



**The 11th International Conference on Mobile Data Management**  
**Kansas City, Missouri, USA**

**May 23-26, 2010**

[www.sce.umkc.edu/mdm2010](http://www.sce.umkc.edu/mdm2010)

**Conference and Workshop Programs**

**MDM2010 welcomes you to a stimulating academic event at Kansas City, the city of fountains. The annual MDM conference, as usual, offers you an international forum that focuses on data management for mobile, ubiquitous, and pervasive computing to share your research achievements.**

<b>General Co-Chairs</b> Christian S. Jensen (Aalborg University, Denmark) Sanjay K. Madria (Missouri University of Science & Technology, USA)	<b>PC Co-Chairs</b> Takahiro Hara (Osaka University, Japan) Vijay Kumar (University of Missouri-Kansas City, USA) Demetris Zeinalipour (University of Cyprus, Cyprus)
<b>Industry Track Chairs</b> Gary Gaddis (U. of Missouri-Kansas City, USA) Ali Hurson (Missouri University of Science & Technology, USA) Tamer Nadeem (Siemens Corporate Research, USA)	<b>Tutorial Chairs</b> Evaggelia Pitoura (University of Ioannina, Greece) Peter Scheuermann (Northwestern University, USA)
<b>Demo Chairs</b> Oleg Gusak (University of Missouri-Kansas City, USA) Mohamed Sharaf	<b>Panel Chairs</b> Bharat Bhargava (Purdue University, USA) Nalini Venkatasubramanian (UC Irvine, USA)
<b>Proceedings Chairs</b> Yugyung Lee (University of Missouri-Kansas City, USA) Dan Lin (Missouri University of Science & Technology, USA)	<b>Workshop Chairs</b> Le Gruenwald (University of Oklahoma, USA) Sunil Prabhakar (Purdue University, USA)
<b>Treasurer and Local Arrangements Chairs</b> Praveen Rao (University of Missouri-Kansas City, USA)	<b>Publicity Chairs</b> Debopam Acharya (Georgia Southern University, USA) Rui Zhang (University of Melbourne, Australia)
<b>Ph.D Forum</b> Cory Beard (University of Missouri-Kansas City, USA) Sriram Chellappan (Missouri University of Science & Technology, USA)	

**Sunday, May 23, 2010**  
**A Summary of Conference Activities**

<b>Sunday, May 23, 2010</b>	<b>Activity</b>
7:30 – 8:30 AM	Conference Breakfast, Conference and Workshop Registration
8:30 – 9:00 AM	Workshop opening

**Six Parallel Workshops**

<b>Key</b>	<b>Workshops (Scheduled on Sunday, May 23, 2010)</b>	<b>Location</b>
MCC	International Workshop on Mobile Cloud Computing.	Ballroom B
SeNTIE & QoS2N	Sensor Networks Technologies for Information Explosion Era & QoS enabled Sensor Networks.	Ballroom B
SSPC-WAN	Research Directions in Situational-aware Self-managed Proactive Computing in Wireless Ad hoc Networks	Ballroom A
UMMM	Uncertain Mobile Data Management and Mining	Ballroom C
ROSOC-M	Role of Services, Ontologies, & Context in Mobile Environments	Ballroom C
<b>The following workshop is scheduled on Tuesday, May 25, 2010 from 3:40 – 4:25 PM</b>		
M-PDMST	International workshop on Mobile P2P Data Management, Security and Trust	Ballroom C

**Research Papers**

Full (30 minutes), Short (20 Minutes)

**Keynote Talks, Demos, Posters, Panel, and PhD Forum**

<b>Activity</b>	<b>Presentation</b>	<b>Date</b>	<b>Location</b>
Keynote 1	M. Satyanarayanan (Carnegie Mellon Univ., USA). “VM-based Cloudlets in Mobile Computing”	5-24-10	Ballroom ABC
Invited talk	John Blakeney (Commerce Bank, USA). “Securing Financial Institutions from Authorized Users’ Attack”	5-24-10	Ballroom B
Poster	5 Posters	5-24-10	Ballroom C
Keynote 2	Jon S. Jones (Air Force Research Lab., USA). “Sensor Fusion Reliance on Data Management”	5-25-10	Ballroom ABC
Demo	6 Demos	5-25-10	Boardroom
PhD Forum	12 PhD Presentations with Conference Dinner	5-25-10	Ballroom ABC
Panel	1 Panel	5-26-10	Ballroom A

**Food and Drinks**

**Continental Breakfast:** Every morning  
**Buffet Lunch:** Every day in the hotel restaurant  
**Drinks:** Every day during session breaks  
**Dinner:** Banquet dinner.

## Program at a Glance

<b>May 23 (Sunday)</b>	<b>7:30 - 8:30</b>	<b>Conference Breakfast and Registration</b>			
	<b>8:30-9:00</b>	ROSOC-M. Ballroom C	SeNTIE&QoS2N (Opening) - Ballroom B	Joint session SSPC-WAN & MCC (opening). Ballroom A	
	<b>9:00-10:30</b>	ROSOC-M. Ballroom C	SeNTIE&QoS2N - Ballroom B	SSPC-WAN - Breakout 1 Salon A	SSPC-WAN - Breakout 2 Salon B
	<b>10:30-11:00 AM</b>	<b>Tea Break</b>			
	<b>11:00-12:30</b>		SeNTIE&QoS2N - Ballroom B		
	<b>12:30-1:30 PM</b>	<b>Lunch at Hotel Restaurant (Buffet)</b>			
	<b>1:30-3:30 PM</b>	UMMM - Ballroom C	MCC - Ballroom B	SSPC-WAN - Ballroom A	
	<b>3:30-4:00 PM</b>	<b>Tea Break</b>			
<b>4:00-5:30 PM</b>	UMMM - Ballroom C	MCC - Ballroom B	SSPC-WAN - Ballroom A		
<b>May 24 (Monday)</b>	<b>7:30 - 8:30</b>	<b>Conference Breakfast and Registration</b>			
	<b>8:30 - 9:00</b>	<b>Opening Ceremony - Ballroom ABC</b>			
	<b>9:00-10:00</b>	<b>Keynote Talk: VM-Based Cloudlets in Mobile Computing by Mahadev Satyanarayanan (Carnegie Mellon). Ballroom ABC Chair: Sanjay Madria (Missouri University of Science and Technology, USA)</b>			
	<b>10:00-10:30 AM</b>	<b>Tea Break</b>			
	<b>10:30-12:10 PM</b>	<b>Invited Talk (10:30-11:30). Ballroom B</b> Securing Financial Institutions from Authorized Users' Attack <i>John M. Blakeney</i> (Commerce Bank, USA) Chair: Vijay Kumar	<b>Research Session 1. Ballroom A.</b> Localization and Location-based Services Chair: Wang-Chien Lee		
	<b>12:10-1:30 PM</b>	<b>Lunch at Hotel Restaurant (Buffet)</b>			
	<b>1:30-3:10 PM</b>	<b>Seminar 1. Ballroom A.</b> On the Similarity of Motions <i>Goce Trajcevski</i> (Northwestern Univ. USA), <i>Dimitrios Gunopulos (Univ. of Athens, Greece)</i> Chair: Takahiro Hara	<b>Research Session 2. Ballroom C.</b> GIS, Multimedia, and Storage Chair: Goce Trajcevski		
	<b>3:10 - 3:40 PM</b>	<b>Tea Break</b>			
<b>3:40-5:00 PM</b>	<b>Seminar 1. Ballroom A.</b> On the Similarity of Motions Goce Trajcevski (Northwestern Univ., USA), Dimitrios Gunopulos (Univ. of Athens, Greece) Chair: Takahiro Hara	<b>Poster Session. Ballroom C.</b> (10 min oral presentation) Chair: Vijay Kumar			
<b>May 25 (Tuesday)</b>	<b>8:00 - 9:00 AM</b>	<b>Conference Breakfast and Registration</b>			
	<b>9:00-10:00 AM</b>	<b>Keynote Talk: Sensor Fusion Reliance on Data Management. Jon Jones (Air Force Research Lab, Rome, NY, USA). Ballroom ABC. Chair: Vijay Kumar (University of Missouri-Kansas City, USA)</b>			
	<b>10:00-10:30 AM</b>	<b>Tea Break</b>			

	10:30-12:00	<b>Seminar 2. Ballroom B</b> Trajectory Warehousing and Mining: a State-of-the-Art and Research Directions <i>Alejandro Vaisman (Univ. de Buenos Aires).</i> Chair: Demetris Zeinalipour	<b>Research Session 3. Ballroom C.</b> Privacy and Trust Management Chair: Mukesh Singhal (Colorado State University, USA)	<b>Demo Session. Boardroom.</b>	
	12:00-1:30 PM	<b>Lunch at Hotel Restaurant (Buffet)</b>			
	1:30-3:10 PM	<b>Research Session 4. Ballroom A.</b> Query Processing for Location-based Services Chair: Jari Veijalainen	<b>Research Session 5. Ballroom B.</b> Wireless Networks Chair: Arkady Zaslavsky	<b>MP-DMST (Workshop). Ballroom C.</b>	
	3:10 - 3:40 PM	<b>Tea Break</b>			
	3:40-5:20 PM	<b>Industrial Session 1. Ballroom A.</b> Presentation by IBM/Informix What Can IBM Do for You - Industry, Government. TANGO: Mobile Security and Architecture Chair: Gary Gaddis	<b>Research Session 6. Ballroom B.</b> Query Processing in Wireless Sensor Networks Chair: Silvia Nittel	<b>MP-DMST (Workshop). Ballroom C.</b>	
	6:00-9:00 PM	<b>Conference Dinner with PhD Forum. Chair: Vijay Kumar. Ballroom ABC.</b>			
May 26 (Wed)	8:00 - 9:00 AM	<b>Conference Breakfast and Registration</b>			
	9:00 - 10:15 AM	<b>Panel: Context Prediction and Adaptation in Pervasive Computing. Chair: Arkady Zaslavsky. Ballroom A</b>			
	10:15-10:45 AM	<b>Tea Break</b>			
	10:45-12:25	<b>Research Session 7. Ballroom A</b> Moving Objects Chair: Sriram Chellappan	<b>Industrial Session 2. Ballroom C.</b> Tracking and Sensing Quality Chair: Tamer Nadeem		
	12:30-1:30	<b>Lunch and Closing Ceremony - Location: Hotel Restaurant (Buffet)</b>			
	<b>WORKSHOPS</b>				
<b>ROSOC-M:</b>		International Workshop on the Role of Services, Ontology, and Context in Mobile Environments			
<b>MP-DMST:</b>		International Workshop on Mobile P2P Data Management, Security and Trust			
<b>UMMM:</b>		International Workshop on Uncertain Mobile Data Management and Mining			
<b>MCC:</b>		International Workshop on Mobile Cloud Computing			
<b>SeNTIE &amp; QoS2N:</b>		International Workshop on Sensor Networks Technologies for Information Explosion Era QoS enabled Sensor Networks			
<b>SSPC-WAN:</b>		2nd Workshop on Research Directions in Situational-aware Self-managed Proactive Computing in Wireless Adhoc Networks			

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**Sunday, May 23, 2010**

**Parallel Workshops**

**8:30 – 10:30 AM**

**Workshop: SSPC-WAN (Research Directions in Situational-aware Self-managed Proactive Computing in Wireless Ad hoc Networks)**  
**Joint session with MCC (International Workshop on Mobile Cloud Computing). Ballroom A.**

8:30 -9:00 AM. *Welcome and Introduction*

Sanjay Madria (Missouri U. Science & Technology, USA) and Mark Linderman (Air Force Research Lab. USA)

9:00-9:45 AM. *Keynote Talk I: The Great Indoors: A Data Management Frontier*

Christian S. Jensen (Aalborg University, Denmark)

9:45-10:30 AM. *Keynote Talk II, Enabling the Tactical Cloud*

Ken Birman (Cornell University, USA)



**10:30 - 11:00 AM – Tea Break**

11:00-12:30 PM. 25 Position paper presentations (8 minutes each)



**12:30 - 1:30 PM – Lunch at Hotel Restaurant (Buffet).**

1:30-3:30 PM. Position paper presentations (continued)



**3:30 - 4:00 AM – Tea Break**

**4:00-5:00 PM. Breakout Sessions. Salon A and Salon B.**

5:00-6:00 PM. Breakout session presentations

6:00-6:15 PM. Concluding Remarks. Mark Linderman

**11:00 - 12:30 PM. SeNTIE&QoS2N Workshop. Ballroom B.**

- *A-SAS : An Adaptive High-Availability Scheme for Distributed Stream Processing Systems.*  
Hiroaki Shiokawa, Hiroyuki Kitagawa, Hideyuki Kawashima (University of Tsukuba, Japan).
- *An Examination of Sensor Data Collection Method for Spatial Interpolation on Hierarchical Delaunay Overlay Network.*  
Jun Shinomiya, Yuuichi Teranishi, Kaname Harumoto (Osaka U., Japan), Susumu Takeuchi (NICT, Japan), Shojiro Nishio (Osaka U., Japan).
- *Use of data warehouse to manage data from wireless sensors networks that monitor pollinators.*  
Ricardo Costa, Carlos Cugnasca (Poli-USP, Brazil).

Sunday, May 23, 2010

## Parallel Workshops

May 23, 2010. 1:30 – 5:35 PM.

### Workshop MCC Ballroom B.

- *Defining the Mobile Cloud.*  
Steve Warner
- *Access Schemes for Mobile Cloud Computing.*  
H. Schotten
- *Mobile Community Cloud Computing: Emerges and Evolves.*  
D. Kovachev et al
- *A Mobile-Cloud Collaborative Traffic Lights Detector for Blind Navigation.*  
P. Angin et al



### May 23, 2010. 3:30 - 4:00 PM – Tea Break

- *Security Issues in Cloud Computing.*  
Anya Kim.
- *In-Device Spatial Cloaking for Mobile User Privacy Assisted by the Cloud.*  
S. Wang et al.
- *Mobility Can Help: Protect User Identity with Dynamic Credential.*  
S. Xiao et al.

Workshop wrap-up.

May 23, 2010. 2:00 - 5:30 PM. UMMM Workshop. Ballroom C.

2:00–3:30PM. Keynote Talk by Wang-Chien Lee (Pennsylvania State University)

Title: Toward Distributed Uncertain Data Management  
Chair: To be announced



### May 23, 2010. 3:30 - 4:00 PM – Tea Break

4:00-5:30 PM

- *Finding One-of Probably Nearest Neighbors with Minimum Location Updates.*  
Mitzi McCarthy (La Trobe University, USA), X. Sean Wang (U. Vermont, USA), and Zhen He (La Trobe University, USA)
- *Situation-Aware Data Stream Mining Service for Ubiquitous Applications.*  
Joao Bartolo, Gomes Ernestina Menasalvasand (U. Politecnica Madrid, Spain), & Pedro A. C. Sousay (U. Nova de Lisboa, Portugal)
- *Protecting Privacy in Location-based Services Using K-anonymity without Cloaked Region.*  
Zhenqiang Gong (U. of Sci & Tech of China), Guangzhong Sun (U. of Sci & Tech of China), Xing Xie (Microsoft Research, Asia)
- *PATS: A Framework of Pattern-Aware Trajectory Search.*  
Ling-Yin Wei, Wen-Chih Peng, Bo-Chong Chen, and Ting-Wei Lin (National Chiao Tung University, Taiwan)

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**Sunday, May 23, 2010**

**Parallel Workshops**

**May 23, 2010. 8:30 AM - 10:30 AM**

**Workshop. ROSOC-M. Ballroom C.**

**Chair: Jari Veijalainen (University of Jyväskylä, Finland)**

- *Invited Paper: Supporting Location-Based Services through Composable Stream-Processing Flows.*  
Anand Ranganathan (IBM TJ Watson Research Center, USA)
- *SMBots: An architecture to manage dynamic services based on SMS.*  
Mauricio Lin, Thomaz Philippe Silva, Roberto Santos & Andre Neto.
- *Mobile communities in developing countries.*  
Jari Veijalainen (University of Jyväskylä, Finland), Waseem Rehmat.



**May 23, 2010. 10:30AM - 11:00 AM – Tea Break**

**Monday, May 24, 2010**

**Research Sessions**

7:30 – 8:30 AM – Conference Registration and Breakfast

8:30 - 9:00 AM - Opening Ceremony. Ballroom ABC.

9:00 - 10:00 AM Keynote 1: Mahadev Satyanarayanan (Carnegie Mellon Univ., USA). Ballroom ABC.

*Title: VM-based Cloudlets in Mobile Computing*

Chair: Sanjay Madria (**Missouri University of Science and Technology, USA**)



**May 24, 2010. 10:30 - 11:00 PM – Tea Break**

**May 24, 2010. 10:30 - 12:10 PM**

**10:30 -11:30 AM: Invited Talk: John M. Blakeney (Commerce Bank, USA). Ballroom B.**

*Title: Securing Financial Institutions from Authorized Users' Attack*

Chair: Vijay Kumar (University of Missouri-Kansas City, USA)

**Research Session 1: Localization and Location-based Services. Ballroom A.**

**Chair: Wang-Chien Lee (Pennsylvania State University, USA)**

- *A Generic Platform for Efficient Processing of Spatial Monitoring Queries in Mobile Peer-to-Peer Networks*  
Patricio Galdames, Kihwan Kim, Ying Cai (Iowa State Univ., USA)
- *A Distributed Technique For Dynamic Operator Placement in Wireless Sensor Networks*  
Georgios Chatzimilioudis (U. California-Riverside, USA), Nikos Mamoulis (Hong Kong U., Hong Kong), Dimitrios Gunopulos (U. Athens, Greece)
- *diffeRS: A Mobile Recommender Service (Short Paper).*  
Lucia Del Prete, Licia Capra (Univ. College London, UK)
- *Learning Location Correlation from GPS Trajectories (Short Paper).*  
Yu Zheng, Xing Xie (Microsoft Research, China)



**12:10 - 1:30 PM – Lunch at Hotel Restaurant (Buffet).**

**1:30 - 5:00 PM**

**Seminar 1. Goce Trajcevski (Northwestern Univ.), Dimitrios Gunopulos (Univ. of Athens, Greece)**

*Title: On the Similarity of Motions. Ballroom A*

Chair: Takahiro Hara (University of Osaka, Japan)



## Monday, May 24, 2010

### Research Sessions

1:30 - 3:10 PM

**Research Session 2. *GIS, Multimedia, and Storage.* Ballroom C**  
**Chair: Praveen Rao (University of Missouri-Kansas City, USA)**

- *ACR: an Adaptive Cost-Aware Buffer Replacement Algorithm for Flash Storage Devices.*  
Xian Tang, Xiaofeng Meng (Renmin U. China, China)
- *An Interactive Voting-based Map Matching Algorithm*  
Jing Yuan (U. Science and Technology of China, China), Yu Zheng (Microsoft Research Asia, China), Chengyang Zhang (U. North Texas, USA), Xing Xie (Microsoft Research, China), Guang-Zhong Sun (U. Science and Technology of China, China)
- *Mobile Metadata for Web-based Image Query Services (Short Paper).* Daniel Beatty and Noe Lopez-Benitez (Texas Tech U., USA)
- *Mobile Multimedia Management for Community-aware Storytelling (Short Paper)*  
Yiwei Cao, Anna Hannemann, Ralf Klamma, Dejan Kovachev, Dominik Renzel (RWTH Aachen, Germany)



**May 24, 2010. 3:10 - 3:40 PM – Tea Break**

3:40 - 5:00 PM

**Seminar 1. *Goce Trajcevski (Northwestern Univ.), Dimitrios Gunopulos (Univ. of Athens, Greece) (Continued)***  
**Title: *On the Similarity of Motions.* Ballroom A**  
**Chair: Takahiro Hara (University of Osaka, Japan)**

**Poster Session. 10 mins presentation for each poster paper. Ballroom C**  
**Chair: Vijay Kumar (University of Missouri - Kansas City, USA)**

- *Dessy: Search and Synchronization on the Move*  
Eemil Lagerspetz (U. Helsinki, Finland), Tancred Lindholm (Aalto U., Finland), Sasu Tarkoma (U. Helsinki, Finland)
- *On the Evaluation of Caching in Vehicular Information Systems*  
Nicholas Loulloudes, George Pallis, Marios Dikaiakos (U. Cyprus, Cyprus)
- *Mobility-Awareness for Information Sharing in MANETs*  
Addisalem Negash Shiferaw, Vasile-Marianr Scuturici, Lionel Brunie, Yaser Fawaz (INSA-Lyon, France)
- *Optimal Trajectory Partitioning for Enhanced Privacy and Utility in Continuous Location Based Services*  
Heechang Shin, Jaideep Vaidya, Vijayalakshmi Atluri, Sungyong Choi (Rutgers U., USA)
- *Adapting Batch Learning Algorithms Execution in Ubiquitous Devices.* Zanda Andrea (U. Politecnica de Madrid, Spain).

**Tuesday, May 25, 2010**

**Research Sessions**

**7:30 – 8:30 AM – Continental Breakfast. Conference Registration**

**9:00 - 10:00 AM Keynote 2: Jon S. Jones (Air Force Research Lab.)**  
**Title: *Sensor Fusion Reliance on Data Management***  
**Chair: Vijay Kumar (University of Missouri - Kansas City, USA)**



**May 24, 2010. 10:00 - 10:30 AM – Tea Break**

**10:30 - 12:00 PM**

**Seminar 2 . Alejandro Vaisman (Univ. de Buenos Aires). Ballroom B.**  
**Title: *Trajectory Warehousing and Mining: a State-of-the-Art and Research Directions***  
**Chair: Demetris Zeinalipour (University of Cyprus, Cyprus)**

**Research Session 3: Privacy and Trust Management. Ballroom C**  
**Chair: Mukesh Shingal (University of Kentucky, USA)**

- *Privacy-Aware Location-Aided Routing in Mobile Ad-hoc Networks.*  
Gabriel Ghinita, Mehdi Azarmi, Elisa Bertino (Purdue Univ., USA)
- *Private and Flexible Proximity Detection In Mobile Social Networks.*  
Laurynas Siksny, Jeppe Rishede Thomsen, Simonas Saltenis (Aalborg U., Denmark), Man Lung Yiu (Hong Kong Poly. U., Hong Kong)
- *Coping with Node Misbehaviors in Ad Hoc Networks: A Multi-Dimensional Trust Management Approach.*  
Wenjia Li, Anupam Joshi, Tim Finin (U. Maryland - Baltimore County, USA)

**10:30 – 12:00 PM. Demo Session. Boardroom.**

- *A New Approach for Spatiotemporal Pattern Queries in Trajectory Databases.*  
Mahmoud Sakr, Ralf Hartmut Guting (Fern U. Hagen, Germany)
- *Pcube: A System to Evaluate and Test Privacy-Preserving Proximity Services*  
Dario Freni, Sergio Mascetti, Claudio Bettini (Univ. degli Studi di Milano, Italy), Marco Cozzi
- *A Flash-aware Random Write Optimized Database.*  
Da Zhou, Xiaofeng Meng (Renmin Univ. of China, China)
- *Data-based Agreement for Inter-Vehicle Coordination*  
Brahim Ayari, Abdelmajid Khelil, Kamel Saffar, Neeraj Suri (Technische U. Darmstadt, Germany)
- *Efficient Simulation Architecture for Routing and Replication in Mobile Peer to Peer Network of UAVs*  
Hemanth Meka, Sanjay Madria (Missouri U. Science and Technology, USA), Mohan Kumar (U. Texas-Arlington, USA), Mark Linderman (Air Force Research Lab, USA), Sharma Chakravarthy (U. Texas, Arlington, USA)
- *Dessy: Demonstrating Mobile Search and Synchronization*  
Eemil Lagerspetz, Sasu Tarkoma, Tancred Lindholm (Helsinki Institute for Information Technology, Finland)



**May 25, 2010. 12:00 - 1:30 PM – Lunch at Hotel Restaurant (Buffet).**

Tuesday, May 25, 2010

Research Sessions and Workshop

1:30 - 3:10 PM

**Research Session 4. Query Processing for Location-based Services. Ballroom A**  
**Chair: Jari Veijalainen (University of Jyväskylä, Finland)**

- *Query m-Invariance: Preventing Query Disclosures in Continuous Location-Based Services*  
Rinku Dewri, Indrakshi Ray, Indrajit Ray, Darrell Whitley (Colorado State U., USA)
- *Processing Approximate Rank Queries in a Wireless Mobile Sensors Environment*  
Antoniya Petkova, Kien Hua, Soontharee Koombairojn (U. Central Florida, USA)
- *Efficient Evaluation of k-Range Nearest Neighbor Queries in Road Networks*  
Jie Bao, Chi-Yin Chow, Mohamed F. Mokbel (U. Minnesota, USA), Wei-Shinn Ku (Auburn U., USA)

**Research Session 5. Wireless Networks. Ballroom B**  
**Chair: Arkady Zaslavsky (Lulea University of Technology, Sweden)**

- *A NATed Mobility Management Scheme for PMIPv4 on Wireless LANs.* Wen-Kang Jia, Yaw-Chung Chen (Nat. Chiao Tung U., Taiwan)
- *ParTAC: A Partition-Tolerant Atomic Commit Protocol for MANETs.*  
Brahim Ayari, Abdelmajid Khelil, Neeraj Suri (Technische U. Darmstadt, Germany)
- *Resource Discovery Protocols for Bluetooth-based Ad-hoc Smart Spaces: Architectural Considerations and Protocol Eval. (Short Paper).*  
Andreas Brodt, Alexander Wobser, Bernhard Mitschang (Univ. Stuttgart, Germany)
- *Towards Adaptive Sensor Data Management for Distributed Fire Evacuation Infrastructure (Short Paper)*  
Andrii Cherniak, Vladimir Zadorozhny (Univ. of Pittsburgh, USA)

1:30 - 3:10 PM

**Workshop. Mobile P2P Data Management, Security and Trust (M-PDMST). Ballroom C**  
**Chair: Anirban Mondal and Bharat Bhargava**

**Invited Talk. Takahiro Hara. Title: Energy Efficient Data Access in Mobile Ad Hoc Networks**

- *CReaM: User-Centric Replication Model for Mobile Environments.*  
Zeina Torbey, Nadia Bennani, Lionel Brunie, David Coquil
- *Interest-Awareness for Information Sharing in MANETs.*  
Addisalem Negash Shiferaw, Vasile-Marian Scuturici, Lionel Brunie



**May 25, 2010. 3:15 - 3:40 AM – Tea Break**

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**Tuesday, May 25, 2010**

**Research Sessions and Workshop**

**3:40 - 5:20 PM**

**Industrial Session 1. Presentation by IBM/Informix & Mobile Security and Architecture. Ballroom A.  
Chair: Gary Gaddis (University of Missouri - Kansas City, USA)**

- Presentation by IBM/Informix. What Can IBM Do for You - Industry, Government and Academia  
Pradeep Natarajan, Amit Dandekar (IBM/Informix, USA)
- TANGO: A Flexible Mobility-enabled Architecture for Online and Offline Mobile Enterprise Applications  
Huaigu Wu, Louenas Hamdi, Nolwen Mahe (SAP Labs Canada, Canada)

**Research Session 6. Query Processing in Wireless Sensor Networks. Ballroom B  
Chair: Silvia Nittel (University of Maine, USA)**

- A Cross Pruning Framework for Top-k Data Collection in Wireless Sensor Networks  
Xingjie Liu (Penns State U., USA), Jianliang Xu (Hong Kong Baptist U., Hong Kong), Wang-Chien Lee (Penns State U., USA)
- Low Cost Region Detection from Distributed Sensor Observations. Chengyang Zhang, Yan Huang (Univ. of North Texas, USA)
- Online Time Interval Top-k Queries in Wireless Sensor Networks (Short Paper)  
Baichen Chen, Weifa Liang (Australian National U., Australia), Jeffrey Xu Yu (Chinese U. Hong Kong, Hong Kong)
- Cost Efficient Data Collection Approach Using K-Nearest Neighbors in a 3D Sensor Network (Short Paper)  
Prem Prakash Jayaraman (Monash U., Australia), Arkady Zaslavsky, Jerker Delsing (U. Technology Lulea, Sweden)

**3.40 – 4.25 PM.**

**Workshop. M-PDMST (Continued). Ballroom C.  
Chair: Akimitsu Kanzaki (Osaka U. Japan)**

**Invited Talk: Sensing, Triggers and Mobile (Meta) Data. Goce Trajcevski, Alok Choudhary, Peter Scheuermann**

- *Defending Wireless Sensor Networks Against Adversarial Localization.* Neelanjana Dutta, Abhinav Saxena & Sriram Chellappan
- *Timing and Radius Considerations for Maintaining Connectivity QoS.* Richard Tynan, Gregory O'Hare, Michael O'Grady, Conor Muldoon

**Tuesday, May 25, 2010**  
**Research Sessions and Workshop**



**6:00 - 9:00 PM. PhD Forum and Conference Dinner. Ballroom ABC**

**Chair: Vijay Kumar (University of Missouri-Kansas City, USA)**

- *Context Elements for Transportation Services.*  
Dana Popovici (U. de Valenciennes, France)
- *Malware Detection on Mobile Devices.*  
Asaf Shabtai (Ben-Gurion U., Israel)
- *Dynamic Approximative Data Caching in Wireless Sensor Networks.*  
Nils Hoeller (U. Luebeck, Germany)
- *Gossip-Based Data Fusion Framework for Radio Resource Map.*  
Jin Yang (Ilmenau U. Technology, Germany)
- *Dynamic Social Grouping Based Routing in a Mobile Ad-Hoc Network*  
Roy Cabaniss, Sanjay Madria, George Rush, Abbey Trotta, Srinivasa S. Vulli (Missouri U. Sc. & Technology, USA)
- *MobileSOA framework for Context-Aware Mobile Applications.*  
Aaratee Shrestha (Univ. of Leipzig, Germany)
- *Performance Analysis of Secure Hierarchical Data Aggregation in Wireless Sensor Networks.*  
Vimal Kumar, Sanjay Madria (Missouri U. Sc. & Technology, USA)
- *A Communication Efficient Framework for Finding Outliers in Wireless Sensor Networks*  
Dylan McDonald, Stewart Sanchez, Sanjay Madria, Fikret Ercal (Missouri U. Sc. & Technology, USA)
- *Self Synchronization of Mobile Objects.*  
Amol Khedkar, Vijay Kumar (U. Missouri - Kansas City, USA)
- *Security in Pervasive Health Care Networks: Current R&D and Future Challenges.*  
Debargh Acharya, V. Kumar (U. Missouri-Kansas City, USA)
- *Real-Time Data Compression in Wireless Sensor Networks.*  
Tommy Szalapski, Sanjay Madria (Missouri U. Sc. & Technology, USA)
- *A Peer to Peer based Information Sharing Scheme in Vehicular AdHoc Networks.*  
Neelanjana Dutta (Missouri U. Science & Technology, USA)

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Wednesday, May 26, 2010

Research Sessions and Conference Closing

7:30 – 8:30 AM – Continental Breakfast and Conference Registration

9:00 - 10:15 AM. **Panel Discussion. Ballroom A**  
**Title: *Context Prediction and Adaptation in Pervasive Computing***  
**Chair: Arkady Zaslavsky (Luleå University of Technology, Sweden)**



May 26, 2010. 10:15 - 10:30 AM – Tea Break

May 26, 2010. 10:45 - 12:25 PM

**Research Session 7: Moving Objects. Ballroom B**  
**Chair: Sanjay Madria (Missouri Univ. of Science and Technology, USA)**

- Ad-hoc OLAP on Trajectory Data.  
Gerasimos Marketos, Yannis Theodoridis (U. Piraeus, Greece)
- Uncertain Range Queries for Necklaces  
Goce Trajcevski, Alok Chouhday (Northwestern U., USA), Ouri Wolfson (U. Illinois, USA), Li Ye, Gang Li (Northwestern U., USA)
- Supporting Continuous Range Queries in Indoor Space (Short Paper).  
Wenjie Yuan, Markus Schneider (U. Florida, USA)

10:45 - 12:25 PM

**Industrial Session 2. Tracking and Sensing Quality. Ballroom B**  
**Chair: Tamer Nadeem (Siemens Research, USA)**

- Querying Spatio-Temporal Patterns in Mobile Phone-Call Databases  
Marcos Vieira (U. California, Riverside, USA), Enrique Frias-Martinez (Telefónica Research, Spain), Petko Bakalov (ESRI, Redlands, USA), Vanessa Frias-Martinez (Telefónica Research, Spain), Vassilis Tsotras (U. California, Riverside, USA)
- Scalable, Real-time Map-Matching using IBM's System S.  
Eric Bouillet, Anand Ranganathan (IBM TJ Watson Research Center, USA)
- The Boomerang Protocol: Tying Data to Geographic Locations in Mobile Disconnected Networks (Short Paper)  
Bin Zan (Rutgers Univ., USA), Tingting Sun (Rutgers Univ., USA), Marco Gruteser (Rutgers Univ., USA), Yanyong Zhang (Rutgers Univ., USA)
- An Ontology-Based Framework for Designing a Sensor Quality of Information Software Library (Short Paper)  
Jerrid Matthews (U. California, Los Angeles, USA), Chatschik Bisdikian (IBM TJ Watson Research Center, USA), Lance Kaplan, Tien Pham (U.S. Army Research Laboratory, USA)



12:25 – 2:00. **Conference Closing Ceremony and Lunch at Hotel Restaurant (Buffet).**

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