



15th ACM International Symposium on Advances in Geographic Information Systems (ACM GIS 2007)



Day 1: Wednesday, Nov 7, 2007

7:00-8:15

Breakfast and Registration

8:30-8:40

Welcome

8:40-10:20

Paper Session 1: Spatial Databases (Session Chair: Isabel Cruz)

Handling Spatial Data in Distributed Environment

Verena Kantere, National Technical University of Athens; Timos Sellis, National Technical University of Athens

An Interactive Framework for Raster Data Spatial Joins

Wan D. Bae, University of Denver; Petr Vojtechovsky, University of Denver; Shayma Alkobaisi, University of Denver; Scott T. Leutenegger, University of Denver; Seon Ho Kim, University of Denver

Dynamic Storage Balancing in a Distributed Spatial Index

Cedric du Mouza, CNAM; Witold Litwin, University of Paris-Dauphine; Philippe Rigaux, University of Paris-Dauphine

Randomization in Traffic Information Sharing Systems

Masaaki Tanizaki, Hitachi Ltd; Ouri Wolfson, University of Illinois at Chicago

10:20-10:50

Coffee Break

10:50-12:30

Paper Session 2: GIS Imagery (Session Chair: Duane Marble)

Exploiting Automatically Inferred Constraint-Models for Building Identification in Satellite Imagery

Martin Michalowski, University of Southern California; Craig A. Knoblock, University of Southern California; Kenneth Bayer, University of Nebraska at Lincoln; Berthe Y. Choueiry, University of Nebraska at Lincoln

Modeling Satellite Image Streams for Change Analysis

Carlos Rueda, University of California at Davis; Michael Gertz, University of California at Davis

High-Level Web Service for Building Information Visualization and Analysis

Benjamin Hagedorn, University of Potsdam; Jürgen Döllner, University of Potsdam

Comparing Global and Interest Point Descriptors for Similarity Retrieval in Remote Sensed Imagery

Shawn Newsam, University of California at Merced; Yang Yang, University of California at Merced

12:30-14:00

Lunch

14:00-14:50

Paper Session 3: Trajectories (Session Chair: Mohamed Mokbel)

Where We Were: Communities for Sharing Space-Time Trails

Scott Counts, Microsoft Research; Marc Smith, Microsoft Research

Dynamic-Aware Similarity of Moving Objects Trajectories

Goce Trajcevski, Northwestern University; Hui Ding, Northwestern University; Roberto Tamassia, Brown University; Peter Scheuermann, Northwestern University; Dennis Vaccaro, Northrop Grumman Corp

14:50-15:50

Fast Forward Poster Preview Session

15:50-16:20

Coffee Break

16:20-18:00

Paper Session 4: GIS Modeling (Session Chair: Budhendra Bhaduri)

Multilevel Object-Oriented Classification of Quickbird Images for Urban Population Estimates

Claudia Almeida, DSR-INPE; Iris Souza, DSR-INPE; Claudia Durand, DSR-INPE; Carolina Pinho, DPI-INPE; Madalena Pereira, DSR-INPE; Gilberto Ribeiro, DSR-INPE; Raul Feitosa, Catholic University of Rio de Janeiro

The Road Extension Model in the Land Change Modeler for Ecological Sustainability of IDRISI

Ziying Jiang, Clark University

Using Fuzzy Clustering Methods for Delineating Urban Housing Submarkets

Sungsoon Hwang, DePaul University; Jean-Claude Thill, University of North Carolina at Charlotte

Near-real time motion analysis for APLIS 2007: A systems modeling perspective

Mani Thomas, University of Delaware; Chandra Kambhmettu, University of Delaware; Cathleen Geiger, University of Delaware; Jennifer Hutchings, University of Alaska; Melanie Engram, University of Alaska

19:00-21:30

Poster Reception

Day 2: Thursday, Nov 8, 2007

7:00-8:00

Breakfast

8:00-9:15

Paper Session 5: Conflation (Session Chair: Erik Hoel)

Quality-driven Geospatial Data Integration

Snehal Thakkar, University of Southern California; Craig Knoblock, University of Southern California; Jose Luis Ambite, University of Southern California

Automatic Alignment of Large-scale Aerial Rasters to Road-maps

Xiaqing Wu, Google Inc; Rodrigo Carceroni, Google Inc; Hui Fang, Google Inc; Steve Zelinka, Google Inc; Andrew Kirmse, Google Inc

Hierarchical Photo Organization using Geometric Relevance

Boris Epshtien, Microsoft Corporation; Eyal Ofek, Microsoft Corporation; Yonathan Wexler, Microsoft Corporation; Pusheng Zhang, Microsoft Corporation

9:15-10:15

Invited Lecture by Michael Jones of Google Earth

10:15-10:45

Coffee Break

10:45-12:25

Paper Session 6: Road Networks (Session Chair: Robert Laurini)

Optimal Traversal Planning in Road Networks with Navigational Constraints

Leyla Kazemi, University of Southern California; Cyrus Shahabi, University of Southern California; Mehdi Sharifzadeh, Google Inc; Luc Vincent, Google Inc

Evacuation Route Planning: Scalable Heuristics*Sangho Kim, University of Minnesota; Betsy George, University of Minnesota; Shashi Shekhar, University of Minnesota***Proximity Queries in Large Traffic Networks***Hans-Peter Kriegel, Ludwig-Maximilians-University; Peer Kröger, Ludwig-Maximilians-University; Peter Kunath, Ludwig-Maximilians-University; Matthias Renz, Ludwig-Maximilians-University; Tim Schmidt, Ludwig-Maximilians-University***A Model for Enriching Trajectories with Semantic Geographical Information***Luis Otavio Alvares, UFRGS; Vania Bogorny, Hasselt University; Bart Kuijpers, Hasselt University; Jose Antonio Fernandes de Macedo, Ecole Polytechnique Federale de Lausanne; Bart Moelans, Hasselt University; Alejandro Vaisman, Universidad de Buenos Aires*

12:25-14:00

Lunch

14:00-15:40

Paper Session 7: Search Engines and Semantics (Session Chair: Michael Jones)

Robust Location Search from Text Queries*Vibhuti Sengar, Microsoft Research India; Tanuja Joshi, Microsoft Research India; Joseph Joy, Microsoft Research India; Samarth Prakash, Microsoft Research India; Kentaro Toyama, Microsoft Research India***STEWART: Architecture of a Spatio-Textual Search Engine***Michael D. Lieberman, University of Maryland; Hanan Samet, University of Maryland; Jagan Sankaranarayanan, University of Maryland; Jon Sperling, HUD PD&R***Semantically-Assisted Geospatial Workflow Design***Gobe Hobona, Newcastle University; David Fairbairn, Newcastle University; Philip James, Newcastle University***Environmental Scenario Search and Visualization***Mikhail Zhizhin, Geophysical Center RAS; Eric Kihn, NOAA; Vassily Lyutsarev, Microsoft Research; Sergei Berezin, Moscow State University; Alexey Poyda, Geophysical Center RAS; Dmitry Mishin, Geophysical Center RAS; Dmitry Medvedev, Geophysical Center RAS; Dmitry Voitsekhovskiy, Moscow State University*

15:40-16:10

Coffee Break

16:10-17:50

Paper Session 8: Terrain Modeling (Session Chair: Philippe Rigaux)

TerraStream: From Elevation Data to Watershed Hierarchies*Andrew Danner, Swarthmore College; Thomas Mølhøve, University of Aarhus; Ke Yi, Hong Kong U.S.T.; Pankaj K. Agarwal, Duke University; Lars Arge, University of Aarhus; Helena Mitasova, North Carolina State University***Multi-Scale Dual Morse Complexes for Representing Terrain Morphology***Emanuele Danovaro, Free University of Bozen-Bolzano; Leila De Floriani, University of Genova; Maria Vitali, University of Genova; Paola Magillo, University of Genova***Smugglers and Border Guards - The GeoStar Project at RPI***W Randolph Franklin, RPI; Metin Inanc, RPI; Zhongyi Xie, RPI; Daniel M Tracy, RPI; Barbara Cutler, RPI; Marcus V.A. Andrade, RPI***Distributed Computation of Drainage Basin Delineations from Uncertain Digital Elevation Models***Tomas Ukkonen, Finnish Geodetic Institute; Tapani Sarjakoski, Finnish Geodetic Institute; Juha Oksanen, Finnish Geodetic Institute*

18:30-19:30

Sponsor Demo Session

20:00-23:30

Banquet

Day 3: Friday, Nov 9, 2007

7:00-8:00

Breakfast

8:00-9:15

Paper Session 9: Visualization (Session Chair: Peter Widmayer)

GeoModeler: Tightly linking spatially-explicit models and data with a GIS for analysis and geovisualization*Tiffany Vance, NOAA; Nazila Merati, NOAA; Sharon Mesick, NOAA; Christopher Moore, NOAA; Dawn Wright, Oregon State University***GeoAnalytics Visual Inquiry and Filtering Tools in Parallel Coordinates Plot***Sara Johansson, Linköping University; Mikael Jern, Linköping University***A Web-Enabled Extension of a Spatio-Temporal DBMS***Markus Innerebner, Free University of Bozen-Bolzano; Michael Boehlen, Free University of Bozen-Bolzano; Igor Timko, Free University of Bozen-Bolzano*

9:15-10:15

Invited Lecture by Franz Leberl of Microsoft 3DI (Vexcel)

10:15-10:45

Coffee Break

10:45-12:50

Paper Session 10: Spatiotemporal Databases and Moving Objects (Session Chair: Franz Leberl)

An Object-Oriented Approach to the Representation of Spatiotemporal Geographic Features*Alex Lohfink, University of Glamorgan; Tom Carnduff, University of Glamorgan; Nathan Thomas, University of Glamorgan; Mark Ware, University of Glamorgan***Approximate Order-k Voronoi Cells over Positional Streams***Kostas Patroumpas, National Technical University of Athens; Theofanis Minogiannis, National Technical University of Athens; Timos Sellis, National Technical University of Athens***Partition-Based Lazy Updates for Continuous Queries over Moving Objects***Yuling Hsueh, University of Southern California; Roger Zimmermann, National University of Singapore; Haojun Wang, University of Southern California; Wei-Shinn Ku, Auburn University***CLAM: Concurrent Location Management for Moving Objects***Jing Dai, Virginia Polytechnic and State University; Chang-Tien Lu, Virginia Polytechnic and State University***Location Anonymity in Continuous Location-based Services***Toby Xu, Iowa State University; Ying Cai, Iowa State University*

12:50-13:00

Closing Remarks and Adjournment of Symposium