana-Champaign, USA), Luigi Marini (University of Illinois at Urbana-Champaign, USA), Rob Kooper (University of Illinois at Urbana-Champaign, USA), Joe Futrelle (University of Illinois at Urbana-Champaign, USA), Barbara Minsker (University of Illinois at Urbana-Champaign, USA), James Myers (University of Illinois at Urbana-Champaign, USA)

6. GISolve Toolkit: Advancing GIS through Cyber infrastructure

Shaowen Wang (University of Illinois at Urbana-Champaign, USA)

7. A Location Aware Role and Attribute Based Access Control System

Isabel Cruz (University of Illinois at Chicago, USA), Pohsiu Lin (University of Illinois at Chicago, USA), Mirko Orsini (University of Illinois at Chicago, USA), Rigel Gjomemo (University of Illinois at Chicago, USA)

8. Highway Operation Monitoring and Evaluation System

Chang-Tien Lu (Virginia Polytechnic Institute and State University, USA), Arnold Boedihardjo (Virginia Polytechnic Institute and State University, USA), Jing Dai (Virginia Polytechnic Institute and State University, USA), Feng Chen (Virginia Polytechnic Institute and State University, USA)

9. *Miner: A Spatial and Spatiotemporal Data Mining System

Ranga Raju Vatsavai (Oak Ridge National Laboratory, USA), Shashi Shekhar (University of Minnesota at Twin Cities, USA), Thomas Burk (University of Minnesota at Twin Cities, USA), Budhendra Bhaduri (Oak Ridge National Laboratory, USA)

10. Development of Trail Network Model and a Web-based Bikeway Routing Service System

Qifeng Lu (Virginia Polytechnic Institute and State University, USA), Stephen Sedlock (Virginia Polytechnic Institute and State University, USA)

11. MAEviz - An Earthquake Risk Assessment System

Terrence M. McLaren (National Center for Supercomputing Applications, USA), James D. Myers (National Center for Supercomputing Applications, USA), Jong Sung Lee, (National Center for Supercomputing Applications, USA) Nathan Tolbert (National Center for Supercomputing Applications, USA), Shawn Hampton (National Center for Supercomputing Applications, USA), Chris Navarro (National Center for Supercomputing Applications, USA)

12. Biography as Events in Time and Space

Fredric Gey (University of California at Berkeley, USA), Ryan Shaw (University of California at Berkeley, USA), Ray Larson (University of California at Berkeley, USA), Michael Buckland (University of California at Berkeley, USA)
