# Advanced Program - PerCom Workshops 2008

## Monday, 17.03.2008

### PerSeNS 2008: The 4th International Workshop on Sensor Networks and Systems for Pervasive Computing

**8:30 Opening Remarks**

**9:00 – 10:00 Session 1: Networking architectures and protocols**

Session Chair: Fabio A. Schreiber

- **Distributed Interactions with Wireless Sensors Using TinySIP for Hospital Automation**
  Sudha Krishnamurthy (Deutsche Telekom Laboratories, Germany), Lajos Lange (Deutsche Telekom Laboratories, Germany).
- **Topology formation in IEEE 802.15.4: cluster-tree characterization**
  Francesca Cuomo, Sara Della Luna, Emanuele Cipollone (University of Rome La Sapienza), Petia Todorova (Fraunhofer FOKUS, Germany), Tapio Suihko (Technical Research Centre of Finland).

**10:00 – 10:30 Coffee Break**

**10:30 – 12:00 Session 2: Middleware and Software Tools**

Session Chair: Mohan Kumar

- **PERLA: a Data Language for Pervasive Systems**
  Fabio Schreiber, Romolo Campani, Marco Fortunato, Marco Marelli, Filippo Pacifici (Politecnico di Milano, Italy)
- **Lightweight Sensor Network Management System Design**
  Fenghua Yuan, Wen-Zhan Song, Nina Peterson, Yang Peng, Lei Wang, Behrooz Shirazi (Washington State University, USA)
- **Information Agents for Pervasive Sensor Networks**
  Alex Rogers (University of Southampton, UK), Mike Osborne (University of Oxford, UK), Sarvapali D. Ramchurn (University of Southampton, UK), Stephen Roberts (University of Oxford, UK), Nicholas R Jennings (University of Southampton, UK)

**12:00 – 1:30 Lunch**

**1:30 – 3:00 Session 3: Power Management, Modeling and Performance Evaluation**

Session Chair: Behrooz Shirazi

- **Analysis of On-off Policies in Sensor Networks using Interacting Markovian Agents**
  Marco Gribaudo, Davide Cerotti (Università di Torino), Andrea Bobbio (Università del Piemonte Orientale)
- **Budget-Based Clustering with Context-awareness for Sensor Networks**
  Jiaxi You, Dominik Lieckfeldt, Matthias Handy, Dirk Timmermann (University of Rostock, Germany)
- **Stability and Delay Analysis for Multi-Hop Single-Sink Wireless Sensor Networks**
  Muhammad Farukh Munir (Institut Eurécom, France), Arzad Alam Kherani, Indian Institute of Technology, India), Fethi Filali (Institut Eurécom, France)

## 3:00 – 3:30 Coffee Break

## 3:30 – 4:30 Session 4: Algorithms for Localization and Security

**Session Chair: Qi Han**

- **An Algorithm for Distributed Beacon Selection**
  Dominik Lieckfeldt, Jiaxi You, Dirk Timmermann (University of Rostock, Germany)
- **A Group Key Management Scheme with Revocation and Loss-tolerance Capability for WSNs**
  Linchun Li, Jianhua Li, Ping Yi, Yue Wu.

## 4:30 Invited Talk

- **Pervasive Security with Sensor Networks**
  Mohan Kumar (University of Texas at Arlington, USA)

## CoMoRea 2008: 5th Workshop on Context Modeling and Reasoning

## 8.30 – 10:00 Session 1: Contextual Ontologies and Privacy

**Session Chair: Daniela Nicklas**

- **Ontology and Context**
  Isabel Cafezeiro, Edward Hermann Haeusler, and Alexandre Rademaker.
- **Collision Avoidance in VANETs – An Application for ontological context models**
  Robert Eigner and Georg Lutz
- **Composition and Generalization of Context Data for Privacy Preservation**
  Linda Pareschi, Daniele Riboni, Alessandra Agostini and Claudio Bettini.

## 10:00 – 10:30 Coffee Break

## 10:30 – 12:00 Session 2: Context Reasoning

**Session Chair: Jadwiga Indulska**

- **Peer-to-Peer Context Reasoning in Pervasive Computing Environments,**
  Tao Gu
- **Adding High-level Reasoning to Efficient Low-level Context Management: a Hybrid Approach**
  Daniela Nicklas, Matthias Grossmann, Jorge Mínguez and Matthias Wieland.

## 12:00 – 1:30 Lunch

## 1:30 – 3:00 Session 3: Context Queries and Context Management

**Session Chair: Daniele Riboni**

- **Environment-Awareness: Quantitative Processing of Context Changes**
  Andreas Heil and Martin Gaedke
- **A Context Query Language for Pervasive Computing Environments**
  Roland Reichle, Michael Wagner, Mohammad Ullah Khan, Kurt Geihs, Massimo Valla, Christina Fra, Nearchos Paspallis and George Papadopoulos
- **Kinds of Contexts and their Impact on Semantic Similarity Measurement**
  Krzysztof Janowicz

## PerDev 2008: The First International Workshop on Power-Aware Pervasive Devices

### 8.30 – 10:00 Session 1: Power Aware Protocol and Mechanism

**Session Chair: Qiang Yang**

- **An Advanced Save-Energy Mechanism of Ad hoc Networks**
  Feng Zhenxin and Li Layuan (Wuhan University of Technology, China)
- **PZSPTF: Parallelism-aware and Zone-based Shortest Positioning TimeFirst Scheduling for MEMS-based Storage Devices**
  Yan Like, Shi Qingsong, Zhang Tiefei, and Chen Tianzhou (Zhejiang University, China)
- **A Distributed Energy-Efficient Flow Protocol for Mobile Ad Hoc Wireless Networks**
  Haiyang Hu and Hua Hu (Zhejiang Gongshang University, China)

### 10:00 - 10:30 Coffee break

### 10:30 – 12:00 Session 2: Power Aware Pervasive Device

**Session Chair: Lijuan Duan**

- **WiFi-Based Power Aware Pervasive Device**
  Yiqiang Chen, Junfa Liu, Mingqing Hu, and Qingsheng Yuan, (Institute of Computing Technology, Chinese Academy of Sciences)
- **A Power Management mechanism for Handheld Systems having a Multimedia Accelerator**
  Junho Ahn, Junghi Min, Hojung Cha, and Rhan Ha ( Yonsei University, South Korea)
- **Establishing a Trusted Architecture on Pervasive Terminals for SecuringContext Processing**
  Chen Li, Ye Zhang, and Lijuan Duan (Beijing University of Technology, China)

### 12:00 - 1:30 Lunch

### 1:30 – 3:00 Session 3: Power Aware System and Applications of Pervasive Devices

**Session Chair: Yiqiang Chen**

- **Digital Wall: A Power-efficient Solution for Location-based Data Sharing**
  Jeffrey Junfeng Pan, Sinno Jialin Pan, Vincent Wenchen Zheng, and Qiang Yang (Hong Kong University of Science and Technology, Hongkong, China)
- **Power-Aware Code Restructuring for Embedded Parallel Storing Device**
  Xie Bin, Shi Qingsong, Tong Liangliang, Huang Jiangwei, Wu Xinliang, and Chen Tianzhou (Zhejiang University, China)

## PerEL 2008: The 4th IEEE International Workshop on PervasivE Learning

### 10:30 – 12:00 Session 1

**Session Chair: Rory McGreal**

- **Welcome and introduction from the Program Chair**
  Djamshid Tavangarian (University of Rostock)
- **Implementing Scenarios in a Smart Learning Environment**
  Christoph Burghardt, Christiane Reisse, Thomas Heider, Martin Giersich, and Thomas Kirste (University of Rostock)

- **ArCoMo - An Artefact-based Collaborative Mobile Learning Environment**
  Christian Hoff, Ulf Wehling, and Steffen Rothkugel (University of Luxembourg)

## 12:00 - 1:30 Lunch

## 1:30 – 3:00 Session 2

**Session Chair: Djamshid Tavangarian**

- **An Infrastructure for Developing Pervasive Learning Environments**
  Sabine Graf (Vienna University of Technology), Kathryn MacCallum (Massey University), Tzu-Chien Liu (National Central University Taiwan), Maiga Chang, Dunwei Wen, Qing Tan, Jon Dron, Fuhua Lin, Nian-Shing Chen, Rory McGreal, and Kinshuk (Athabasca University)
- **HyLearn: A Mobile Learning System for Hybrid Networks**
  Matthias Brust, Adrian Andronache, and Steffen Rothkugel (University of Luxembourg)
- **Meta-Service Organization for a Pervasive University**
  Raphael Zender, Enrico Dressler, Ulrike Lucke, and Djamshid Tavangarian (University of Rostock)

# WPS 2008: The 2nd International Workshop on Web and Pervasive Security

## 1:30 – 3:00 Session 1: Applications on Web and Pervasive Security

**Session Chair: Sheikh Iqbal Ahamed**

- **Detecting and Tracing DDoS Attacks by Intelligent Decision Prototype (IDP),**
  Ashley Chonka, Wanlei Zhou, Yang Xiang, and Jaipal Singh
- **Entropy-Based Collaborative Detection of DDOS Attacks on Community Networks,**
  Shui Yu and Wanlei Zhou
- **A Key Distribution Scheme for Wireless Sensor Networks,**
  Yong Ho Kim, Hwaseong Lee, and Dong Hoon Lee
- **A Risk-aware Trust Based Secure Resource Discovery (RTSRD) Model for Pervasive Computing**
  Sheikh Ahamed, Moushumi Sharmin, and Shameem Ahmed

## 3:00 – 3:30 Coffee Break

## 3:30 – 4:30 Session 2: Theories on Web and Pervasive Security

**Session Chair: Shui Yu**

- **On the Automated Creation of Understandable Positive Security Models for Web Applications,**
  Christian Bockermann, Ingo Mierswa, Katharina Morik
- **Building an Open Toolkit of Digital Certificate Validation for Mobile Web Services,**
  Florina Almenares, Andres Marin, Daniel Diaz, Alberto Cortes, Celeste Campo, Carlos Garcia-Rubio
- **Extraction of Residual Information in the Microsoft PowerPoint File from the Viewpoint of Digital Forensics Considering PerCom Environment,**
  JungHeum Park, Bora Park, SangJin Lee, SeokHie Hong, and Jong Hyuk Park

**PerWare 2008: IEEE Middleware Support for Pervasive Computing Workshop**

## 8.30 – 10:00 Session 1: Middleware for Pervasive Computing Environments

**Session chair: Anand Ranganathan**

- **Experiences in Designing an Energy-Aware Middleware for Pervasive Computing**
  Gregor Schiele (University of Mannheim) Marcus Handte (University of Bonn) and Christian Becker (University of Mannheim)
- **MAGIC Broker: A Middleware Toolkit for Interactive Public Displays,**
  Aiman Erbad (University of British Columbia) Michael Blackstock (University of British Columbia) Adrian Friday (Lancaster University) Rodger Lea (University of British Columbia) and Jalal Al-Muhtadi (King Saud University)
- **Middleware Services for Multimodal Interactions in Smart Environments,**
  Antonio Coronato and Giuseppe De Pietro (ICAR-CNR)

### Discussions

### 10:00 - 10:30 Coffee break

### 10:30 – 12:00 Session 2: Middleware for Trust, Safety and Energy Management

**Session chair: Gregor Schiele**

- **Enabling Deliberate Design for Energy Management in Pervasive Systems,**
  Angela Dalton (University of Texas at Austin) Carla Ellis (Duke University) and Christine Julien (University of Texas at Austin)
- **Safety Enhancing Mechanisms for Pervasive Computing Systems in Intelligent Environments,**
  Hen-I Yang and Abdelsalam Helal (University of Florida)
- **A Trust-based Middleware for Providing Security to Ad-Hoc Peer-to-Peer Applications**
  Florina Almenárez, Andrés Marín, Daniel Díaz, Alberto Cortés, Celeste Campo and Carlos García-Rubio (University Carlos III of Madrid)

### Discussions

### 12:00 - 1:30 Lunch

### 1:30 – 3:00 Session 3: Middleware & Service Oriented Architectures

**Session chair: Jalal Al-Muhtadi**

- **An Adapter Chaining Scheme for Service Continuity in Ubiquitous Environments with Adapter Evaluation,**
  Byoungoh Kim, Kyungmin Lee, and Dongman Lee (Information and Communications University)
- **Design of Software Architecture for Smart Meeting Space,**
  Namgon Kim, Sangwoo Han, and JongWon Kim (Gwangju Institute of Science and Technology)
- **A Survey of Current Directions in Service Placement in Mobile Ad-hoc Networks,**
  Georg Wittenburg and Jochen Schiller (Freie Universität Berlin)

**3:00 – 3:30 Coffee Break**

**3:30 – 4:30 Session 4: Discussion Panel**


## MP2P 2008: The 5th IEEE International Workshop on Mobile Peer-to-Peer


**8.30 – 10:00 Session 1**

**Session Chair: Li Li**

### Opening Remarks
- **Cooperative Caching in Wireless Ad Hoc Networks**
  Jiannong Cao (Hong Kong Polytechnic University)
- **Mobile P2P Networks for Highly Dynamic Environments**
  Kei Takeshita, Masahiro Sasabe, Hirotaka Nakano (Osaka University)

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

**10:30 – 12:00 Session 2**

**Session Chair: Kurt Tutschku**

- **An Architecture for Mobile P2P File Sharing in Marine Domain**
  Huafeng Wu (Fudan University, China), Chaojian Shi (Shanghai Maritime University, China), Haiguang Chen, Xi Zhou, and Chuanshan Gao (Fudan University, China)
- **Evaluation of Peer-to-Peer Overlays for First Response**
  Dirk Bradler (Technische Universitaet Darmstadt, Germany), Jussi Kangasharju (University of Helsinki, Finland)**,** Max Mühlhäuser (Darmstadt University of Technology)
- **Load Sharing and Bandwidth Control in Mobile P2P Wireless Sensor Networks**
  Elisa Rondini (University College London, UK), Stephen Hailes (University College London, UK), Li Li (Communications Research Center Canada, Canada)

**12:00 - 1:30 Lunch**

**1:30 – 3:00 Session 3**

**Session Chair: John Buford**

- **Invited Position Paper**
  **EuroFGI: the European Network of Excellence for the Design and the Engineering of the Next Generation Internet - Efforts and Perspectives for Ubiquitous Mobile P2P Services,** Kurt Tutschku (NICT, Japan)
- **Prototyping a P2P SIP User Agent with Support for Multiple Overlays**
  Mosiuoa Tsietsi**,** Alfredo Terzoli**,** and George Wells (Rhodes Univeristy, South Africa)

**3:00 – 3:30 Coffee Break**

**3:30 – 5:30 Session 4**

**Session Chair: Kurt Tutschku**

- **P2PNS: A Secure Distributed Name Service for P2PSIP**
  Ingmar Baumgart (Universität Karlsruhe, Germany)

- **A Novel Utility and Game-Theoretic Based Security Mechanism for Mobile P2P Systems**
  Brent Lagesse and Mohan Kumar (University of Texas at Arlington, USA)
- **Distributed Video Adaptation and Streaming for Heterogeneous Devices**
  Razib Iqbal, Dewan Tanvir Ahmed, and Shervin Shirmohammadi (Univeristy of Ottawa, Canada)
- **A Scalable Approach for Application Layer Multicast in P2P Networks**
  Amad Mourad (Univ. of Bejaia, Algeria), Meddahi Ahmed (GET/Telecom Lille 1, France)

## Closing Remarks


## PWN 2008: The 4th IEEE PerCom Workshop on Pervasive Wireless Networking


### 9:00 - 10:00 Session 1: Link/PHY Layer Issues in Ad Hoc Networks

- **An Interface-aware and Power Efficient Topology Control Algorithm for Wireless Multi-hop Networks**
  Huang Chuanhe, Cheng Yong, Li Yuan, Shi Wenming, and Zhou Hao (Wuhan University, Hubei, China)
- **Performance Analysis of Dynamic Spectrum Access Networks**
  Zhong Fan (Toshiba Research Europe, Bristol, UK)

### 10:00 - 10:30 Coffee Break

### 10:30 – 12:00 Session 2: Efficient Resource Utilization in Mobile Networks

- **Implementation of Flow Binding Mechanism**
  Tanguy Ropitault and Nicolas Montavont (ENST Bretagne, France)
- **A MAC Layer Multicasting Approach for WiMAX Access Networks**
  Kyu-Seol Lee, Sang-Won Rhee, and Hee-Yong Youn (Sungkyunkwan University, Suwon, Korea)
- **Resource Optimization for 60 GHZ Indoor Networks Using Dynamic Extended Cell Formation**
  Bao Linh Dang, R. Venkatesha Prasad, Ignas Niemegeers, M. Garcia Larrode, and A.M.J. Koonen (Delft University of Technology, Delft, Netherlands)

### 12:00 - 1:30 Lunch

### 1:30 – 2:30 Session 3: Network Layer Optimization in Mobile Environment

- **SGR: A Shared Generic Routing Support for Ad Hoc Ubiquitous Computing Environment**
  Yangwoo Ko and Dongman Lee (Information and Communications University, Daejeon, Korea)
- **An Approach to Load Balancing and Network Longevity using Dynamic Adaptive Routing in Wireless Sensor Network**
  R. Sumathi, M. G. Srinivasa, and R. Srinivasan (Visvesvaraya Technological University, Karnataka, India)
- **Enabling Pervasiveness by Seamless Inter-domain Handover: Performance Study of PANA Pre-authentication**
  Patryk Chamuczyński, Omar Alfandi, Henrik Brosenne, Constantin Werner, and Dieter Hogrefe (University of Göttingen Lotzestrasse, Göttingen, Germany)

**PerCare 2008: First International Workshop on Pervasive Digital Healthcare**

## 8:30 - 10:00 Session 1: Core Technology Support for Pervasive Digital Healthcare

**Session Chair: Wilfred W.K. Lin**

- **Applying Dynamic Buffer Tuning to Help Pervasive Medical Consultation Succeed**
  Wilfred W.K. Lin, Jackei H.K. Wong, and Allan K.Y. Wong (Hong Kong Polytechnic University, Hong Kong)
- **Optimal Routing in Sensor Networks for In-Home Health Monitoring with Multi-factor Considerations**
  Xiaoling Wu, Brian J. d'Auriol, Jinsung Cho, and Sungyoung Lee (Kyung Hee University, Korea)
- **Enforcing Patient Privacy in Healthcare WSNs Using ECC Implemented on 802.15.4 Beacon Enabled Clusters**
  Jelena Mišić (University of Manitoba Canada)

## 10:00 - 10:30 Coffee Break

## 10:30 - 12:00 Session 2: Pervasive Digital Healthcare System Design

**Session Chair: Jelena Mišić**

- **WAITER: A Wearable Personal Healthcare and Emergency Aid System**
  Wanhong Wu, Jiannong Cao, Yuan Zheng, and Yong-Ping Zheng (Hong Kong Polytechnic University, Hong Kong)
- **Wireless Networked Chinese Telemedicine System: Method and Apparatus for Remote Pulse Information Retrieval and Diagnosis**
  Shilong Lu, Rui Wang, Li Cui, Ze Zhao, Youhua Yu, and Zengyu Shan (Institute of Computing Technology,Chinese Academy of Sciences, China)
- **Towards an Implementation of Smart Hospital: A Localization System for Mobile Users and Devices**
  Antonio Coronato and Massimo Esposito (ICAR - CNR Italian National Council of Research) Italy

## 12:00 - 1:30 Lunch

## 1:30 - 3:00 Session 3: Applications for Pervasive Digital Healthcare

**Session Chair: Daqing Zhang**

- **Assisting Elders with Mild Dementia Staying at Home**
  Daqing Zhang, Mossaab Hariz, and Mounir Mokhtari (Institut National des Télécommunications, France)
- **Pervasive Digital Monitoring and Transmission of Pre-Care Patient Biostatics with an OSGi, MOM and SOA Based Remote Health Care System**
  Ing-Yi Chen and Chen-Hsin Tsai (National Taipei University of Technology, Taiwan)
- **Wireless Patient Information Provision and Sharing at the Point of Care using a Virtual Organization Framework in Clinical Work**
  A. Mohyuddin, W.A. Gray, Hazel Bailey, Carol Jordan, and David Morrey (Cardiff University, UK)

## ATPC 2008: The First IEEE Workshop on Agent Technologies for Pervasive Communities

### 8:30 – 10:00 Session 1

**Session Chair: Yu (Cathy) Jiao**

- **Spatial Distribution Patterns, Power Law, and the Agent-Based Directed Diffusion Sensor Networks**
  Zhanshan (Sam) Ma and Axel Krings (Computer Science Dept., University of Idaho, USA)
- **Multiagent Place-Based Virtual Communities for Pervasive Computing**
  Tuan Nguyen, Seng Loke, Torab Torabi, and Hongen Lu (Department of Computer Science and Computer Engineering, Latrobe University, Australia)
- **A Flexible Protocol Composition for Multi-Party Coordination Protocols in Multi-Agent Systems**
  Ryuichi Takahashi (Waseda University, Japan) , Kenji Tei (National Institute of Informatics), Fuyuki Ishikawa (National Institute of Informatics), Yoshiaki Fukazawa(Waseda University, Japan), and Shinichi Honiden (The University of Tokyo, Japan)

### 10:30 – 11:30 Session 2

**Session Chair: Helena Unger**

- **A Geographical Observation System based on P2P Agents**
  Yuuichi Teranishi, Hirokazu Tanaka, Yoshimasa Ishi, and Mikio Yoshida (Osaka University, Japan)
- **Road Intersections as Pervasive Computing Environments: Towards a Multiagent Real-Time Collision Warning System**
  Flora Dilys Salim, Licheng Cai, Maria Indrawan (Information Technology, Monash University, Australia) and Seng Wai Loke (Computer Science and Computer Engineering, La Trobe University, Australia)