

<b>Day 1: Wednesday, Nov 3, 2010</b>	
7:00 – 8:00	Breakfast and Registration
8:00 – 8:10	Welcome
8:10 – 9:25	<p style="text-align: center;">Paper Session 1</p> <p>Title: GIS Privacy Session Chair: Yucel Saygin (Sabanci University, Turkey)</p>
	<p><b>Privacy-Preserving Matching of Spatial Datasets with Protection against Background Knowledge</b> Gabriel Ghinita (Purdue University);Carmen Ruiz Vicente (Aalborg University);Ning Shang (Purdue University);Elisa Bertino (Purdue University)</p>
	<p><b>Privacy-Preserving Data-Oblivious Geometric Algorithms for Geographic Data</b> David Eppstein (University of California, Irvine);Michael T. Goodrich (University of California, Irvine);Roberto Tamassia (Brown University)</p>
	<p><b>VeriPlace: A Privacy-Aware Location Proof Architecture</b> Wanying Luo (University of Waterloo);Urs Hengartner (University of Waterloo)</p>
9:25-10:25	<p style="text-align: center;">Invited Lecture</p> <p>Speaker: Sebastian Thrun Title: Photographing the World Ground Up Session Chair: Hanan Samet (University of Maryland, USA)</p>
10:25-10:50	Coffee Break
10:50-12:30	<p style="text-align: center;">Paper Session 2</p> <p>Title: GeoWeb Session Chair: Franz Label (Graz University, Austria)</p>
	<p><b>Deep integration of spatial query processing into native RDF triple stores</b> Andreas Brodt (Universität Stuttgart);Daniela Nicklas (Carl von Ossietzky Universität Oldenburg);Bernhard Mitschang (Universität Stuttgart)</p>
	<p><b>Determining the Spatial Reader Scopes of News Sources Using Local Lexicons</b> Gianluca Quercini (University of Maryland);Hanan Samet (University of Maryland);Jagan Sankaranarayanan (University of Maryland);Michael D. Lieberman (University of Maryland)</p>
	<p><b>An Efficient Location Extraction Algorithm by Leveraging Web Contextual Information</b> Teng Qin (Peking University);Rong Xiao (Microsoft Research Asia);Lei Fang (Tsinghua University);Xing Xie (Microsoft Research Asia);Lei Zhang (Microsoft Research Asia)</p>
	<p><b>Supporting Location-Based Approximate-Keyword Queries</b> Sattam Alsubaiee (University of California, Irvine);Alexander Behm (University of California, Irvine);Chen Li (University of California, Irvine)</p>
12:30-14:00	Lunch (On your own)

14:00-15:30	Fast Forward Preview Session Session Chair: Mohamed Ali (Microsoft, USA)
15:30-16:00	Coffee Break
16:00-18:05	Paper Session 3 Title: Road Networks Session Chair: Mike Worboys (University of Maine, USA)
	<b>Best Point Detour Query in Road Networks</b> Shuo Shang (The University of Queensland);Ke Deng (The University of Queensland);Kexin Xie (The University of Queensland)
	<b>Probabilistic Modeling of Traffic Lanes from GPS Traces</b> Yihua Chen (University of Washington);John Krumm (Microsoft Research)
	<b>Scalable Shortest Paths Browsing on Land Surface</b> Songhua Xing (University of Southern California);Cyrus Shahabi (University of Southern California)
	<b>T-Drive: Driving Directions Based on Taxi Trajectories</b> Jing Yuan (University of Science and Technology of China);Yu Zheng (Microsoft Research Asia);Chengyang Zhang;Wenlei Xie (Microsoft Research Asia);Xing Xie (Microsoft Research Asia);Guangzhong Sun (University of Science and Technology of China);Yan Huang (University of North Texas)
	<b>Local Network Voronoi Diagram</b> Sarana Nutanong (University of Melbourne);Egemen Tanin (University of Melbourne);Mohammed Eunos Ali (University of Melbourne);Lars Kulik (University of Melbourne)
18:30-19:15	ACM SIGSPATIAL Business Meeting (Open, Everyone Welcome)
19:30-23:00	Poster Reception, Demo Session, Ph.D. Showcase
<b>Day 2: Thursday, Nov 4, 2010</b>	
7:00 – 8:00	Breakfast and Registration
8:00 – 9:15	Paper Session 4 Title: Industrial Session Session Chair: Xuan Liu (IBM T. J. Watson Lab, USA)
	<b>Efficiently Locating Photographs in Many Panoramas</b> Michael Kroepfl (Microsoft);Yonatan Wexler (Microsoft);Eyal Ofek (Microsoft Research)
	<b>Location Disambiguation in Local Searches Using Gradient Boosted Decision Trees</b> Ritesh J. Agrawal (AT&T Interactive);James G. Shanahan (AT&T Interactive Research)
	<b>Detecting Nearly Duplicated Records in Location Datasets</b> Yu Zheng (Microsoft Research Asia);Xixuan Feng (Microsoft Research Asia);Shuang Peng (Search Technology Center, Microsoft);James Fu (Search Technology Center, Microsoft);Xing Xie (Microsoft Research Asia)

	<p><b>Geospatial Editing Over a Federated Cloud Geodatabase for the State of NSW</b>  Kalyan K. Janakiraman (Land and Property Management Authority &amp; Macquarie University); Mehmet A. Orgun (Macquarie University); Abhaya Nayak (Macquarie University)</p>
9:15-10:15	<p>Invited Lecture  Speaker: Maneesh Agrawala  Title: Designing Maps to Help People  Session Chair: Hanan Samet (University of Maryland, USA)</p>
10:15-10:40	Coffee Break
10:40-12:45	<p>Paper Session 5  Title: Computational Geometry  Session Chair: Michael Lounsbery (Boeing, USA)</p>
	<p><b>Cleaning Massive Sonar Point Clouds</b>  Lars Arge (Aarhus University); Kasper Green Larsen; Thomas Mølhave (Duke University); Freek van Walderveen (Aarhus University)</p>
	<p><b>Tolerance Geometry - Euclid's First Postulate for Points and Lines with Extension</b>  Gwen Wilke (Vienna University of Technology); Andrew U. Frank (Vienna University of Technology)</p>
	<p><b>Natural Neighbor Interpolation Based Grid DEM Construction Using a GPU</b>  Alex Beutel (Duke University); Thomas Mølhave (Duke University); Pankaj K. Agarwal (Duke University)</p>
	<p><b>Measuring Consistency with Respect to Topological Dependency Constraints</b>  M. Andrea Rodriguez (Universidad de Concepcion); Nieves Brisaboa (Universidade da Coruña); Yasna Meza (Universidad de Concepcion); Miguel R. Luaces (Universidade da Coruña)</p>
	<p><b>Optimal and Topologically Safe Simplification of Building Footprints</b>  Jan-Henrik Haurert (Universität Würzburg); Alexander Wolff (Universität Würzburg)</p>
12:45-14:00	Lunch (On your own)
14:00-16:05	<p>Paper Session 6  Title: Spatio-temporal Data  Session Chair: Conny Junghans (University of Heidelberg, Germany)</p>
	<p><b>An Algorithmic Framework for Segmenting Trajectories based on Spatio-Temporal Criteria</b>  Maike Buchin (TU Eindhoven); Anne Driemel (Utrecht University); Marc van Kreveld (Utrecht University); Vera Sacristán (Universitat Politècnica de Catalunya)</p>
	<p><b>A Lagrangian Approach for Storage of Spatio-Temporal Network Datasets: A Summary of Results</b>  Michael R. Evans (University of Minnesota); KwangSoo Yang (University of Minnesota); James M. Kang (University of</p>

	Minnesota);Shashi Shekhar (University of Minnesota)
	<b>Selecting Tracking Principals with Epoch Awareness</b> Oliviu Ghica (Northwestern University);Goce Trajcevski (Northwestern University);Fan Zhou (University of Electronic Science and Technology of China);Roberto Tamassia (Brown University);Peter Scheuermann (Northwestern University)
	<b>A Variant of Particle Filtering Using Historic Datasets for Tracking Complex Geospatial Phenomena</b> Anand Panangadan (Jet Propulsion Laboratory);Ashit Talukder (Jet Propulsion Laboratory)
	<b>Usability Analysis of Compression Algorithms for Position Data Streams</b> Nicola Höhle (Universität Stuttgart);Matthias Grossmann (Universität Stuttgart);Steffen Reimann (Universität Stuttgart);Bernhard Mitschang (Universität Stuttgart)
16:05-16:30	Coffee Break
16:30-18:10	Paper Session 7 Title: Visualization Session Chair: Robert Laurini (INSA-Lyon, France)
	<b>Bridge Detection in Grid Terrains and Improved Drainage Enforcement</b> Ryan Carlson (Swarthmore College);Andrew Danner (Swarthmore College)
	<b>Annotating and Navigating Tourist Videos</b> Bo Zhang (Microsoft Research Asia);Qinlin Li (Sun-Yatsen University);Hongyang Chao (Sun-Yatsen University);Bill Chen (Microsoft Corporation);Eyal Ofek (Microsoft Corporation);Ying-Qing Xu (Microsoft Research Asia)
	<b>Bag-Of-Visual-Words and Spatial Extensions for Land-Use Classification</b> Shawn Newsam (University of California at Merced);Yi Yang (University of California at Merced)
	<b>Generating Synthetic Meta-data for Georeferenced Video Management</b> Sakire Arslan Ay (University of Southern California);Seon Ho Kim (University of Southern California);Roger Zimmermann (National University of Singapore)
18:30-19:30	Sponsor Demo Session
19:30-23:30	Banquet
<b>Day 3: Friday, Nov 5, 2010</b>	
7:00 – 8:00	Breakfast and Registration
8:00-10:05	Paper Session 8 Title: Map Matching and Labeling Session Chair: Stephan Winter (University of Melbourne, Australia)
	<b>On Map Matching of Wireless Positioning Data: A Selective Look-ahead Approach</b>

	<p>Matt Weber (Georgia Institute of Technology);Ling Liu (Georgia Institute of Technology);Kipp Jones (Skyhook Wireless);Michael J. Covington (Georgia Institute of Technology);Lama Nachman (Intel Corporation);Peter Pesti (Georgia Institute of Technology)</p> <p><b>Qualitative Matching of Spatial Information</b> Jan Oliver Wallgrün (University of Bremen);Diedrich Wolter (University of Bremen);Kai-Florian Richter (University of Bremen)</p> <p><b>Dynamic One-Sided Boundary Labeling</b> Martin Nöllenburg (Karlsruhe Institute of Technology and University of California, Irvine);Valentin Polishchuk (University of Helsinki);Mikko Sysikaski (University of Helsinki)</p> <p>Beyond Rasters: Introducing The New OGC Web Coverage Service 2.0 Peter Baumann (Jacobs University)</p> <p><b>Semi-Automatic Interpretation of Buildings and Settlement Areas in User-Generated Spatial Data</b> Stefan Werder (Leibniz Universität Hannover);Birgit Kieler (Leibniz Universität Hannover);Monika Sester (Leibniz Universität Hannover)</p>
10:05-10:35	Coffee Break
10:35-12:40	<p>Paper Session 9</p> <p>Title: Spatial Queries Session Chair: Roger Zimmermann (National University of Singapore, Singapore)</p>
	<p><b>Energy-Efficient Processing of Spatio-Temporal Queries in Wireless Sensor Networks</b> Markus Bestehorn (Karlsruhe Institute of Technology);Klemens Böhm (Karlsruhe Institute of Technology);Erik Buchmann (Karlsruhe Institute of Technology);Stephan Kessler (Karlsruhe Institute of Technology)</p> <p><b>Verifying Spatial Queries Using Voronoi Neighbors</b> Ling Hu (University of Southern California);Wei-Shinn Ku (Auburn University);Spiridon Bakiras (City University of New York);Cyrus Shahabi (University of Southern California)</p> <p><b>Easiest-to-Reach Neighbor Search</b> Jie Shao (University of Melbourne);Lars Kulik (University of Melbourne);Egemen Tanin (University of Melbourne)</p> <p><b>Spatial Outlier Detection: Random Walk Based Approaches</b> Xutong Liu (Virginia Tech);Chang-Tien Lu (Virginia Tech);Feng Chen (Virginia Tech)</p> <p><b>Topological Reasoning Between Complex Regions in Databases with Frequent Updates</b> Arif Khan (University of Florida);Markus Schneider (University of Florida)</p>
12:40-13:00	Closing Remarks and Adjournment of Conference

Poster Papers Program Schedule	
Fast Forward Preview Session: 14:00-15:30, Wednesday, Nov 3, 2010	
Poster Session: 19:30-23:00, Wednesday, Nov 3, 2010	

**9+-Intersection Calculi for Spatial Reasoning on the Topological Relations between Heterogeneous Objects**

Yohei Kurata (Tokyo Metropolitan University)

**A Managed Object Based Method for Representing Interactive and Dynamic Features**

Wan Wen (Aalborg University);Xing Lin (Peking University)

**A User Location Anonymization Method for Location Based Services in a Real Environment**

Akiyoshi Suzuki (Osaka University);Mayu Iwata (Osaka University);Yuki Arase (Microsoft Research Asia);Takahiro Hara (Osaka University);Xing Xie (Microsoft Research Asia);Shojiro Nishio (Osaka University)

**Algorithms for Compressing GPS Trajectory Data: An Empirical Evaluation**

Jonathan Muckell (University at Albany -- SUNY);Jeong-Hyon Hwang (University at Albany -- SUNY);Catherine T. Lawson (University at Albany -- SUNY);S. S. Ravi (University at Albany -- SUNY)

**Augmented Internet Maps with Property Information from Aerial Imagery**

Philipp Meixner (Graz University of Technology);Franz Leberl (Graz University of Technology)

**On Continuous Monitoring Top-k Unsafe Moving Objects**

Jian Wen (University of California, Riverside);Vassilis J. Tsotras (University of California, Riverside)

**Decentralized Querying of Topological Relations Between Regions without Using Localization**

Matt Duckham (University of Melbourne);Myeong Hun Jeong (University of Melbourne);Sanjiang Li (University of Technology Sydney);Jochen Renz (Australian National University)

**Derivation of Road Network from Land Parcels**

Jiantong Zhang (Technische Universität München);Yueqin Zhu (Technische Universität München and China University of Mining and Technology);Jukka Krisp (Technische Universität München);Liqiu Meng (Technische Universität München)

**DualgridFF: a Robust, Consistent and Efficient Physical Data Model for Spatial Databases**

Jose Antonio Cotelo-Lema (Universidade da Coruña);Miguel Rodríguez Luaces (Universidade da Coruña)

**Efficient Indexing Structure for Scalable Processing of Spatial Alarms**

Myungcheol Doo (Georgia Institute of Technology);Ling Liu (Georgia Institute of

Technology);Nitya Narasimhan (Motorola Applied Research Center);Venu Vasudevan (Motorola Applied Research Center)

**Evaluation of Cardinal Direction Developments between Moving Points**

Tao Chen (University of Florida);Hechen Liu (University of Florida);Markus Schneider (University of Florida)

**Exploiting Local Node Cache in Top-k Queries within Wireless Sensor Networks**

Johannes Niedermayer (Ludwig-Maximilians-Universität München);Marioi A. Nascimento (University of Alberta);Matthias Renz (Ludwig-Maximilians-Universität München);Peer Kröger (Ludwig-Maximilians-Universität München);Hans-Peter Kriegel (Ludwig-Maximilians-Universität München)

**Extracting Moving Regions from Spatial Data**

Mark McKenney (Texas State University);James Webb (Texas State University)

**Finding Similar Users Using Category-Based Location Histories**

Xiangye Xiao (Microsoft Research Asia and Hong Kong University of Science and Technology);Yu Zheng (Microsoft Research Asia);Qiong Luo (Hong Kong University of Science and Technology);Xing Xie (Microsoft Research Asia)

**GeoLinked Data and INSPIRE through an Application Case**

Luis M. Vilches-Blázquez (Ontology Engineering Group);Boris Villazón-Terrazas (Ontology Engineering Group);Victor Saquicela (Ontology Engineering Group);Alexander de León (Ontology Engineering Group);Oscar Corcho (Ontology Engineering Group);Asunción Gómez-Pérez (Ontology Engineering Group)

**Indexing Large-Scale Raster Geospatial Data Using Massively Parallel GPU Computing**

Jianting Zhang (City College of New York);Simin You (City University of New York Graduate Center);Le Gruenwald (University of Oklahoma)

**Kernelized Map Matching**

Ahmed Jawad (Fraunhofer IAIS);Kristian Kersting (Fraunhofer IAIS)

**Location Recommendation for Location-based Social Networks**

Mao Ye (The Pennsylvania State University);Peifeng Yin;Wang-Chien Lee (The Pennsylvania State University)

**Memory-Efficient A\*-Search Using Sparse Embeddings**

Franz Graf (Ludwig-Maximilians-Universität München);Hans-Peter Kriegel (Ludwig-Maximilians-Universität München);Matthias Renz (Ludwig-Maximilians-Universität München);Matthias Schubert (Ludwig-Maximilians-Universität München)

**Spatial Probabilistic Modeling of Calls to Businesses**

Ramaswamy Hariharan (AT&T Interactive Research);Ji Meng Loh (AT&T Labs -

Research);James G. Shanahan (AT&T Interactive Research);Kenji Yamada (AT&T Interactive Research)

### **Modelling Spatial Video as part of a GIS Video Analysis Framework**

Paul Lewis (National University of Ireland, Maynooth)

### **A Case for Time-Dependent Shortest Path Computation in Spatial Networks**

Ugur Demiryurek (University of Southern California);Farnoush Banaei-Kashani (University of Southern California);Cyrus Shahabi (University of Southern California)

### **Optimal Network Location Queries**

Parisa Ghaemi (University of Southern California);Kaveh Shahabi (University of Southern California);John P. Wilson (University of Southern California);Farnoush Banaei-Kashani (University of Southern California)

### **Quantitative Analysis of Simulated Erosion for Different Soils**

Zhongxian Chen (Rensselaer Polytechnic Institute);Christopher Stuetzle (Rensselaer Polytechnic Institute);Barbara Cutler (Rensselaer Polytechnic Institute);Jared Gross;Randolph Franklin (Rensselaer Polytechnic Institute);Thomas Zimmie (Rensselaer Polytechnic Institute)

### **Querying the Future of Spatio-Temporal Objects**

Philip Schmiegelt (Philipps-Universität Marburg);Bernhard Seeger (Philipps-Universität Marburg)

### **Regional Behavior Change Detection via Local Spatial Scan**

Jing Dai (IBM T.J. Watson Research);Feng Chen (Virginia Tech);Sambit Sahu (IBM T.J. Watson Research);Milind Naphade (IBM T.J. Watson Research)

### **Reverse k-Nearest Neighbor Monitoring on Mobile Objects**

Tobias Emrich (Ludwig-Maximilians-Universität München);Hans-Peter Kriegel (Ludwig-Maximilians-Universität München);Peer Kröger (Ludwig-Maximilians-Universität München);Matthias Renz (Ludwig-Maximilians-Universität München);Naixin Xu (Ludwig-Maximilians-Universität München);Andreas Züfle (Ludwig-Maximilians-Universität München)

### **Spatial Extensions to Kernel Methods**

Alexei Pozdnoukhov (National University of Ireland, Maynooth)

### **sTrack: Tracking in Indoor Symbolic Space with RFID Sensors**

Hye-Young Kang (Pusan National University);Joon-Seok Kim (Pusan National University);Ki-Joune Li (Pusan National University)

### **Spatial Indexing on Tetrahedral Meshes**

Leila De Floriani (University of Genova);Riccardo Fellegara (University of Genova);Paola Magillo (University of Genova)



**Time Geography Inverted: Recognizing Intentions in Space and Time**

Peter Kiefer (Universität Bamberg);Martin Raubal (University of California, Santa Barbara);Christoph Schlieder (University of Bamberg)

**Towards Quality Metrics for OpenStreetMap**

Peter Mooney (National University of Ireland, Maynooth);Padraig Corcoran (National University of Ireland, Maynooth);Adam C. Winstanley (National University of Ireland, Maynooth)

**Voronoi-Based Aggregate Nearest Neighbor Query Processing in Road Networks**

Liang Zhu (Fudan University);Yinan Jing (Fudan University);Weiwei Sun (Fudan University);Dingding Mao (Fudan University);Peng Liu (Fudan University)

**Ph.D. Showcase Program Schedule**

Fast Forward Preview Session: 14:00-15:30, Wednesday, Nov 3, 2010

Ph.D Showcase Session: 19:30-23:00, Wednesday, Nov 3, 2010

**3D Oceanographic Data Compression Using 3D-OETLAP**

You Li (RPI), Tsz-Yam Lau (RPI), Christopher S. Stuetzle (RPI), Peter Fox (RPI), and W. Randolph Franklin (RPI)

**A Model for Progressive Transmission of Spatial Data based on Shape Complexity**

Fangli Ying (NUI Maynooth, Ireland), Peter Mooney (Environmental Protection Agency, Ireland), Padraig Corcoran (NUI Maynooth, Ireland), and Adam C. Winstanley (NUI Maynooth, Ireland)

**Applications of Graph Algorithms in GIS**

Stéphanie Vanhove (Ghent University) and Veerle Fack (Ghent University)

**Haptic-GIS: Exploring the possibilities**

Ricky Jacob (NUI Maynooth, Ireland), Peter Mooney (Environmental Protection Agency, Ireland), Padraig Corcoran (NUI Maynooth, Ireland), and Adam C. Winstanley (NUI Maynooth, Ireland)

**Slope Preserving Lossy Terrain Compression**

Zhongyi Xie (RPI), W. Randolph Franklin (RPI), and Daniel M. Tracy (RPI)

**Demonstration Program Schedule**

Demonstration Session: 19:30-23:00, Wednesday, Nov 3, 2010

### **Analyzing Semantic Location Cloaking Techniques in a Probabilistic Grid-Based Map**

Maria Luisa Damiani (University of Milan);Claudio Silvestri (University of Venice);Elisa Bertino (Purdue University)

### **Automatic Construction and Multi-level Visualization of Semantic Trajectories**

Zhixian Yan (EPFL);Lazar Spremic (EPFL);Dipanjan Chakraborty (IBM Research, India);Christine Parent (University of Lausanne);Stefano Spaccapietra (EPFL);Karl Aberer (EPFL)

### **CBGIR: Content-Based Geographic Image Retrieval**

Shawn Newsam (University of California at Merced);Daniel Leung (University of California at Merced);Oscar Caballero (University of California at Merced);Justin Floreza (University of California at Merced);Jesus Pulido (University of California at Merced)

### **A Spatio-Temporal-Textual Crime Search Engine**

Xutong Liu (Virginia Tech);Changshu Jian (Virginia Tech);Chang-Tien Lu (Virginia Tech)

### **Exploring Labeled Spatial Datasets Using Association Analysis**

Tomasz F. Stepinski (Lunar and Planetary Institute);Josue Salazar (Lunar and Planetary Institute);Wei Ding (University of Massachusetts Boston)

### **Geoblogging - User-Contributed Geospatial Data Collection and Fusion**

Dieter Pfoser (Institute for the Management of Information Systems, Athena);Charikleia Lontou (Institute for the Management of Information Systems, Athena);Euthymios Drymonas (Institute for the Management of Information Systems, Athena);Savvas Georgiou (National Technical University of Athens)

### **GQBox: Geospatial Data Quality Assessment**

Yassine Lassoued (CMRC, University College);Mohamed Reda Bouadjeneq (Alactel-Lucent Bell Labs);Omar Boucelma (LSIS - Aix-Marseille Université);Feranando Lemos (PRiSM, University of Versailles);Mokrane Bouzeghoub (PRiSM, University of Versailles)

### **INTACT: A Spatial Query Integrity Assurance Framework for Location-based Services**

Chih-Jye Wang (Auburn University);Wei-Shinn Ku (Auburn University);Ling Hu (University of Southern California);Cyrus Shahabi (University of Southern California)

### **Keyword Search in Geospatial Database**

Kavita V. V Ganeshan (International Institute of Information Technology, Bangalore);N. L. Sarda (Indian Institute of Technology, Bombay);Sanchit Gupta (Indian Institute of Technology, Bombay)

**Ontuition: Intuitive Data Exploration via Ontology Navigation**

Marco D. Adelfio (University of Maryland);Michael D. Lieberman (University of Maryland);Hanan Samet (University of Maryland);Kashif A. Firozvi (Georgetown University)

**Real-Time Spatio-Temporal Analytics using Microsoft StreamInsight**

Mohamed Ali (Microsoft SQL Server);Badrish Chandramouli (Microsoft Research);Balan S. Raman (Microsoft SQL Server);Ed Katibah (Microsoft SQL Server)

**Strabo: A System for Extracting Road Vector Data from Raster Maps**

Yao-Yi Chiang (University of Southern California);Craig A. Knoblock (University of Southern California)