Technical Program

I1: Keynote 1

**Keynote1: The Golden Age of Pervasive Computing**
Roy Want (Google Inc, USA)
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R1: Innovative applications, tools and software design

**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)
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**COMITY: Coordinated Application Adaptation in Multi-Platform Pervasive Systems**
Verena Majuntke (University of Mannheim, Germany); Sebastian VanSyckel (University of Mannheim, Germany); Dominik Schäfer (University of Mannheim, Germany); Christian Krupitzer (University of Mannheim, Germany); Gregor Schiele (Digital Enterprise Research Institute (DERI) at NUIG, Ireland); Christian Becker (Universität Mannheim, Germany)
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**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); Hayoon Yi (Seoul National University, Korea); Donghyun Kwon (Seoul National University, Korea); Jonghee Youn (Gangneung-wonju National University, Korea); Yunheung Paek (Seoul National University, Korea)
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R2: Context modeling and reasoning

**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)
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**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)
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**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); Svetla Venkatesh (Deakin University, Australia)
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**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 Zürich, Switzerland); Markus Wüstenberg (Aarhus University, Denmark); Daniel Roggen (ETH Zürich, Switzerland); Gerhard Tröster (Wearable Computing Lab ETH Zürich, Switzerland); Kaj Grønbæk (Aarhus University, Denmark)
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**I2: Keynote 2**

*Keynote 2: Pervasive Communication and Interaction to make the Built Environment Better and more Sustainable*

David Culler (University of California at Berkeley, USA)

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**R3: Best Papers**

*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)

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*Providing Privacy-Aware Incentives for Mobile Sensing*

Qinghua Li (Pennsylvania State University, USA); Guohong Cao (The Pennsylvania State University, USA)

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*METIS: Exploring mobile phone sensing offloading for efficiently supporting social sensing applications*

Kiran K. Rachuri (University of Cambridge, United Kingdom); Christos Efstratiou (University of Cambridge, United Kingdom); Ilias Leontiadis (Telefonica I+D, Spain); Cecilia Mascolo (University of Cambridge, United Kingdom); Peter Rentfrow (University of Cambridge, United Kingdom)

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**R4: Privacy, security and location detection**

*PIKE: Enabling Secure Interaction with PIggybacked Key-Exchange*

Wolfgang Apolinariski (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)

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*Privacy Preservation for Participatory Sensing Data*

Ioannis Boutsis (Athens University of Economics and Business, Greece); Vana Kalogeraki (Athens University of Economics and Business, Greece)

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*RF-Beep: A light ranging scheme for smart devices*

Mostafa Uddin (Old Dominion University, USA); Tamer Nadeem (Old Dominion University, USA)

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**NSF Initiatives on Sustainability Research (Krishna Kant, NSF)**

**R5: Pervasive networking and sensing**

*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)

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*Probabilistic Registration for Large-Scale Mobile Participatory Sensing*

Sara Hachem (Inria Paris-Rocquencourt, France); Animesh Pathak (Inria Paris-Rocquencourt, France); Valerie Issarny (INRIA, France)
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)
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P1: Panel

Moderator: Peter Marx, Qualcomm

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Peter Marx (Qualcomm Labs, USA)
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R6A: Positioning and tracking (Concise papers)

OpenCapSense: A Rapid Prototyping Toolkit for Pervasive Interaction using Capacitive Sensing
Tobias Grosse-Puppendahl (Fraunhofer Institute for Computer Graphics Research, Germany); Yannick Berghoefer (Technical University Darmstadt, Germany); Andreas Braun (Fraunhofer Institute for Computer Graphics Research, Germany); Raphael Wimmer (University of Regensburg, Germany); Arjan Kuiper (Fraunhofer IGD & TU Darmstadt, Germany)
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Bichromatic Reverse Nearest Neighbors in Mobile Peer-to-Peer Networks
Phuong Thao Nghiem (Monash University, Australia); Kiki Maulana (Monash University, Australia); Agustinus Borgy Waluyo (Monash University, Australia); David Green (Monash University, Australia); David Taniar (Monash University, Australia)
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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 (DFKI and University of Kaiserslautern, Germany); Paul Lukowicz (DFKI and University of Kaiserslautern, Germany)
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CLIPS: Infrastructure-free Collaborative Indoor Positioning Scheme for Time-critical Team Operations
Youngtae Noh (Cisco Systems Inc., USA); Hirozumi Yamaguchi (Osaka University, Japan); Uichin Lee (KAIST, Korea); Prerna Vij (University of California Los Angeles & Adobe Systems, USA); Joshua Joy (UCLA, USA); Mario Gerla (University of California Los Angeles, USA)
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R6B: Context-awareness and social sensing (Concise papers)

Community Detection in Weighted Networks: Algorithms and Applications
Zongqing Lu (Nanyang Technological University, Singapore); Yonggang Wen (Nanyang Technological University, Singapore); Guohong Cao (The Pennsylvania State University, USA)
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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 Rothermel (University of Stuttgart, Germany)
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Bluetooth based Collaborative Crowd Density Estimation with Mobile Phones
Jens Weppner (University of Kaiserslautern & Deutsches Forschungszentrum für Künstliche Intelligenz GmbH, Germany); Paul Lukowicz (DFKI and University of Kaiserslautern, Germany)
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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)
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R7: Enabling technologies, smart applications and devices

A Dense Pressure Sensitive Bedsheet Design for Unobtrusive Sleep Posture Monitoring
Jason J Liu (University of California, Los Angeles, USA); Wenyao Xu (University of California, Los Angeles & Wireless Health Institute, USA); Ming-Chun Huang (UCLA, USA); Nabil Alshurafa (UCLA, USA); Majid Sarrafzadeh (UCLA, USA); Nitin Raut (Medisens Wireless Inc., USA); Behrooz Yadegar (Medisens Wireless Inc., USA)
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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)
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B-Planner: Night Bus Route Planning using Large-scale Taxi GPS Traces
Chao Chen (Institut TELECOM & Management SudParis, France); Daqing Zhang (Institut Télécom, Télécom SudParis, France); Zhi-Hua Zhou (Nanjing University, P.R. China); Nan Li (Nanjing University & Soochow University, P.R. China); Tulin Atmaca (IMT/Telecom SudParis, France); Shijian Li (Zhejiang University, P.R. China)
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PerCom "Town Hall" Meeting