



IEEE PerCom 2013 Program

Conference Registration

Pt. Loma Foyer

Registration hours are:

Monday, March 18: from 7:30am to 4:30pm

Tuesday, March 19: from 7:30am to 4:00pm

Wednesday, March 20: from 8:30am to 4:00pm

Thursday, March 21: from 8:30am to 3:00pm

Friday, March 22: from 8:30am to 11:00am

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Monday, March 18th, Pre-conference Workshops

Morning coffee break: 10:00am-10:30am Pt. Loma Foyer
Afternoon coffee break: 3:00pm-3:30pm Pt. Loma Foyer
Lunch: 12:00pm-1:30pm Pt. Loma 3

Panel on Pervasive Computing Education

Location: Pt. Loma 2

3:30 pm – 5:00 pm Moderator: **Mohan Kumar**, The University of Texas at Arlington, USA

The 2nd International IEEE Workshop on Hot Topics in Pervasive Computing (PerHot)

Location: Pt. Loma 2

PerHot Paper Session

8:30 am – 10:00 am Chairs: **Christian Becker** (Universität Mannheim, Germany), **Justin Mazzola Paluska** (MIT, USA)

- PH1. “**Eywa: Crowdsourced and Cloudsourced Omniscience**” Murat Demirbas (University at Buffalo, SUNY, USA); Yavuz Selim Yilmaz (University at Buffalo, SUNY, USA); MuhammedFatihBulut (University at Buffalo, USA)
- PH2. “**A Preliminary Investigation of User Incentives to Leverage Crowdsensing Activities**” Nicolas Haderer (University Lille 1 & INRIA Lille – Nord Europe, Project-team ADAM, France); Romain Rouvoy (University Lille 1, France); Lionel Seinturier (University of Lille, France)
- PH3. “**Social relationship classification based on interaction data from smartphones**” Deyi Sun (The Chinese University of Hong Kong, Hong Kong); Wing Cheong Lau (The Chinese University of Hong Kong, Hong Kong)

PerHot Discussion Session

10:30 am – 12:00 pm Chairs: **Christian Becker** (Universität Mannheim, Germany), **Justin Mazzola Paluska** (MIT, USA)

Session 1 - Keynote Speech

9:00 am – 10:00 am Chair: **Daniela Nicklas** (Carl von Ossietzky Universität Oldenburg, Germany)

From Personal and Space Context to Social and Community Context

CMK. **“Context-aware Computing in the Era of Crowd Sensing”**
by **Daqing Zhang** (InstitutTélécom, TélécomSudParis, France)

Session 2 – Action and Gesture Recognition

10:30 am – 12:00 pm Chair: **Daniela Nicklas** (Carl von Ossietzky Universität Oldenburg, Germany)

CM1. **“Adaptive Context-agnostic Floor Transition Detection”** Salvatore Vanini (University of Applied Science - SUPSI, Switzerland); Silvia Giordano (University of Applied Sciences and Arts of Southern Switzerland - SUPSI), Switzerland)

CM2. **“User Independent, Multi-Modal Spotting of Subtle Arm Actions with Minimal Training Data”** Gerald Bauer (DFKI, Germany); Paul Lukowicz (DFKI and University of Kaiserslautern, Germany); Ulf Blanke (TU Darmstadt, Germany); Bernt Schiele (TU Darmstadt, Germany)

CM3. **“Method of Determining Training Data for Gesture Recognition Considering Decay in Gesture Movements”** Gaku Yoshida (Kobe University, Japan); Kazuya Murao (Kobe University, Japan); Tsutomu Terada (Kobe University, Japan); Masahiko Tsukamoto (Kobe University, Japan)

Session 3 – Activity and Situation Recognition

1:30 pm – 3:00 pm Chair: **Daqing Zhang** (Institut Télécom, Sud Paris, France)

CM4. **“A new approach for distributed and collaborative context prediction”** Christian Voigtmann (University of Kassel, Germany); Christoph Schütte (University of Kassel, Germany); Arno Wacker (University of Kassel, Germany); Klaus David (University of Kassel, Germany)

CM5. **“SP-ACT: A Hybrid Framework for Complex Activity Recognition Combining OWL and SPARQL Rules”** Georgios Meditskos (Information Technologies Institute, Centre of Research and Tech., Greece); Stamatia Dasiopoulou (Informatics and Telematics Institute & Centre for Research and Tech. Hellas, Greece); Vasiliki Efstathiou (Information Tech. Institute, Centre of Research and Tech. Hellas, Greece); IoannisKompatsiaris (Centre for Research and Technology Hellas (CERTH), Greece)

CM6. **“Situation Recognition for Service Management Systems Using OWL 2 Reasoners”** Walteneagus Dargie (Technische Universität Dresden, Germany); Eldora Eldora (Technische Universität Dresden, Germany); Julian Mendez (Technische Universität Dresden, Germany); Christoph Möbius (Technische Universität Dresden, Germany); Kateryna Rybina (Technische Universität Dresden, Germany); Veronika Thost (TU Dresden, Germany); Anni-Yasmin Turhan (TU Dresden, Germany)

Session 4 – Application of Context Models

3:30 pm – 5:30 pm

Chair: **Klaus David** (University of Kassel, Germany)

- CM7. **“A Framework to Support Intelligibility in Pervasive Applications”**
Johnson Fong (The University of Queensland, Australia); Jadwiga Indulska (The University of Queensland, Australia); Ricky Robinson (NICTA, Australia)
- CM8. **“Can Context Tame Web TV?”** Venu Vasudevan (Motorola Mobility, USA); Jehan Wickramasuriya (Motorola Mobility, USA); Gilles Drieu (Motorola Mobility, USA); Silviu Chiricescu (BAE Systems, USA)
- CM9. **“Exploring Concept Drift using Interactive Simulations”** Jeremiah Smith (Imperial College, United Kingdom); Naranker Dulay (Imperial College London, United Kingdom); Máté AtillaTóth (TU Eindhoven, The Netherlands); Oliver Amft (Eindhoven University of Technology, The Netherlands); Yanxia Zhang (Lancaster University, United Kingdom)
- CM10. **“Towards a Model-based Approach for Context-aware Assistance Systems in Offshore Operations”** Nils Koppaetzky (University of Oldenburg, Germany); Daniela Nicklas (Carl von Ossietzky Universität Oldenburg, Germany)

International Workshop on the Impact of Human Mobility in Pervasive Systems and Applications (PerMoby)

Location: Del Mar

Keynote Speech

9:00 am – 10:00 am

Chair: **Daniele Puccinelli** (University of Applied Sciences of Southern Switzerland, Switzerland)

- PMK. **“Mobility in Public Indoor Urban Spaces: An Asian Perspective”**
Archan Misra (Singapore Management University, Singapore)

Session 1 – Understanding Context

10:30 am – 12:00 pm

Chair: **Jakob Eg Larsen** (Technical University of Denmark, Denmark)

- PM1. **“Matador: Mobile Task Detector for Context-aware Crowd-Sensing Campaigns”** Iacopo Carreras (Create-Net, Italy); Daniele Miorandi (Create-Net, Italy); Andrei Tamin (U-Hopper, Italy); Nicola Conci (University of Trento, Italy); Emmanuel R Ssebagala (University of Trento, Italy)
- PM2. **“How Many Places Do You Visit a Day?”** Michela Papandrea (University of Applied Sciences of Southern Switzerland Switzerland - SUPSI, Switzerland); Matteo Zignani (University of Milano, Italy); Sabrina Gaito (Università degli Studi di Milano, Italy); Silvia Giordano (University of Applied Sciences and Arts of Southern Switzerland - SUPSI, Switzerland); Gian Paolo Rossi (Università degli Studi di Milano, Italy)
- PM3. **“Will You Like this Place? A Tag-Based Place Representation Approach”** Gualtiero Colombo (University of Cardiff, United Kingdom); Martin J Chorley (Cardiff University, United Kingdom); VladTanasescu (Cardiff University, United Kingdom); Stuart Allen (University of Cardiff, United Kingdom); Chris Jones (Cardiff University, United Kingdom); Roger Whitaker (University of Cardiff, United Kingdom)

Session 2 – Sensing and Mobility

1:30 pm – 3:00 pm Chair: **Alessio Vecchio** (University of Pisa, Italy)

- PM4. **“AmbientSense: A Real-Time Ambient Sound Recognition System for Smartphones”** Mirco Rossi (ETH Zurich, Switzerland); Sebastian Feese (Wearable Computing Lab ETH Zürich, Switzerland); Oliver Amft (Eindhoven University of Technology, Germany); Nils Braune (Wearable Computing Lab ETH Zürich, Switzerland); Sandro Martis (Wearable Computing Lab ETH Zürich, Switzerland); Gerhard Tröster (Wearable Computing Lab ETH Zürich, Switzerland)
- PM5. **“Sensor Mobile Enablement (SME): a Light-Weight Standard for Opportunistic Sensing Services”** Valerio Arnaboldi (IIT-CNR, Italy); Marco Conti (IIT-CNR, Italy); Franca Delmastro (IIT-CNR, Italy); Giovanni Minutiello (IIT-CNR, Italy); Laura Ricci (University of Pisa, Italy)
- PM6. **“Participatory Bluetooth Sensing: A Method for Acquiring Spatio-Temporal Data about Participant Mobility and Interactions at Large Scale Events”** Arkadiusz Stopczynski (Technical University of Denmark, Denmark); Jakob Eg Larsen (Technical University of Denmark, Denmark); Sune Lehmann (Technical University of Denmark, Denmark); Lukasz Dynowski (Technical University of Denmark, Denmark); Marcos Fuentes (Technical University of Denmark, Denmark)

Session 3 – Crowdsourcing, Communication and Human Dynamics

3:30 pm – 5:30 pm Chair: **Daniele Puccinelli** (University of Applied Sciences of Southern Switzerland, Switzerland)

- PM7. **“Sensing the Internet through crowdsourcing”** Enrico Gregori (CNR-IIT, Italy); Luciano Lenzini (University of Pisa, Italy); Valerio Luconi (University of Pisa, Italy); Alessio Vecchio (University of Pisa, Italy)
- PM8. **“Towards Efficient Opportunistic Communications: A Hybrid Approach”** Ranjana Pathak (The University of Queensland, Australia); Peizhao Hu (NICTA, Australia); Jadwiga Indulska (The University of Queensland, Australia); Marius Portmann (University of Queensland, Australia); Wee Lum Tan (National ICT Australia, Australia)
- PM9. **“Fingerprinting Temporal Networks of Close-range Human Proximity”** André Panisson (ISI Foundation, Italy); Laetitia Gauvin (ISI Foundation, Italy); Alain Barrat (Centre de Physique Theorique, France); Ciro Cattuto (ISI, Italy)
- PM10. **“Spatiotemporal Route Estimation Consistent with Human Mobility Using Cellular Network Data”** Hiroshi Kanasugi (The University of Tokyo, Japan); Yoshihide Sekimoto (The University of Tokyo, Japan); Mori Kurokawa (KDDI R&D Laboratories Inc., Japan); Takafumi Watanabe (KDDI R&D Laboratories Inc., Japan); Shigeki Muramatsu (KDDI R&D Laboratories Inc., Japan); Shibusaki Ryoosuke (The University of Tokyo, Japan)

10th IEEE International Workshop on Managing Ubiquitous Communications and Services (MUCS)

Location: Bay Conference

Opening Remarks

8:45 am – 9:00 am Chair: **Karoly Farkas** (Budapest University of Technology and Economics, Hungary)

Keynote Speech

9:00 am – 10:00 am Chair: **Sajal K. Das** (University of Texas at Arlington, USA)
MCK. **“Balancing Behavioral Privacy and Information Utility in Pervasive Sensing”**
 Mani B. Srivastava (University of California, Los Angeles, USA)

Session 1 – Context Aware and Role Management of Service, Applications and Devices

10:30 am – 12:00 pm Chair: **Dirk Pesch** (Cork Institute of Technology, Ireland)

MC1. **“Supporting Generic Context-Aware Applications for Mobile Devices”**
 Ralph Löwe (Munich University of Applied Sciences, Germany); Peter Mandl (Munich University of Applied Sciences, Germany); Michael Weber (University of Ulm, Germany)

MC2. **“Dynamically Updatable UPnP Service for Device Role Management”**
 Tadanobu Tsunoda (Fujitsu Laboratories Ltd., Japan); Akira Fujii (Fujitsu Laboratories Ltd., Japan); Nobutsugu Fujino (Fujitsu Laboratories Ltd., Japan)

MC3. **“Community Context Management Research and Challenges in Pervasive and Social Computing”** Nick Kalatzis (National Technical University of Athens, Greece); Nicolas Liampotis (National Technical University of Athens, Greece); Ioanna Roussaki (National Technical University of Athens, Greece); Pavlos Kosmides (National Technical University of Athens, Greece); Ioannis Papaioannou (National Technical University of Athens, Greece); Stavros Xynogalas (Ambient Intelligence Informatics and Telecommunications (AMITEC) Ltd, Greece)

Session 2 – Ubiquitous Sensing and Monitoring Services

1:30 pm – 3:00 pm Chair: **Karoly Farkas** (Budapest University of Technology and Economics, Hungary)

MC4. **“Designing Notifications for Ubiquitous Monitoring Systems”** Stuart Moran (University of Nottingham, United Kingdom); Joel Fischer (University of Nottingham, United Kingdom)

MC5. **“Managing Large-Scale Mapping and Localization for Pedestrians Using Inertial Sensors”** Maria Garcia Puyol (German Aerospace Center & DLR, Germany); Patrick Robertson (German Aerospace Center (DLR), Germany); Michael Angermann (German Aerospace Center (DLR), Germany)

MC6. **“Sensor-based Identification of Human Stress Levels”** Korbinian Frank (German Aerospace Center (DLR), Germany); Patrick Robertson (German Aerospace Center (DLR), Germany); Michael Gross (Ludwig-Maximilians-Universität München (LMU Munich), Germany); Kevin Wiesner (LMU Munich, Germany)

Session 3 – Virtualisation and Management of Smart Environments

- 3:30 pm – 4:40 pm Chair: **Korbinian Frank** (German Aerospace Center, Germany)
- MC7. “**ServiceWare - A Service Based Management Approach for WSN Cloud Infrastructures**” Susan Rea (Cork Institute of Technology, Ireland); Muhammad Sohaib Aslam (IBM, Canada); Dirk Pesch (Cork Institute of Technology, Ireland)
- MC8. “**The Missing Layer - Virtualizing Smart Spaces**” Marc-Oliver Pahl (Technische Univ. München, Germany); Georg Carle (Technische Univ. München, Germany)

Session 4 – Panel Discussion

- 4:30 pm – 5:30 pm Chair: **Dirk Pesch** (Cork Institute of Technology, Ireland)
- MCP. “**Panel Discussion – Wireless and M2M Communications and Services for Disaster Management**”
- 5:30 pm – 5:45 pm Closing Remarks by **Karoly Farkas** (Budapest University of Technology and Economics, Hungary)

The 9th International Workshop on Mobile Peer-to-Peer Computing (MP2P)

Location: La Jolla

Session 1 – Mobile P2P Data and Network Services (I)

- 8:45 am – 10:00 am Chair: **Chuan-Ming Liu** (Taipei Univ. of Technology, Taiwan)
- MP1. “**PicFlic: Social Discovery Thru Pictures**” Venu Vasudevan (Motorola Mobility, USA); Jehan Wickramasuriya (Motorola Mobility, USA); Joe Wodka (Motorola Labs, USA); Myungcheol Doo (Motorola Mobility, USA)
- MP2. “**Unity: Collaborative Downloading Content using co-located Socially Connected Peers**” Prateek Jassal (IIIT Delhi, India); Kuldeep Yadav (IIIT Delhi, India); Abhishek Kumar (IIIT-Delhi, India); Vishesh Narwal (IIIT-Delhi, India); Vinayak S. Naik (IIIT-Delhi, India); Amarjeet Singh (IIIT-Delhi, India)
- MP3. “**Location-dependent Content-based Image Retrieval System Based on a P2P Mobile Agent Framework**” Yusuke Ariyoshi (Onomichi City University, Japan); Junzo Kamahara (Kobe University, Japan); Naoki Tanaka (Kobe University, Japan); Katsutoshi Hirayama (Kobe University, Japan); Takashi Nagamatsu (Kobe University, Japan); Yuuichi Teranishi (Osaka University, Japan)

Session 2 – Mobile P2P and Network Services (II)

- 10:30 am – 11:45 am Chair: **Chien-Lung Hsu** (Chang Gung University, Taiwan)
- MP4. “**A Novel Mechanism to Construct a Compatible Overlay on Heterogeneous Mobile Peers**” Chuan-Chi Lai (National Taipei University of Technology, Taiwan); Chuan-Ming Liu (National Taipei University of Technology, Taiwan); Ying-Chi Su (National Taipei University of Technology, Taiwan)
- MP5. “**Peer-to-Peer File Sharing in VANETs Using TC-MAC**” Mohammad Almalag (Old Dominion University, USA); Michele C. Weigle (Old Dominion University, USA); Stephan Olariu (Old Dominion University, USA); Samy S. El-Tawab (James Madison University, USA)
- MP6. “**Password Authenticated Key Exchange Protocol for Multi-Server Mobile Networks Based on Chebyshev Chaotic Map**” Chien-Lung Hsu (Chang Gung University, Taiwan); Tzu-Wei Lin (Chung Gung University, Taiwan)

Workshop on Pervasive Collaboration and Social Networking (PerCol)

Location: Pt. Loma 1

Session 1 – Pervasive Presence and Interaction

- 9:00 am – 10:00 am Chair: **Daniel Schuster** (Technische Univ Dresden, Germany)
- PR1. **“A Large Scale Presence Network for Pervasive Social Computing”** Honguk Woo (Samsung Electronics, Korea); HongSoo Kim (Samsung Electronics, Korea); Kyusik Kim (Samsung Electronics, Korea); Dongkyoung Kim (Samsung Electronics, Korea)
- PR2. **“Question First: Passive Interaction Model for Gathering Experience and Knowledge from the Elderly”** Yuki Nagai (The University of Tokyo, Japan); Atsushi Hiyama (The University of Tokyo, Japan); Masatomo Kobayashi (IBM Research – Tokyo, Japan); Hironobu Takagi (IBM Research – Tokyo, Japan); Michitaka Hirose (The University of Tokyo, Japan)

Session 2 – Pervasive Collaboration Middleware

- 10:30 am – 12:00 pm Chair: **Thomas Springer** (Technische Universität Dresden, Germany)
- PR3. **“Energy Efficient Proximity Alert on Android”** Muhammed Fatih Bulut (University at Buffalo, USA); Murat Demirbas (University at Buffalo, SUNY, USA)
- PR4. **“C3S: A Content Sharing Middleware for Smart Spaces”** Marcos Roriz, Jr. (Universidade Federal de Goiás, Brazil); Marco Massarani (Universidade Federal de Goiás, Brazil); Leandro Freitas (Instituto Federal de Goiás, Brazil); Ricardo CoutoAntunes da Rocha (Federal University of Goias, Brazil); Fabio Costa (Universidade Federal de Goiás, Brazil)
- PR5. **“Session Mobility for Collaborative Pervasive Apps Using XMPP”** István Koren (RWTH Aachen University, Germany); Daniel Schuster (Technische Universität Dresden, Germany); Thomas Springer (Technische Universität Dresden, Germany)

Session 3 – Pervasive Social Networks

- 1:30 pm – 3:00 pm Chair: **Daniel Schuster** (Technische Universität Dresden, Germany)
- PR6. **“An Architecture for Synchronous Micro-Volunteering in Africa using Social Media”** Laurie Butgereit (Nelson Mandela Metropolitan University & Meraka Institute, CSIR, South Africa); Reinhardt Botha (Nelson Mandela Metropolitan University, South Africa)
- PR7. **“Is Twitter a Good Enough Social Sensor for Sports TV?”** Venu Vasudevan (Motorola Mobility, USA); Jehan Wickramasuriya (Motorola Mobility, USA); Siqi Zhao (Rice University, USA); Lin Zhong (Rice University, USA)
- PR8. **“Exploring Social Context from Buzz Marketing Site - Community Mapping based on Tree Edit Distance”** Shoichi Higuchi (Kyushu Institute of Technology, Japan); Takako Hashimoto (Chiba University of Commerce, Japan); Tetsuji Kuboyama (University of Tokyo, Japan); Kouichi Hirata (Kyushu Institute of Technology, Japan)

Fifth International Workshop on SECURITY and SOCIAL Networking (SESOC)

Location: La Jolla

Session 1 – Privacy in Online Social Networks

1:30 pm – 3:00 pm Chair: Melek Önen (EURECOM, France)

- SS1. **“Ineluctable Background Checking on Social Networks: Linking Job Seeker's Résumé and Posts”** Tomotaka Okuno (University of Electro-Communications, Japan); Masatsugu Ichino (University of Electro-Communications, Japan); Isao Echizen (National Institute of Informatics (NII), Japan); Akira Utsumi (University of Electro-Communications, Japan); Hiroshi Yoshiura (The University of Electro-Communications, Japan)
- SS2. **“Friend in the Middle (FiM): Tackling De-Anonymization in Social Networks”** Filipe Beato (Katholieke Universiteit Leuven, Belgium); Mauro Conti (University of Padua, Italy); Bart Preneel (Katholieke Universiteit Leuven, Belgium)

Session 2 – Mobile Social Network Privacy

3:30 pm – 5:00 pm Chair: Thorsten Strufe (TU Darmstadt, Germany)

- SS3. **“Protecting Location Privacy with K-Confusing Paths Based on Dynamic Pseudonyms”** Ken Mano (NTT, Japan); Kazuhiro Minami (Institute of Statistical Mathematics, Japan); Hiroshi Maruyama (Institute of Statistical Mathematics, Japan)
- SS4. **“Studying the Effectiveness of Android Application Permissions Requests”** Kevin T Benton (Indiana University, USA); Linda Camp (Indiana University, USA); Vaibhav Garg (Indiana University, USA)

Tuesday, March 19th

Conference opening

Pt. Loma 2

8:30am - 8:45am

Keynote Lecture

Pt. Loma 2

8:45am- 10:00am

Chair: **Klara Nahrstedt** (University of Illinois at Urbana-Champaign, USA)

K1. “**The Golden Age of Pervasive Computing**” Roy Want (Google Inc., USA)

Coffee/Tea Break

Pt. Loma 3

10:00am- 10:30am

Session 1 – Innovative Applications, Tools and Software Design

Pt. Loma 2

10:30am- 12:00pm

Chair: **Christine Julien** (University of Texas at Austin, USA)

- 1A1. “**Where Has My Battery Gone? Finding Sensor Related Energy Black Holes in Smartphone Applications**” Yepang Liu (The Hong Kong University of Science and Technology, Hong Kong); Chang Xu (Nanjing University, P.R. China); Shing-Chi Cheung (The Hong Kong University of Science and Technology, P.R. China)
- 1A2. “**COMITY: Coordinated Application Adaptation in Multi-Platform Pervasive Systems**” Verena Majuntke (University of Mannheim, Germany); Sebastian Van Syckel (University of Mannheim, Germany); Dominik Schäfer (University of Mannheim, Germany); Christian Krupitzer (University of Mannheim, Germany); Gregor Schiele (Digital Enterprise Research Institute – DERI, Ireland); Christian Becker (Universität Mannheim, Germany)
- 1A3. “**Fast Dynamic Execution Offloading for Efficient Mobile Cloud Computing**” Seungjun Yang (Seoul National University, Korea); Yongin Kwon (Seoul National University, Korea); Yeongpil Cho (Seoul National University, Korea); Jonghee Youn (Gangneung-wonju National University, Korea); Yunheung Paek (Seoul National University, Korea)

Lunch

Pt. Loma 3

12:00pm- 1:30pm

Session 2 – Context modeling and reasoning

Pt. Loma 2

1:30 pm - 3:30 pm

Chair: **Gregor Schiele** (Digital Enterprise Research Institute – DERI, Ireland)

- 2A1. “**Effective Routine Behavior Pattern Discovery from Sparse Mobile Phone Data via Collaborative Filtering**” Jiangchuan Zheng (Hong Kong University of Science and Technology, Hong Kong); Siyuan Liu (Carnegie Mellon University, USA); Lionel Ni (Hong Kong University of Science and Technology, Hong Kong)

- 2A2. **“Infrastructure-Assisted Smartphone-based ADL Recognition in Multi-Inhabitant Smart Environments”** Nirmalya Roy (Washington State University, USA); Archan Misra (Singapore Management University, Singapore); Diane J. Cook (Washington State University, USA)
- 2A3. **“Extraction of Latent Patterns and Contexts from Social Honest Signals Using Hierarchical Dirichlet Processes”** Thuong C. Nguyen (Deakin University, Australia); Dinh Q. Phung (Deakin University, Australia); Sunil Gupta (Deakin University, Australia); Svetha Venkatesh (Deakin University, Australia)
- 2A4. **“Time-lag Method for Detecting Following and Leadership Behavior of Pedestrians from Mobile Sensing Data”** Mikkel Baun Kjærgaard (Aarhus University, Denmark); Henrik Blunck (Aarhus University, Denmark); Martin Wirz (ETH Zurich, Switzerland); Markus Wüstenberg (Aarhus University, Denmark); Daniel Roggen (ETH Zürich, Switzerland); Gerhard Tröster (Wearable Computing Lab ETH Zürich, Switzerland); Kaj Grønbæk (Aarhus University, Denmark)

Coffee/Tea Break

Pt. Loma 3

3:30pm- 4:00pm

Demo and Work-in-Progress “Teaser Madness”

Pt. Loma 2

4:00pm – 4:45pm

Chairs: **Silvia Giordano** (University of Applied Sciences and Arts of Southern Switzerland – SUPSI),
Eli Bozorgzadeh (University of California, Irvine, USA),
Xun Luo (Qualcomm, Inc, USA)

Demo Session (parallel)

Pt. Loma 3

4:45pm – 6:45pm

Chairs: **Eli Bozorgzadeh** (University of California, Irvine, USA), **Xun Luo** (Qualcomm, Inc, USA)

- D1. **“A Lane-Level Dynamic Traffic Control System for Driving Efficiency Optimization Based on Vehicular Networks”** Lien-Wu Chen (Feng Chia University, Taiwan); Chia-Chen Chang (National Chiao Tung University, Taiwan); Pranay Sharma (National Chiao-Tung University, Taiwan); Jen-Hsiang Cheng (National Chiao Tung University, Taiwan); Chien-Cheng Wu (National Chiao Tung University, Taiwan); Yu-Chee Tseng (National Chiao-Tung University, Taiwan)
- D2. **“TinyBox: Social, Local, Mobile Content Sharing”** Carlo Caprini (University of Trento, Italy); Mattia Zeni (University of Trento, Italy); Nicola Conci (University of Trento, Italy); Iacopo Carreras (Create-Net, Italy); Daniele Miorandi (Create-Net, Italy)
- D3. **“ExposureSense: Integrating Daily Activities with Air Quality using Mobile Participatory Sensing”** Bratislav Predić (Faculty of Electronic Engineering, University of Niš, Serbia); Zhixian Yan (Samsung Research, USA); Julien Eberle (EPFL, Switzerland); Dragan Stojanovic (University of Nis, Faculty of Electronic Engineering, Serbia); Karl Aberer (EPFL, Switzerland)
- D4. **“Highly Scalable Data Processing Framework for Pervasive Computing Applications”** Janne Riihijärvi (RWTH Aachen University, Germany); Petri Mähönen (RWTH Aachen University, Germany)
- D5. **“Piggy-backed Key Exchange using Online Services (PIKE)”** Wolfgang Apolinarski (University of Duisburg-Essen, Germany); Marcus Handte (University

of Duisburg-Essen, Germany); Umer Iqbal (Universität Duisburg-Essen Germany, Germany); Pedro Jose Marrón (University of Duisburg-Essen and Fraunhofer FKIE, Germany)

- D6. **“Autonomous Configuration of Spatially Aware Sensor Services in Service Oriented WSNs”** Syed Yousaf Shah (Rensselaer Polytechnic Institute, USA); Boleslaw K Szymanski (Rensselaer Polytechnic Institute, USA); Petros Zerfos (IBM T.J. Watson Research Center, USA); Chatschik Bisdikian (IBM Research, USA); Christopher Gibson (IBM, United Kingdom); Dominic Harries (IBM, United Kingdom)
- D7. **“3D Modeling By the Masses: A Mobile App for Modeling Buildings”** Todd Eaglin (The University of North Carolina at Charlotte, USA); Kalpathi Subramanian (The University of North Carolina, USA); Jamie Payton (University of North Carolina at Charlotte, USA)
- D8. **“Reinventing the Share Button for Physical Spaces”** Darren Carlson (University of Lübeck, Germany); Bashar Altakrouri (University of Lübeck, Germany); Andreas Schrader (University of Lübeck, Germany)
- D9. **“Demonstrating CrowdInside: A System for the Automatic Construction of Indoor Floor-plans”** Moustafa Alzantot (Egypt Japan University of Science and Technology & Google, Egypt); Moustafa Youssef (Egypt-Japan University of Science and Technology (EJUST), USA)

Work-in-Progress Poster Session (parallel)

Pt. Loma 3

4:45pm – 6:45pm

Chair: **Silvia Giordano** (University of Applied Sciences and Arts of Southern Switzerland - SUPSI)

- W1. **“Inside-Out: Reflecting on your Inner State”** Javier Hernandez (Massachusetts Institute of Technology, USA); Daniel McDuff (Massachusetts Institute of Technology, USA); Richard Fletcher (MIT, USA); Rosalind Picard (MIT Media Lab, USA)
- W2. **“Context-Aware Intelligent Recommendation System for Tourism”** Kevin Meehan (University of Ulster, United Kingdom); Tom Lunney (University of Ulster, United Kingdom); Kevin Curran (University of Ulster, United Kingdom); Aiden McCaughey (University of Ulster, United Kingdom)
- W3. **“MemPhone: From Personal Memory Aid to Community Memory Sharing using Mobile Tagging”** Guo Bin (Northwestern Polytechnical University, P.R. China); Zhiwen Yu (Northwestern Polytechnical University, P.R. China); Daqing Zhang (InstitutTélécom, Télécom Sud Paris, France); Xingshe Zhou (Northwestern Polytechnical University, P.R. China)
- W4. **“Let’s Collide to Localize: Achieving Indoor Localization with Packet Collisions”** Joost van Velzen (Salland Electronics, The Netherlands); Marco Antonio Zuniga (Delft University of Technology, The Netherlands)
- W5. **“Adaptive Traffic Management for Secure and Efficient Emergency Services in Smart Cities”** Soufiene Djahel (Lero, UCD School of Computer Science and Informatics, Ireland); Mazeiar Salehie (Limerick University, Ireland); Irina Tal (Dublin City University, Ireland); Pooyan Jamshidi (Dublin City University, Ireland)
- W6. **“DORC: Distributed Online Route Computation - Higher Throughput, More Privacy”** Niklas Schnelle (University of Stuttgart, Germany); Stefan Ernst Funke (University of Stuttgart, Germany); Sabine Storandt (University of Stuttgart, Germany)

- W7. **“HMM-driven Smart White-space-aware Frame Control Protocol for Coexistence of ZigBee and WiFi”** Jie Yuan (Oklahoma State University, USA); Theodore Ward (Oklahoma State University, USA); Sam Honarvar (Oklahoma State University, USA); Tingting Chen (Oklahoma State University, USA); Johnson Thomas (Oklahoma State University, USA)
- W8. **“JointCache: Collaborative Path Confusion through Lightweight P2P Communication”** Kai Dong (University of Nanjing, P.R. China); Tao Gu (University of Southern Denmark, Denmark); Xianping Tao (Nanjing University, P.R. China); Jian Lu (Nanjing University, P.R. China)
- W9. **“Constructivist Ambient Intelligent Agent for Smart Environments”** Amro Najjar (Ecole des Mines de Saint-Etienne, France); Patrick Reignier (Grenoble INP, France)
- W10. **“The Digital Box and Block Test - Automating Traditional Post-Stroke Rehabilitation Assessment”** Chih-Pin Hsiao (Georgia Institute of Technology, USA); Chen Zhao (Beijing Institute of Technology, P.R. China); Ellen Yi-Luen Do (Georgia Institute of Technology, USA)
- W11. **“Who, How, and Why? Enhancing Privacy Awareness in Ubiquitous Computing”** Bastian Koenings (Ulm University, Germany); Florian Schaub (Ulm University, Germany); Michael Weber (University of Ulm & Faculty of Engineering and Computer Science, Germany)
- W12. **“Crowd-Sensing: why Context Matters”** Iacopo Carreras (Create-Net, Italy); Daniele Miorandi (Create-Net, Italy); Nicola Conci (University of Trento, Italy); Andrei Tamin (U-Hopper, Italy); Emmanuel R Ssebagala (University of Trento, Italy)
- W13. **“Saving Energy in Smart Homes with Minimal Comfort Level Reduction”** Yukitoshi Kashimoto (Nara Institute of Science and Technology, Japan); Shinya Yamamoto (NARA INSTITUTE of SCIENCE and TECHNOLOGY, Japan); Keiichi Yasumoto (Nara Institute of Science and Technology, Japan); Minoru Ito (NaraInstitute of Science and Technology, Japan)
- W14. **“DiTON: Towards Facilitating Distributed Transactions in Opportunistic Networks”** Chance Eary (The University of Texas at Arlington, USA); Mohan J Kumar (The University of Texas at Arlington, USA); Gergely Záruba (The University of Texas at Arlington, USA)
- W15. **“Towards Monitoring Firefighting Teams with the Smartphone”** Sebastian Feese (Wearable Computing Lab ETH Zürich, Switzerland); Bert Arnrich (ETH Zurich, Switzerland); Mirco Rossi (ETH Zurich, Switzerland); Michael Burtscher (University of Zurich, Switzerland); Bertolt Meyer (University of Zurich, Switzerland); Klaus Jonas (University of Zurich, Switzerland); Gerhard Tröster (Wearable Computing Lab ETH Zürich, Switzerland)
- W16. **“A Service Infrastructure for the Internet of Things based on XMPP”** Sven Bendel (Technische Universität Dresden, Germany); Thomas Springer (Technische Universität Dresden, Germany); Daniel Schuster (Technische Universität Dresden, Germany); Alexander Schill (Technische Universität Dresden, Germany); Ralf Ackermann (SAP AG, Germany); Michael Ameling (SAP AG, Germany)
- W17. **“Human Sensors: Case-study of Open-ended Community Sensing in Developing Regions”** Kuldeep Yadav (IIIT Delhi, India); Dipanjan Chakraborty (IBM Research, India); Sonia Soubam (IIIT-Delhi, India); Naveen Prathapaneni (IBM Research, India); Vikrant Nandakumar (IBM Research, USA); Vinayak S. Naik (IIIT-Delhi, India); Nithya Rajamani (IBM Research, India); Venkat Subramaniam (IBM India Research Laboratory, India); Sameep Mehta (IBM India

- Research Laboratory, India); Pradipta De (SUNY Korea, Korea)
- W18. **“Key Challenges in Application and Content Scheduling for Open Pervasive Display Networks”** Ivan Elhart (University of Lugano, Switzerland); Marc Langheinrich (University of Lugano (USI), Switzerland); Nigel Davies (Lancaster University, United Kingdom); Rui Jose (University of Minho, Portugal)
- W19. **“Interchange: Bidding for Green Lights”** Nitin Shantharam (University of California, Irvine, USA); Thomas Strang (German Aerospace Center (DLR) & University of Innsbruck, Intelligence on Wheels, Germany); Donald J. Patterson (University of California at Irvine, USA)
- W20. **“Recommendations-based Location Privacy Control”** Hongxia Jin (Samsung R & D Center, USA); Gokay Saldamli (Bogazici University, Canada); Richard Chow (Samsung, USA); Bart Knijnenburg (Samsung Information Systems of America, USA)
- W21. **“Dynamic Barcodes for a Better Ubiquitous Understanding”** Geert Vanderhulst (Alcatel-Lucent Bell Labs, Belgium); Lieven Trappeniers (Alcatel-Lucent, France)
- W22. **“I see you: How to Improve Wearable Activity Recognition by Leveraging Information from Environmental Cameras”** Gernot Bahle (DFKI, Germany); Paul Lukowicz (DFKI and University of Kaiserslautern, Germany); Kai Kunze (University of Passau, Germany); Koichi Kise (Osaka Prefecture University, Japan)

Qualcomm Demos (parallel)

Pt. Loma 3

4:45pm – 6:45pm

Reception (parallel to Demo/WiP) (parallel)

Pt. Loma 3

4:45pm – 6:45pm

Wednesday, March 20th

Keynote Lecture

Pt. Loma 2

8:45am - 10:00am

Chair: **Jadwiga Indulska** (The University of Queensland, Australia)

K2 “Pervasive Communication and Interaction to Make the Built Environment Better and more Sustainable”

David Culler (University of California at Berkeley, USA)

Coffee/Tea Break

Pt. Loma 3

10:00am- 10:30am

Session 3: Best Papers

Pt. Loma 2

10:30am - 12.00pm

Chair: **Claudio Bettini** (University of Milan, Italy)

3A1. **“Supero: A Sensor System for Unsupervised Residential Power Usage Monitoring”** Dennis Phillips (Michigan State University, USA); Rui Tan (Advanced Digital Sciences Center, Singapore); Mohammad Mahdi Moazzami (Michigan State University, Iran); Guoliang Xing (Michigan State University, USA); Jinzhu Chen (Michigan State University, USA); David Yau (Advanced Digital Sciences Center, Singapore)

3A2. **“Providing Privacy-Aware Incentives for Mobile Sensing”** Qinghua Li (Pennsylvania State University, USA); Guohong Cao (The Pennsylvania State University, USA)

3A3. **“METIS: Exploring mobile phone sensing offloading for efficiently supporting social sensing applications”** Kiran K. Rachuri (University of Cambridge, UK); Christos Efstratiou (University of Cambridge, UK); Ilias Leontiadis (University of Cambridge, UK); Cecilia Mascolo (University of Cambridge, UK); Peter Rentfrow (University of Cambridge, UK)

Lunch

Pt. Loma 3

12:00pm- 1:30pm

Session 4 – Privacy, Security and Location Detection

Pt. Loma 2

1:30pm - 3:00pm

Chair: **Marco Gruteser** (WINLAB / Rutgers University, USA)

4A1. **“PIKE: Enabling Secure Interaction with Piggybacked Key-Exchange”** Wolfgang Apolinarski (University of Duisburg-Essen, Germany); Marcus Handte (University of Duisburg-Essen, Germany); Umer Iqbal (Universität Duisburg-Essen Germany, Germany); Pedro Jose Marrón (University of Duisburg-Essen and Fraunhofer FKIE, Germany)

4A2. **“Privacy Preservation for Participatory Sensing Data”** Ioannis Boutsis (Athens University of Economics and Business, Greece); Vana Kalogeraki (Athens University of Economics and Business, Greece)

4A3. **“RF-BEEP: A light ranging scheme for smart devices”** Mostafa Uddin (Old Dominion University, USA); Tamer Nadeem (Old Dominion University, USA)

Coffee/Tea Break*Pt. Loma 3*

3:00pm- 3:30pm

NSF Presentation*Pt. Loma 2*

3:30pm - 4:00pm

Chair: **Sajal K. Das** (University of Texas at Arlington, USA)N1. “**NSF Initiatives on Sustainability Research**” Krishna Kant (NSF, USA)**IBM PhD Forum on Pervasive Computing and Communication –
Teaser Madness***Pt. Loma 2*

4:00pm - 4:20pm

Chair: **Mohan J Kumar** (The University of Texas at Arlington, USA)**IBM PhD Forum on Pervasive Computing and Communication –
Posters***Pt. Loma 2*

4:20pm – 6:00pm

Chair: **Mohan J Kumar** (The University of Texas at Arlington, USA)

- P1. “**A Two-Tier VANET/P2P System for Information Retrieval in Vehicular Environments**” Chien-Ming Cheng (National Chiao Tung University, Taiwan)
- P2. “**Toward Large-scale Situation Awareness Applications on Camera Networks**” Kirak Hong (Georgia Institute of Technology, USA)
- P3. “**Modeling, Managing and Reasoning about Social Contexts for Socially-Aware Applications**” Muhammad AshadKabir (Swinburne University of Technology, Australia)
- P4. “**Using Electronic Storyboards to Support Interdisciplinary Design of Pervasive Computing Systems**” Jason Forsyth (Virginia Tech, USA)
- P5. “**Converting context to indoor position using built-in smartphone sensors**” Sara Khalifa (University of New South Wales, Australia)
- P6. “**Middleware-based System Support for Proactive Adaptation in Pervasive Environments**” Sebastian VanSyckel (University of Mannheim, Germany)
- P7. “**Distributed Opportunistic Sensing in Mobile Phone Sensor Networks**” Viet-Duc Le (University of Twente, The Netherlands)
- P8. “**Collaborative Opportunistic Network Coding for Persistent Data Stream in Disruptive Sensor Networks**” Mingsen Xu (Georgia State University, USA)

Conference Banquet*Pt. Loma Terrace*

7:00pm – 10:00pm

Session 5 – Pervasive networking and sensing

Pt. Loma 2

- 8:30am- 10:00am Chair: Marius **Portmann** (University of Queensland, Australia)
- 5A1. **“WizNet: A ZigBee-based Sensor System for Distributed Wireless LAN Performance Monitoring”** Ruogu Zhou (Michigan State University, USA); Guoliang Xing (Michigan State University, USA); Xunteng Xu (HP Labs, P.R. China); Jianping Wang (City University of Hong Kong, Hong Kong); Lin Gu (Hong Kong University of Science and Technology, Hong Kong)
- 5A2. **“Probabilistic Registration for Large-Scale Mobile Participatory Sensing”** Sara Hachem (Inria, France); Animesh Pathak (Inria Paris-Rocquencourt, France); Valerie Issarny (INRIA, France)
- 5A3. **“Scheduling Sensors for Monitoring Sentient Spaces using an Approximate POMDP Policy”** Ronen Vaisenberg (University of California - Irvine, USA); Alessio Della Motta (Università di Bologna, Italy); Sharad Mehrotra (University of California, Irvine, USA); Deva Ramanan (University of California - Irvine, USA)

Coffee/Tea Break

Pt. Loma 3

10:00am- 10:30am

Panel Session

Pt. Loma 2

10:30am - 12:00pm Moderator: **Peter Marx** (Qualcomm Labs, USA)
PerCom 2013 Panel: **“Intelligent Devices and Smart Spaces”**

Lunch

Pt. Loma 3

12:00pm- 1:30pm

Session 6A – Positioning and tracking (Concise papers)

Pt. Loma 2

- 1:30pm- 2:50pm Chair: **Thomas Strang** (German Aerospace Center, Germany)
- 6A1. **“OpenCapSense: A Rapid Prototyping Toolkit for Pervasive Interaction using Capacitive Sensing”** Tobias Grosse-Puppenthal (Fraunhofer Institute for CG Research, Germany); Yannick Berghoefer (TU. Darmstadt, Germany); Andreas Braun (Fraunhofer Institute for CG Research, Germany); Raphael Wimmer (University of Regensburg, Germany); Arjan Kuijper (TU Darmstadt, Germany)
- 6A2. **“Bichromatic Reverse Nearest Neighbors in Mobile Peer-to-Peer Networks”** Thao Nghiem (Monash University, Australia); Kiki Maulana (Monash University, Australia); Agustinus Borgy Waluyo (Monash University, Australia); David Taniar (Monash University, Australia)
- 6A3. **“Human Tracking and Identification using a Sensitive Floor and Wearable Accelerometers”** Miguel Sousa (Future-Shape GmbH, Germany); Axel Techmer (Future-Shape GmbH, Germany); Axel Steinhage (Future-Shape GmbH, Germany); Christl Lauterbach (Future-Shape GmbH, Germany); Paul Lukowicz (DFKI and University of Kaiserslautern, Germany)

- 6A4. **“CLIPS: Infrastructure-free Collaborative Indoor Positioning Scheme for Time-critical Team Operations”** Youngtae Noh (Cisco Systems Inc., USA); Hirozumi Yamaguchi (Osaka University, Japan); Prerna Vij (University of California Los Angeles & Adobe Systems, USA); Uichin Lee (KAIST, Korea); Joshua Joy (UCLA, USA); Mario Gerla (UCLA, USA)

Session 6B – Context-Awareness and Social Sensing (Concise papers)

Pt. Loma 1

- 1:30pm- 2:50pm Chair: **Archan Misra** (Singapore Management University, Singapore)
- 6B1. **“Community Detection in Weighted Networks: Algorithms and Applications”** Zongqing Lu (Nanyang Tech. Univ., Singapore); Yonggang Wen (Nanyang Tech. Univ., Singapore); Guohong Cao (The Pennsylvania State University, USA)
- 6B2. **“DrOPS: Model-Driven Optimization for Public Sensing Systems”** Damian Philipp (University of Stuttgart, Germany); Jaroslaw Stachowiak (University of Stuttgart, Germany); Patrick Alt (University of Stuttgart, Germany); Frank Dürr (University of Stuttgart, Germany); Kurt Roethermel (University of Stuttgart, Germany)
- 6B3. **“Bluetooth based Collaborative Crowd Density Estimation with Mobile Phones”** Jens Weppner (University of Kaiserslautern, Germany); Paul Lukowicz (DFKI and University of Kaiserslautern, Germany)
- 6B4. **“CircleSense: A Pervasive Computing System for Recognizing Social Activities”** Guanqing Liang (The Hong Kong Polytechnic University, Hong Kong); Jiannong Cao (Hong Kong Polytechnic Univ, Hong Kong); Weiping Zhu (The Hong Kong Polytechnic University, Hong Kong)

Coffee/Tea Break

Pt. Loma 3

3:00pm- 3:30pm

Session 7 – Enabling Technologies, Smart Applications and Devices

Pt. Loma 2

- 3:30pm- 5:00pm Chair: **Nalini Venkatasubramanian** (University of California, Irvine, USA)
- 7A1. **“A Dense Pressure Sensitive Bedsheet Design for Unobtrusive Sleep Posture Monitoring”** Jason Liu (University of California, Los Angeles, USA); Wen Yao Xu (University of California, Los Angeles, USA); Ming-Chun Huang (UCLA, USA); Nabil Alshurafa (UCLA, USA); Majid Sarrafzadeh (UCLA, USA)
- 7A2. **“Idetic: A High-level Synthesis Approach for Enabling Long Computations on Transiently-powered ASICs”** Azalia Mirhoseini (Rice University, USA); Ebrahim M. Songhori (Rice University, USA); Farinaz Koushanfar (Rice University, USA)
- 7A3. **“B-Planner: Night Bus Route Planning using Large-scale Taxi GPS Traces”** Chao Chen (Institut TELECOM Sud Paris, France); Daqing Zhang (Institut Télécom, Télécom SudParis, France); Shijian Li (Zhejiang University, P.R. China)

PerCom 2013 Town Hall Meeting

Pt. Loma 2

5:00pm- 6:00pm

Chair: **Marco Conti** (IIT-CNR, Italy)

Friday, March 22nd, Post-conference Workshops

Morning coffee break: 10:00am-10:30am Pt. Loma Foyer
Afternoon coffee break: 3:00pm-3:30pm Pt. Loma Foyer
Lunch: 12:00pm-1:30pm Pt. Loma 3

The First International Workshop on Cognitive Computing and Communications (C3)

Location: La Jolla

Session 1 – Cognitive networking and computing (I)

9:00 am – 10:00 am Chair: **Sunil Kumar** (San Diego State University, USA)

- CC1. “**Communication Mechanisms for Cognitive Radio Networks**” Alexandru Popescu (Blekinge Institute of Technology, Sweden); Yong Yao (Blekinge Institute of Technology, Sweden); Markus Fiedler (Blekinge Institute of Technology, Sweden); Adrian Popescu (Blekinge Institute of Technology, Sweden)
- CC2. “**Resource Control for Cognitive Multi-hop Network in Traffic Cross Environment**” Shuta Kako (The University of Electro-Communications, Japan); Osamu Takyu (Shinshu University, Japan); Takeo Fujii (The University of Electro-Communications, Japan)

Session 2 – Cognitive networking and computing (II)

10:30 am – 11:30 am Chair: **Sunil Kumar** (San Diego State University, USA)

- CC3. “**Signal Sensing and Modulation Classification Using Pervasive Sensor Networks**” Wei Su (US Army RDECOM CERDEC, USA)
- CC4. “**Communication Protocols in FRIEND: A Cyber-Physical System for Traffic Flow Related Information AggrEgatioN and Dissemination**” Samy S. El-Tawab (James Madison University, USA); Stephan Olariu (Old Dominion University, USA)

5th International Workshop on Smart Environments and Ambient Intelligence (SEnAmI)

Location: Del Mar

Session 0 – Welcome

8:50 am – 8:59 am

Chair: **Josue Iglesias** (Universidad Politecnica de Madrid, Spain)

Session 1 – Architectures and middleware for data processing and service delivery in smart environments

9:00 am – 10:00 am

Chair: **Josue Iglesias** (Universidad Politecnica de Madrid, Spain)

- SE1. **“Towards Context-Aware Internet Services with Unselfish Clients”** Yu Lu (National University of Singapore, Singapore); Wai-Choong Wong (National University of Singapore, Singapore)
- SE2. **“HomePort: Middleware for Heterogeneous Home Automation Networks”** Thibaut Le Guilly (Aalborg University, Denmark); Petur Olsen (Aalborg University, Denmark); Anders P. Ravn (Aalborg University, Denmark); Jesper Rosenkilde (Aalborg University, Denmark); Arne Skou (CISS, Denmark)
- SE3. **“System-level Approach to the Design of Collaborative Distributed Systems Based on Wireless Sensor and Actuator Networks”** Udayanto Dwi Atmojo (The University of Auckland, New Zealand); Zoran Salcic (The University of Auckland, New Zealand); Kevin I-Kai Wang (The University of Auckland, New Zealand)

Session 2 – Interacting with smart objects and WSN

10:30 am – 11:50 am

Chair: **Marco Morana** (University of Palermo, Italy)

- SE4. **“PERSEO: a system to Personalize the Environment Response through Smart phonEs and Objects”** Luca Bergesio (Universidad Politécnica de Madrid, Spain); Íñigo Marqunez (Universidad Politécnica de Madrid, Spain); Ana M. Bernardos (Universidad Politecnica de Madrid, Spain); Juan Besada (Universidad Politecnica de Madrid, Spain); Jose R Casar (Universidad Politecnica de Madrid, Spain)
- SE5. **“Motion Sensors for Activity Recognition in an Ambient-Intelligence Scenario”** Pietro Cottone (University of Palermo, Italy); Giuseppe Lo Re (University of Palermo, Italy); Gabriele Maida (University of Palermo, Italy); Marco Morana (University of Palermo, Italy)
- SE6. **“Integrating Wireless Sensor Nodes and Smartphones for Energy-Efficient Data Exchange in Smart Environments”** Sebastian Zöller (Technische Universität Darmstadt & Multimedia Communications Lab - KOM, Germany); Andreas Reinhardt (Technische Universität Darmstadt, Germany); Markus Wachtel (Technische Universität Darmstadt, Germany); Ralf Steinmetz (Technische Universität Darmstadt, Germany)
- SE7. **“Supporting Daily Living Activities using Behavior Logs and Augmented Reality”** Yuki Nakamura (Nara Institute of Science and Technology, Japan); Keiichi Yasumoto (Nara Institute of Science and Technology, Japan); Morihiko Tamai (Nara Institute of Science and Technology, Japan); Shinya Yamamoto (Tokyo University of Science Yamaguchi, Japan)

Session 3 – Personalized applications in Smart Environments

1:30 pm – 2:50 pm Chair: **Sebastian Zöller** (Technische Universität Darmstadt, Germany)

- SE8. **“Improving Energy Efficiency through Activity-Aware Control of Office Appliances using Proximity Sensing - A Real-Life Study”** Paola Andrea Jaramillo Garcia (Eindhoven University of Technology, The Netherlands); Oliver Amft (TU Eindhoven, The Netherlands)
- SE9. **“SoundOfTheCity - Continuous Noise Monitoring for a Healthy City”** Lukas Ruge (University of Luebeck, Germany); Bashar Altakrouri (University of Luebeck& Ambient Computing Group, Germany); Andreas Schrader (University of Lübeck, Germany)
- SE10. **“Multimodal Energy Expenditure Calculation for Pervasive Health: A Data Fusion Model using Wearable Sensors”** Haik Kalantarian (University of California, Los Angeles, USA); Sunghoon Lee (University of California Los Angeles, USA); Anurag Mishra (UCLA, USA); Hassan Ghasemzadeh (UCLA, USA); Jason J Liu (University of California, Los Angeles, USA); Majid Sarrafzadeh (UCLA, USA)
- SE11. **“Situation and Social Awareness-based Personalized Recommendation Service in Pervasive Computing Environment”** Haesung Lee (Kyonggi University, Korea); Joonhee Kwon (Kyonggi University, Korea)

9th IEEE International Workshop on Sensor Networks and Systems for Pervasive Computing (PerSeNS)

Location: Coronado

Welcome from the TPC chair

8:45 am – 9:00 am Chair: **Giuseppe Lo Re** (University of Palermo, Italy)

Keynote Speech

9:00 am – 10:00 am Chair: **Giuseppe Lo Re** (University of Palermo, Italy)

- PSK. **“A Decade of Low-Power Wireless”** Daniele Puccinelli (University of Applied Sciences of Southern Switzerland, Switzerland)

Session 1 – Security

10:30 am – 12:00 pm Chair: **Andreas Reinhardt** (Technische Universität Darmstadt, Germany)

- PS1. **“Evaluating Energy-Efficiency of Hardware-based Security Mechanisms”** Christian Haas (Karlsruhe Inst. of Tech., Germany); Stephan Munz (Karlsruhe Inst. of Tech., Germany); Joachim Wilke (Karlsruhe Inst. of Tech., Germany); Anton Hergenröder (Karlsruhe Institute of Technology, Germany)
- PS2. **“Performance Evaluation of Key Disclosure Delay-Based Schemes in Wireless Sensor Networks”** Wafa Ben Jaballah (University of Bordeaux I, France); Mosbah Mohamed (University of Bordeaux, France); Habib Youssef (Institut Supérieur d'Informatique et des Technologies de Communication, Tunisia)
- PS3. **“Leakage Detection in Waterpipes Networks using Acoustic Sensors and Identifying Codes”** Francesco De Pellegrini (Create-Net, Italy); Roberto Riggio (Create-Net, Italy)

Session 2 – Energy Efficiency

1:30 pm – 3:00 pm

Chair: **Silvia Giordano** (University of Applied Sciences and Arts of Southern Switzerland (SUPSI), Switzerland)

- PS4. **“Pre-Allocating Code Mappings for Energy-Efficient Data Encoding in Wireless Sensor Networks”** Andreas Reinhardt (Technische Universität Darmstadt, Germany); Delphine Christin (Technische Universität Darmstadt, Germany); Ralf Steinmetz (Technische Universität Darmstadt, Germany)
- PS5. **“Efficient Reprogramming of Wireless Sensor Networks Using Incremental Updates”** Milosh Stolikj (Eindhoven University of Technology, The Netherlands); Pieter Cuijpers (Technische Universiteit Eindhoven, The Netherlands); Johan J. Lukkien (Eindhoven University of Technology, The Netherlands)
- PS6. **“Connectivity and Energy Usage in Low-Power Wireless: an Experimental Study”** Daniele Puccinelli (University of Applied Sciences of Southern Switzerland, Switzerland); Silvia Giordano (University of Applied Sciences and Arts of Southern Switzerland - SUPSI, Switzerland)

Session 3 – Architecture & Protocols

3:30 pm – 5:30 pm

Chair: **Marco Ortolani** (University of Palermo, Italy)

- PS7. **“Enhanced DNS Message Compression - Optimizing mDNS/DNS-SD for the Use in 6LoWPANs”** Ronny Klauck (IHP GmbH, Germany); Michael Kirsche (Brandenburg University of Technology Cottbus, Germany)
- PS8. **“DRCS: A Distributed Routing and Channel Selection Scheme for Multi-Channel Wireless Sensor Networks”** Amitangshu Pal (The University of North Carolina at Charlotte, USA); Asis Nasipuri (University of North Carolina at Charlotte, USA)
- PS9. **“Runtime Migration of Stateful Event Detectors with Low-Latency Ordering Constraints”** Christopher Mutschler (University of Erlangen-Nuremberg & Fraunhofer IIS, Germany); Michael Philippsen (University of Erlangen-Nuremberg, Germany)
- PS10. **“A reconfigurable distributed CEP middleware for diverse mobility scenarios”** Piotr Kamisiński (University of Oslo, Norway); Vera H. Goebel (University of Oslo, Norway); Thomas Plagemann (University of Oslo, Norway)

Third International Workshop on Pervasive Networks for Emergency Management (PerNEM)

Location: Pt. Loma 1

Session 1 – Adaptive Routing for Emergency Situations

8:30 AM – 10:00 AM Chair: **Avgoustinos Filippoupolitis** (Imperial College London, United Kingdom)

- PN1. **“A Hybrid MANET-DTN Routing Scheme for Emergency Response Scenarios”** Christian Raffelsberger (University of Klagenfurt, Austria); Hermann Hellwagner (Klagenfurt University, Austria)
- PS2. **“Maximum Throughput Flow-Based Contraflow”** Manki Min (South Dakota State University, USA); Jonguk Lee (South Dakota State University, USA)
- PS3. **“Performance Evaluation of Binary Spray and Wait OppNet Protocol in the Context of Emergency Scenario”** Mazlan Abbas (MIMOS Berhad, Malaysia); Nur Husna Md Yusof (MIMOS Berhad, Malaysia); Norsheila Faisal (Universiti Teknologi Malaysia & Faculty of Electrical Engineering, Malaysia)

Session 2 – Architecture and Systems for Emergency Management Applications

10:30 am – 12:00 pm Chair: **Gokce Gorbil** (Imperial College London, United Kingdom)

- PS4. **“Graph and Analytical Models for Emergency Evacuation”** Antoine Desmet (Imperial College London, United Kingdom); Erol Gelenbe (Imperial College London, United Kingdom)
- PS5. **“Towards Trustworthy Mobile Social Networking Services for Disaster Response”** Sander Wozniak (Ilmenau University of Technology, Germany); Michael Rossberg (Ilmenau University of Technology, Germany); Guenter Schaefer (Technische Universität Ilmenau, Germany)
- PS6. **“A taxonomy of cyber attack and defence mechanisms for emergency management”** George Loukas (University of Greenwich, United Kingdom); Diane E Gan (University of Greenwich, United Kingdom); Tuan Vuong (University of Greenwich, United Kingdom)

Session 3 – Emergency Communication Systems

1:30 pm – 3:00 pm Chair: **George Loukas** (University of Greenwich, United Kingdom)

- PS7. **“Disruption Tolerant Communications for Large Scale Emergency Evacuation”** Gokce Gorbil (Imperial College London, United Kingdom); Erol Gelenbe (Imperial College London, United Kingdom)
- PS8. **“Improving Sensor Data Delivery During Disaster Scenarios with Resilient Overlay Networks”** Kyle E Benson (University of California, Irvine, USA); Nalini Venkatasubramanian (University of California, Irvine, USA)
- PS9. **“Supervisory Decision Making in Emergency Response Application”** Raheleh B Dilmaghani (IBM T. J. Watson Research Lab & University of California, San Diego, USA); Ramesh Rao (University of California at San Diego, USA)

The 5th International Workshop on Information Quality and Quality of Service for Pervasive Computing (IQ2S)

Location: Bay Conference

Session 1 – Opening Session

9:00 am – 10:00 am Chair: **Boleslaw K Szymanski** (Rensselaer Polyt. Institute, USA)

- IQ1. “**Quality of Information and Energy Provisioning (Invited Paper)**”
Erol Gelenbe (Imperial College London, United Kingdom)

Session 2 – Foundations

10:30 am – 12:00 pm Chair: **Prithwish Basu** (BBN Technologies, USA)

- IQ2. “**Compatibility among Diversity: Foundations, lessons, and directions of semantic communication**” **Brendan Juba** (Harvard University, USA)
- IQ3. “**Interactive Interfaces for Complex Network Analysis: An Information Credibility Perspective**” **James Schaffer** (UCSB, USA); **Byungkyu Kang** (UCSB, USA); **Hengchang Liu** (UIUC, USA); **Chenji Pan** (UIUC, USA); **Siyu Gu** (UIUC, USA); **Tobias Höllerer** (University of California, Santa Barbara, USA); **John O'Donovan** (University of California, Santa Barbara, USA)

Session 3 – Security and Trust

1:30 pm – 3:00 pm Chair: **Boleslaw K Szymanski** (Rensselaer Polyt. Institute, USA)

- IQ4. “**Symmetric-Key Encryption Scheme based on the Strong Generating Sets of Permutation Groups**” **Ara Alexanyan** (Yerevan State University, Armenia); **Hakob Aslanyan** (University of Geneva, Switzerland); **Jose Rolim** (University of Geneva, Switzerland)
- IQ5. “**TAF: A Trust Assessment Framework for Inferencing with Uncertain Streaming Information**” **Anthony Etuk** (Univ. of Aberdeen, UK); **Timothy J Norman** (Univ. of Aberdeen, UK); **Chatschik Bisdikian** (IBM Research, USA); **Mudhakar Srivatsa** (IBM T.J. Watson Research Center, USA)
- IQ6. “**Trust and Independence Aware Decision Fusion in Distributed Networks**” **Xinlei (Oscar) Wang** (University of California, Davis, USA); **Jin-Hee Cho** (Army Research Laboratory, USA); **Kevin S Chan** (US Army Research Laboratory, USA); **MoonJeong Chang** (Virginia Tech, USA); **Ananthram Swami** (Army Research Lab., USA); **Prasant Mohapatra** (University of California, Davis, USA)

Session 4 – Closing Session

3:30 pm – 5:15 pm Chair: **Prithwish Basu** (BBN Technologies, USA)

- IQ7. “**SPOTLESS: Similarity Patterns Of Trajectories in Label-Iess Sensor Streams**” **Vasanth Iyer** (Florida International University, USA)
- IQ8. “**Quality and Energy Aware Data Acquisition for Activity and Locomotion Recognition**” **Viet Nguyen** (University of Oslo, Norway); **Ellen Munthe-Kaas** (University of Oslo, Norway); **Thomas Plagemann** (University of Oslo, Norway)
- IQ9. “**Spatio-Temporal Provenance: Identifying Location Information from Unstructured Text**” **Kisung Lee** (Georgia Tech, USA); **Raghu Ganti** (IBM T J Watson Research Center, USA); **Mudhakar Srivatsa** (IBM T.J. Watson Research Center, USA); **Prasant Mohapatra** (University of California, Davis, USA)