

Wednesday, January 31st, 2007

09:00 - 10:30 **Session 6: OS & TOOLS**
Chair: Jan Beutel

Improving the Energy Efficiency of the MANTIS Kernel

Cormac Duffy¹, Utz Roedig², John Herbert¹,
and Cormac J. Sreenan¹
(¹University College Cork, Ireland),
(²Lancaster University, UK)

Model-Based Design Exploration of Wireless Sensor Node Lifetimes

Deokwoo Jung, Thiago Teixeira, Andrew Barton-Sweeney,
and Andreas Sawides
(Yale University, USA)

Multithreading Optimization Techniques for Sensor Network Operating Systems

Hyoseung Kim and Hojung Cha
(Yonsei University, Korea)

10:30 - 11:00 **Coffee Break**

11:00 - 12:30 **Session 7: LOCALIZATION**
Chair: Kay Römer

An Empirical Study of Antenna Characteristics Toward RF-based Localization for IEEE 802.15.4 Sensor Nodes

Sungwon Yang and Hojung Cha
(Yonsei University, Korea)

Radio Propagation-Aware Distance Estimation Based on Neighborhood Comparison

Carsten Buschmann¹, Horst Hellbrück¹, Stefan Fischer¹,
Alexander Kröller², and Sádor Fekete²
(¹University of Lübeck, Germany),
(²TU Braunschweig, Germany)

Removing Systematic Error in Node Localisation Using Scalable Data Fusion

Albert Krohn¹, Mike Hazas², and Michael Beigl³
(¹Univ. of Karlsruhe, Germany),
(²Lancaster Univ., UK),
(³Univ. of Braunschweig, Germany)

12:30 - 12:40 **Conference Closing**

12:40 - 13:00 **Lunch**

Wireless Internet access

SSID : TUDelft-Congress

Web key : 123ab



Venue:

Aula Congressentrum
(Lecture Room A)
Mekelweg 52
2628 CC Delft
Tel: 015 - 27 880 22
Fax: 015 - 27 867 55

Organizers:

Koen Langendoen (General Chair)
Muneeb Ali (Local Arrangements)
Laura Zondervan (Local Arrangements)



4th European conference on
Wireless Sensor Networks
(EWSN 2007)

January 29-31, Delft, The Netherlands

EWSN 2007

Conference Program



Monday, January 29th, 2007**8:00 - 9:00** **Registration** (open entire first day)**9:00 - 10:15** **Tutorials** (parallel sessions)

Tutorial 1: Mathematical Modeling of Data-Centric Querying in Wireless Sensor Networks
 Bhaskar Krishnamachari (USC, USA)

Tutorial 2: Reliable Multihop Networking with Bluetooth
 Jan Beutel (ETH Zurich, Switzerland)

10:15 - 10:45 **Coffee Break****10:45 - 12:00** **Tutorial 1 & 2** (continued)**12:00 - 13:00** **Lunch** (for tutorial participants)

13:00 - 13:15 **Conference Opening:**
 Koen Langendoen (TU Delft, The Netherlands),
 Thiemo Voigt (SICS, Sweden)

13:15 - 14:00 **Keynote 1:**
Sensornets: the Next Big Thing (broadening the definition of sensornet research)
 John Heidemann (USC/ISI, USA)

14:00 - 14:15 **Coffee Break**

14:15 - 15:45 **Session 1: NETWORKING**
 Chair: Amy Murphy

Versatile Support for Efficient Neighborhood Data Sharing
 Andreas Lachenmann, Pedro José Marrón, Daniel Minder,
 Olga Saukh, Matthias Gauger,
 and Kurt Roethermel
 (Universität Stuttgart, Germany)

An Energy-Efficient K-hop Clustering Framework for Wireless Sensor Networks
 Quanbin Chen, Jian Ma, Yanmin Zhu, Dian Zhang,
 and Lionel Ni
 (Hong Kong Univ. of Science and Technology, Hong Kong)

Efficient Routing from Multiple Sources to Multiple Sinks in Wireless Sensor Networks
 Pietro Ciciriello¹, Luca Mottola¹, and Gian Pietro Picco^{1,2}
 (¹Politecnico di Milano, Italy),
 (²Univ. of Trento, Italy)

15:45 - 16:15 **Coffee Break**

16:15 - 17:45 **Session 2: TRACKING**
 Chair: Nirupama Bulusu

inTrack: High Precision Tracking of Mobile Sensor Nodes
 Branislav Kusý¹, György Balogh¹, János Sallai¹,
 Ákos Lédeczi¹, and Miklós Maróti²
 (¹Vanderbilt University, USA), (²Univ. of Szeged, Hungary)

Approximate Initialization of Camera Sensor Networks
 Purushottam Kulkarni, Prashant Shenoy,
 and Deepak Ganesan
 (Univ. of Massachusetts, Amherst, USA)

Trail: A Distance Sensitive WSN Service For Distributed Object Tracking
 Vinodkrishnan Kulathumani¹, Anish Arora¹,
 Murat Demirbas², and Mukundan Sridharan¹
 (¹Ohio State University, USA), (²SUNY at Buffalo, USA)

17:45 - 18:00 Announcement:
WSN Research in the Framework Programme for Research FP6 and FP7. Opportunities in the Work Programme 2007/2008
 Rolf Riemenschneider (European Commission, Belgium)

18:00 - 20:00 **Poster/Demo Reception****Tuesday, January 30th, 2007**

08:45 - 09:30 **Keynote 2:**
Wireless sensor networks - From science to reality
 Paul Havinga (UTwente and Ambient Systems)

09:30 - 10:00 **Coffee Break**

10:00 - 12:00 **Session 3: ALGORITHMS**
 Chair: Bhaskar Krishnamachari

Towards Energy-Efficient Skyline Monitoring in Wireless Sensor Networks
 Hekang Chen¹, Shuigeng Zhou^{1,2}, and Jihong Guan³
 (¹Fudan Univ, China), (²Shanghai Key IIP Lab, China),
 (³Tongji Univ, China)

Secure Data Aggregation with Multiple Encryption
 Melek Önen and Refik Molva
 (Institut Eurécom Sophia-Antipolis, France)

RIDA: A Robust Information-Driven Data Compression Architecture for Irregular Wireless Sensor Networks
 Thanh Dang, Nirupama Bulusu, and Wu-chi Feng
 (Portland State University, USA)

Loss Tomography in Wireless Sensor Network using Gibbs Sampling
 Yongjun Li, Wandong Cai, Guangli Tian, and Wei Wang
 (Northwestern Polytechnical University, USA)

12:00 - 13:00 **Lunch**

13:00 - 14:30 **Session 4: APPLICATIONS**
 Chair: Thiemo Voigt

Fence Monitoring – Experimental Evaluation of a Use Case for Wireless Sensor Networks
 Georg Wittenburg, Kirsten Terfloth, Freddy López Villafuerte,
 Tomasz Naumowicz, Hartmut Ritter, and Jochen Schiller
 (Freie Universität Berlin, Germany)

Development of a Wireless Sensor Network for Collaborative Agents to Treat Scale Formation in Oil Pipes
 Frank Murphy, Dennis Laffey, Brendan O'Flynn,
 John Buckley, and John Barton
 (Tyndall National Institute, Cork, Ireland)

Deployment Support Network – A Toolkit for the Development of WSNs
 Matthias Dyer¹, Jan Beutel¹, Thomas Kalt¹, Patrice Oehen¹,
 Lothar Thiele¹, Kevin Martin², and Philipp Blum²
 (¹ETH Zurich, Switzerland), (²Siemens, Switzerland)

14:30 - 15:00 **Coffee Break**

15:00 - 16:30 **Session 5: MAC**
 Chair: Pedro Marrón

Energy Consumption of Minimum Energy Coding in CDMA Wireless Sensor Networks
 Benigno Zurita Ares, Carlo Fischione,
 and Karl Henrik Johansson
 (KTH Stockholm, Sweden)

Crankshaft: An Energy-Efficient MAC-Protocol For Dense Wireless Sensor Networks
 Gertjan Halkes and Koen Langendoen
 (TU Delft, The Netherlands)

Decentralized Scattering of Wake-up Times in Wireless Sensor Networks
 Alessandro Giusti¹, Amy L. Murphy^{2,3},
 and Gian Pietro Picco^{1,4}
 (¹Politecnico di Milano, Italy),
 (²Univ. of Lugano, Switzerland),
 (³ITC-IRST, Povo, Italy), (⁴Univ. of Trento, Italy)

17:00 - 21:00 **Social event** (including dinner)