



IEEE PerCom 2018 Program

Conference Registration

At the Divani Caravel Lobby on Sunday, March 18: from 5:30 pm to 7:00 pm

At the Foyer of Macedonia Ballroom on:

Monday, March 19: from 8:00 am to 3:00 pm

Tuesday, March 20: from 7:30 am to 3:00 pm

Wednesday, March 21: from 8:00 am to 3:00 pm

Thursday, March 22: from 8:00 am to 1:00 pm

Friday, March 23: from 8:00 am to 11:00 am

Sponsors:



Technical Committee on Computer Communications



Workshop Locations at a Glance

Monday, March 19, Pre-conference Workshops	
Workshop name:	Room:
CoMoRea (The 14th Workshop on Context and Activity Modeling and Recognition)	Macedonia A
PerHealth (The Third IEEE PerCom Workshop on Pervasive Health Technologies)	Pella
PerIoT (The First International Workshop on Mobile and Pervasive Internet of Things)	Mycenae
WristSense (The Third IEEE International Workshop on Sensing Systems and Applications Using Wrist Worn Smart Devices)	Kozani
CoSDEO (The 6th workshop on Context Systems Design, Evaluation and Optimization)	Edessa
PerSCB (Pervasive Sensing for Sustainable Smart Cities and Smart Buildings)	Naoussa
IQ2S* (The 8th International Workshop on Information Quality and Quality of Service for Pervasive Computing)	Vergina
HCCS* (Human-Centered Computational Sensing)	Vergina
PerCrowd* (International Workshop on Context-Awareness for Multi-Device Pervasive Computing)	Macedonia B
PhD Forum Training*	Macedonia B
N2Women meeting (Networking Networking Women panel)	Macedonia B

Friday, March 23, Post-conference Workshops

Workshop name:	Room:
PerLS (The First International Workshop on Pervasive Smart Living Spaces)	Pella
ARDUOUS (First International Workshop on Annotation of useR Data for Ubiquitous Systems)	Mycenae
EmotionAware (The 1st Workshop on emotion awareness for pervasive computing with mobile and wearable devices)	Macedonia A
CASPer (The Fourth International Workshop on Crowd Assisted Sensing, Pervasive Systems and Communications)	Edessa
PerAwareCity (The Third IEEE International Workshop on Pervasive Context-Aware Smart Cities and Intelligent Transport Systems)	Naoussa
SmarterAAL (Advanced Technologies for Smarter Assisted Living solutions: Towards an open Smart Home infrastructure)	Vergina
SmartEdge (Second International Workshop on Smart Edge Computing and Networking)	Kozani
PerFoT* (International Workshop on Pervasive Flow of Things)	Macedonia B

Monday, March 19, Pre-conference Workshops

Morning coffee break: 10:00 am – 10:30 am

Foyer of Macedonia Ballroom

Afternoon coffee break: 3:00 pm – 3:30 pm

Foyer of Macedonia Ballroom

Lunch: 12:00 pm – 1:00 pm

Amalia Restaurant

The 14th Workshop on Context and Activity Modeling and Recognition (CoMoRea)

Location: Macedonia A

CoMoRea-S0 Welcome

8:30 am – 8:45 am Chairs: **Pascal Hirmer** (University of Stuttgart, Germany)

Heiner Stuckenschmidt (University of Mannheim, Germany)

Matthias Wieland (Universität Stuttgart, Germany)

CoMoRea-S1: Activity Recognition

8:45 am- 10:00 pm

Chair: **Heiner Stuckenschmidt** (University of Mannheim, Germany)

- CR1. **Human Activity Recognition based on Real Life Scenarios.** Fadi Al Machot (Alpen Adria University Klagenfurt, Austria); Suneth Ranasinghe (Alpen-Adria-Universität Klagenfurt, Austria); Johanna Plattner (Carinthia University of Applied Sciences, Austria); Nour Jnoub (Universität Wien, Austria)
- CR2. **Toward Practical Activity Recognition: Recognizing Complex Activities with Wide Variations.** Rabih Younes (Virginia Polytechnic Institute and State University, USA); Mark Jones and Thomas L. Martin (Virginia Tech, USA)
- CR3. **Towards Systematic Benchmarking of Activity Recognition Algorithms.** Timo Szttyler, Christian Meilicke and Heiner Stuckenschmidt (University of Mannheim, Germany)

CoMoRea-S2: Context Prediction

10:30 pm – 12:00 pm

Chair: **Matthias Wieland** (Universität Stuttgart, Germany)

- CR4. **Correlation-Based Pre-Filtering for Context-Aware Recommendation.** Zahra Vahidi Ferdousi and Dario Colazzo (University of Paris-Dauphine, France); Elsa Negre (Université Paris Dauphine, LAMSADE, France)
- CR5. **Predicting Contextual Influences on App Usage from a Rational Model of Time Allocation.** Robert Edge and Dominic Mussack (University of Minnesota, USA); Matthias Böhmer (TH Köln, Germany); Paul Schrater (University of Minnesota, USA)
- CR6. **Purpose-of-Visit-Driven Semantic Similarity Analysis on Semantic Trajectories for Enhancing The Future Location Prediction.** Antonios Karatzoglou (Robert Bosch GmbH & Karlsruhe Institute of Technology (KIT),

CoMoRea-S3: Internet of Things

1:00 pm – 3:00pm

Chair: **Pascal Hirmer** (University of Stuttgart, Germany)

- CR7. **An Approach for CEP Query Shipping to Support Distributed IoT Environments.** Ana Cristina Franco da Silva, Pascal Hirmer, Rafael Koch Peres and Bernhard Mitschang (University of Stuttgart, Germany)
- CR8. **Inferring Availability for Communication in Smart Homes Using Context.** Julien Cumin (Université Grenoble Alpes & Orange Labs, France); Grégoire Lefebvre and Fano Ramparany (Orange Labs, France); James Crowley (Université Grenoble Alpes, France)
- CR9. **Modeling and Reasoning with ProbLog: An Application in Recognizing Complex Activities.** Timo Sztyler (University of Mannheim, Germany); Gabriele Civitarese (University of Milan, Italy); Heiner Stuckenschmidt (University of Mannheim, Germany)

CoMoRea-S4: Privacy, Safety and Reasoning

3:30 pm – 5:00 pm

Chairs: **Heiner Stuckenschmidt** (University of Mannheim, Germany)

- CR10. **How a Pattern-based Privacy System Contributes to Improve Context Recognition.** Christoph Stach, Frank Dürr, Kai Minderhann, Saravana Murthy Palanisamy and Stefan Wagner (University of Stuttgart, Germany)
- CR11. **The Wireless Seat Belt Requirements, Experiments, and Solutions for Pedestrian Safety.** Marek Bachmann, Michel Morold and Klaus David (University of Kassel, Germany); Patrick Henkel (Technische Universität München, Germany)
- CR12. **Custom Dual Transportation Mode Detection by Smartphone Devices Exploiting Sensor Diversity.** Claudia Carpineti (University of Bologna, Italy); Vincenzo Lomonaco (DISI, Italy); Luca Bedogni, Marco Di Felice and Luciano Bononi (University of Bologna, Italy)

CoMoRea-S5: Discussion Panel

5:00 pm – 5:30pm

Chairs: **Pascal Hirmer** (University of Stuttgart, Germany)

Heiner Stuckenschmidt (University of Mannheim, Germany)

Matthias Wieland (Universität Stuttgart, Germany)

The Third IEEE PerCom Workshop on Pervasive Health Technologies (PerHealth)

Location: Pella

PerHealth-S1: Welcome To PerHealth 2018

8:55 am – 9:00 am Chair: **Manfred Huber** (The Univ. of Texas at Arlington, USA)

PerHealth-S1 Nutrition and Exercise Tools

9:00 am – 10:00 am Chair: **Manfred Huber** (The Univ. of Texas at Arlington, USA)

- PH1. **Cordon Gris: Integrated solution for meal recommendations.** Jorge Ribeiro (Associação Fraunhofer Portugal Research, Portugal); David Ribeiro and Maria João Vasconcelos (Fraunhofer Portugal AICOS, Portugal); Ayla Schwarz (Ghent University, Portugal); Filomena Gerardo (Santa Casa da Misericórdia de Lisboa, Portugal); Ciska van Harten (Unie KBO, The Netherlands); Riccardo Succu (Red Ninja, United Kingdom); Robbie Davison (Can Cook, United Kingdom); Tiago Oliveira, Marlos Silva and Tiago Silva (SONAE, Portugal)
- PH2. **GIFT: Glove for Indoor Fitness Tracking System.** Akpro Elder Hippocrate Akpa and Masashi Fujiwara (Nara Institute of Science and Technology, Japan); Yutaka Arakawa (Nara Institute of Science and Technology & NAIST, Japan); Hirohiko Suwa and Keiichi Yasumoto (Nara Institute of Science and Technology, Japan)

PerHealth-S2: Health and Behavior Monitoring

10:30 am – 12:00 pm Chair: **Manfred Huber** (The Univ. of Texas at Arlington, USA)

- PH3. **Evaluation of cupboard door sensors for improving activity recognition in the kitchen.** Samuel Whitehouse (University of Bristol, United Kingdom); Kristina Yordanova and Stefan Lüdtko (University of Rostock, Germany); Adeline Paiement (Swansea University, United Kingdom); Majid Mirmehdi (University of Bristol, United Kingdom)
- PH4. **A low cost IoT based health monitoring platform enriched with social networking.** Stamatios - Panagiotis Korres (National Technical University of Athens, Greece); Andreas Menychtas (University of Piraeus, Greece); Panayiotis Tsanakas (Greek Research and Technology Network (GRNET), Greece); Ilias Maglogiannis (University of Piraeus, Greece)
- PH5. **Unobtrusive and Pervasive Monitoring of Geriatric Subjects for Early Screening of Mild Cognitive Impairment.** Sonia Sonia (IITG, India); Avik Ghose (Tata Consultancy Services, India)

PerHealth-S3: Keynote

1:30 – 2:45 pm Chair: **Manfred Huber** (The Univ. of Texas at Arlington, USA)

PHK. **IoT Sensing Technologies for Pervasive Health Management. Ilias Maglogiannis (University of Piraeus, Greece)**

PerHealth-S4: Monitoring Sensors and Assistive Tools

3:30 – 4:35 pm

Chair: **Manfred Huber** (The Univ.of Texas at Arlington, USA)

- PH6. **Computer Vision-Based Gait Velocity from Non-Obtrusive Thermal Vision Sensors.** Javier Medina Quero (University of Jaen & Campus Las Lagunillas, Spain); Colin Shewell, Ian Cleland and Joseph Rafferty (Ulster University, United Kingdom); Chris Nugent (University of Ulster, United Kingdom); Macarena Espinilla Estevez (University of Jaen, Spain)
- PH7. **Towards Gaze-Based Mobile Device Interaction for the Disabled.** Anton Wachner (Universität Mannheim, Germany); Janick Edinger (University of Mannheim, Germany); Christian Becker (Universität Mannheim, Germany)

The Second International Workshop on Mobile and Pervasive Internet of Things (PerIoT)

Location: Mycenae

PerIoT-S0: Introduction and Opening Remarks

8:45 am – 9:00 am

Chair: **Samy S. El-Tawab** (James Madison University, USA)

PerIoT-S1: Keynote

9:00 am – 10:00 am

Chair: **Samy S. El-Tawab** (James Madison University, USA)

- PIK. **Sensor-less Sensing: The Future of Ubiquitous Context-Awareness for the IoT.** Moustafa Youssef (Egypt-Japan University of Science and Technology, Egypt)

PerIoT-S2: IoT Systems and Deployments

10:30 pm – 12:00 pm

Chair: **Puya Ghazizadeh** (Seton Hall University, USA)

- PI1. **Detecting Spies in IoT Systems using Cyber-Physical Correlation.** Brent Lagesse (University of Washington Bothell, USA); Kevin Wu and Jaynie Shorb (University of Washington, USA); Zealous Zhu (University of Washington Bothell, USA)
- PI2. **Awakening the Cloud Within: Energy-Aware Task Scheduling on Edge IoT Devices.** Hend Gedawy (Hamad Bin Khalifa University); Karim Habak (Georgia Institute of Technology, USA); Khaled A. Harras (Carnegie Mellon University, USA); Mounir Hamdi (Hamad Bin Khalifa University, Qatar)
- PI3. **Overview of Cellular LPWAN Technologies for IoT Deployment: Sigfox, LoRaWAN, and NB-IoT.** Kais Mekki (University of Lorraine & CRAN, France); Eddy Bajic (University of Lorraine & CRAN -CNRS UMR 7039, France); Frederic Chaxel (CRAN, France)

PerIoT-S3: Systems and Applications in IoT

1:30 pm – 3:00 pm

Chair: **Brent Lagesse** (University of Washington Bothell, USA)

- PI4. **Using Spreadsheet-defined Rules for Reasoning in Self-Adaptive Systems.** Christian Krupitzer, Guido Drechsel, Deborah Mateja, Alina Pollkläser, Florian Schrage, Timo Sturm and Aleksandar Tomasovic (University of Mannheim, Germany); Christian Becker (Universität Mannheim, Germany)
- PI5. **A Propagation Based Model for Communication in Vehicular Cloud.** Puya Ghazizadeh (Seton Hall University, USA); Reza Fathi (University of Houston, USA)
- PI6. **MagController: A System for Touchless Mobile Devices Control Using the Magnetic Field.** Heba Abdelnasser (Alexandria University, Egypt); Moustafa Youssef (Egypt-Japan University of Science and Technology (EJUST), Egypt); Ayman Khalafallah (Alexandria University, Egypt)

PerIoT-S4: Protocols and Standards

3:30 pm – 5:00 pm Chair: **Samy S. El-Tawab** (James Madison University, USA)

- PI7. **Lightweight M2M protocol: Archotyping an IoT device, and deploying an upgrade architecture.** Iago Felipe Trentin (UFRGS, Brazil & Grenoble INP, France); Samuel Berlemont (Orange Labs, France); Dante Barone (UFRGS, Brazil)
- PI8. **Revisiting Trust of Integrating IoT in Enterprise.** Mohsen Dorodchi and Maryam Abedi (University of North Carolina, Charlotte, USA); Bojan Cukic (University of North Carolina at Charlotte, USA)
- PI9. **Scalable and Adaptive Polling Protocol for Concurrent Wireless Sensor Data Flows.** Manos Koutsoubelias, Antonios Argyriou and Spyros Lalis (University of Thessaly, Greece)

PerIoT-S5: Closing remarks

5:00 pm – 5:15 pm Chair: **Samy S. El-Tawab** (James Madison University, USA)

The Third IEEE International Workshop on Sensing Systems and Applications Using Wrist Worn Smart Devices (WristSense)

Location: Kozani

WristSense-Opening Remarks

8:45 am – 9:00 am Chairs: **Nabil Alshurafa** (Northwestern University, USA)
Christos Efstratiou (University of Kent, United Kingdom)
Abhishek Mukherji (Cisco & Worcester Polytechnic Institute, USA)

WristSense-KN: Keynote

9:00 am – 10:00 pm Chair: **Christos Efstratiou** (University of Kent, United Kingdom)

WSKN. **Machine Learning Systems: On-device AI and beyond.** **Nicholas Lane** (University of Oxford, United Kingdom)

WristSense-S1: Gestures and Hand motion

10:30 pm – 12:00 pm Chair: **Nabil Alshurafa** (Northwestern University, USA)

- WS1. **Firearm Detection Using Wrist Worn Tri-Axis Accelerometer Signals.** Md Abdullah Al Hafiz Khan (University of Maryland, Baltimore County, USA); David Welsh and Nirmalya Roy (University of Maryland Baltimore County, USA)
- WS2. **URQUELL: Using wrist-based gestural interaction to discover POIs in urban environments.** Andreas Komninos, Stylianos Sarakinos, Lydia Marini and John Garofalakis (University of Patras, Greece)
- WS3. **Detecting Distracted Driving Using a Wrist-Worn Wearable.** Bharti Goel, Arup Kanti Dey, Pratoool Bharti, Kaoutar Ben Ahmed and Sriram Chellappan (University of South Florida, USA)
- WS4. **Towards a Practical Pedestrian Distraction Detection Framework using Wearables.** Nisha Vinayaga-Sureshkanth (The University of Texas at San Antonio, USA); Anindya Maiti (Wichita State University, USA); Murtuza Jadliwala (The University of Texas at San Antonio, USA); Kirsten Crager and Jibo He (Wichita State University, USA); Heena Rathore (Hiller Measurements, USA)

WristSense-S2: Beyond activity recognition

1:30 pm – 3:00 pm Chair: **Christos Efstratiou** (University of Kent, United Kingdom)

- WS5. **A Lifelogging Platform Towards Detecting Negative Emotions in Everyday Life using Wearable Devices.** Chelsea Dobbins, Stephen Fairclough and Paulo Lisboa (Liverpool John Moores University, United Kingdom); Félix Navarro (Instituto de Ingeniería Universidad Autónoma de Baja California, Mexico)
- WS6. **Biofeedback in the Wild - A SmartWatch Approach.** Nico Pilgram, Ahmed Mohamed, Matthias Kranz and Gerold Hölzl (University of Passau, Germany)

- WS7. **PresentPostures: A Wrist and Body Capture Approach for Augmenting Presentations.** Jochen Kempfle and Kristof Van Laerhoven (University of Siegen, Germany)
- WS8. **Decoupling Screen Size and Gesture Size for Wrist Worn Devices.** Michael Jones and Kevin Seppi (Brigham Young University, USA); Jared Forsyth (Khan Academy, USA); Zann Anderson (Brigham Young University, USA)

WristSense-S3: Evaluating wrist sensing technologies

3:30 pm – 3:50 pm Chair: **Nabil Alshurafa** (Northwestern University, USA)

- WS9. **A Comprehensive Comparison of Commercial Wrist-Worn Trackers in a Young Cohort in a Lab-Environment.** Salvatore Tedesco (Tyndall National Institute); Marco Sica and John Barton (Tyndall National Institute, Ireland); Brendan O'Flynn (Tyndall National Institute, Ireland); Thomas Garbay (Tyndall National Institute, Ireland)

WristSense-P: Panel

3:50 pm – 5:00 pm Chair: **Nabil Alshurafa** (Northwestern University, USA)

- WSP. **How to Establish Objective Gold Standard Measurements for Health Constructs**

The 6th workshop on Context Systems Design, Evaluation and Optimization (CoSDEO)

Location: Edessa

CoSDEO-S1: Introduction

8:45 am – 9:00 am

Chair: **Stephan Sigg** (Aalto University, Finland)

CoSDEO-S2: Keynote

9:00 am – 10:00 pm

Chair: **Stephan Sigg** (Aalto University, Finland)

CSDK1. **Ubiquitous Security - Challenges and Opportunities for Usable Security in the Ubicomp Age.** Florian Alt (University of Munich, Germany)

CoSDEO-S3: Secure IoT

10:30 am – 11:30 pm

Chair: **Sascha Fahl** (Leibniz University of Hannover, Germany)

CSD1. **IoT Service Store: A Web-based System for Privacy-aware IoT Service Discovery and Interaction.** Hosub Lee (University of California, Irvine, USA); Richard Chow, Mohammad Haghghat and Heather Patterson (Intel, USA); Alfred Kobsa (University of California, Irvine, USA)

CSD2. **Secure IoT for a Pervasive Platform.** Stéphanie Chollet, Laurent Pion, Nicolas Barbot and Clément Michel (University Grenoble Alpes, Grenoble INP, LCIS, France)

CSD3. **Secure Context-based Pairing for Unprecedented Devices.** Le Nguyen Ngu Nguyen and Stephan Sigg (Aalto University, Finland)

CoSDEO-S4: Invited Talk

11:30 pm – 12:00 pm

Chair: **Jan Luehr** (AnderScore GmbH, Finland)

CSD4. **Device-Proximity Verification in the Presence of Active Adversaries: Room-Impulse-Response-based Approach.** Hien Truong (NEC Laboratories Europe, Germany)

CoSDEO-S5: Keynote

1:15 pm – 2:00 pm

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

CSDK2. **Achieving usable security in a project driven industry.** Jan Luehr (AnderScore GmbH, Finland)

CoSDEO-S6: Authentication

2:00 pm – 2:30 pm

Chair: **Florian Alt** (University of Munich, Germany)

- CSD5. **Wi-Access: Second Factor User Authentication leveraging WiFi Signals.** Syed Wajid Ali Shah (The University of New South Wales Australia, Australia); Salil S Kanhere (The University of New South Wales, Australia)
- CSD6. **User Authentication based on Personal Image Experiences.** Le Nguyen Ngu Nguyen and Stephan Sigg (Aalto University, Finland)

CoSDEO-S7: Invited Talk

- 2:30 pm – 3:00 pm Chair: **Petteri Nurmi** (Lancaster University, United Kingdom & University of Helsinki, Finland)

- CSD7. **Behavioral Biometrics: From Research Hypothesis to Product.** Dawud Gordon (TwoSense, Inc., USA)

CoSDEO-S8: Prototypes and Demonstrations

- 3:00 pm – 3:30 pm Chair: **Dominik Schürmann** (TU Braunschweig, Germany)

CoSDEO-S9: Tutorial

- 3:30 pm – 4:00 pm **Dominik Schürmann** (TU Braunschweig, Germany)

Workshop on Pervasive Sensing for Sustainable Smart Cities and Smart Buildings (PerSCB)

Location: Naousa

PerSCC-S1: Towards energy savings in cities through gamification

9:00 am – 10:00 am

- PSC1. **A Socio-Technical System Based on Gamification Towards Energy Savings.** Piero Fraternali (Dipartimento di Elettronica e Informazione, Via Ponzio, Italy); Francesca Cellina (Scuola Universitaria Professionale della Svizzera Italiana, Switzerland); Sergio Herrera (Politecnico di Milano, Italy); Stelios Krinidis (Information Technologies Institute, Greece); Chiara Pasini (Politecnico di Milano, Italy); Andrea Emilio Rizzoli (IDSIA USI/SUPSI, Switzerland); Cristina E.M. Rottondi (Dalle Molle Institute for Artificial Intelligence (IDSIA), Switzerland); Dimitrios Tzovaras (Information Technologies Institute, Greece)
- PSC2. **ChArGED: Implementing a framework for improving energy efficiency in public buildings through IoT-enabled energy disaggregation and serious games.** Nikos Dimitriou, Anastasia Garbi and Kostas Vasilakis (European Dynamics S.A., Belgium); Manolis Nikiforakis and Sarantis Kotsilitis (Plegma Labs S.A., Greece); Anthony Schoofs and Amr Taha (Wattics Ltd., Ireland); Fabian Pursche and Nikolay Deliyiski (Bosch Software Innovations GmbH, Germany); Dimosthenis Kotsopoulos, Thanasis G. Papaioannou and Cleopatra Bardaki (Athens University of Economics and Business, Greece)

PerSCC-S2: Novel applications and trends in smart cities

10:30 am – 12:00 pm

- PSC3. **Digitizing energy savings in sustainable smart cities: Introducing a virtual energy-currency approach.** Vangelis Marinakis, Christina Nikolopoulou and Haris Doukas (National Technical University of Athens, Greece)
- PSC4. **UDEPLOY: User-Driven Learning for Occupancy Sensors DEPLOYment In Smart Buildings.** Roufaida Laidi (CERIST Research Center & Ecole Nationale Supérieure d'Informatique, Algeria); Djamel Djenouri (CERIST Research Center, Algeria)
- PSC5. **Smart Grid: a demanding use case for 5G technologies.** Helen Leligou (TEI of Sterea Ellada, Greece)

PerSCC-S3: Analysis of Real-world Data in Smart City applications

1:15 pm – 3:00 pm

Chair: **Nabil Alshurafa** (Northwestern University, USA)

- PSC6. **Enhancing Community Detection for Big Sensor Data Clustering via Hyperbolic Network Embedding.** Vasileios A Karyotis and Konstantinos Tsitseklis (Institute of Communication and Computer Systems (ICCS) & National Technical University of Athens, Greece); Konstantinos Sotiropoulos and Symeon Papavassiliou (National Technical University of Athens, Greece)

- PSC7. **Managing nonuniformities and uncertainties in vehicle-oriented sensor data over next generation networks.** Dimitris Bitzas (University of Patras, Greece); Christos Tselios (University of Patras & Citrix Inc., Greece); Stavros Nousias (University of Patras, Greece); Olivier Orfila (IFSTTAR, France); Samantha Jamson (University of Leeds, United Kingdom); Pablo Mejuto (CTAG, Spain); Dimitrios Amaxilatis (University of Patras & Computer Technology Institute and Press, Greece); Orestis Akrivopoulos (Spark Works ITC LTD, United Kingdom); Ioannis Chatzigiannakis (Sapienza University of Rome, Italy); Aris S. Lalos and Konstantinos Moustakas (University of Patras, Greece)
- PSC8. **On Mining IoT Data for Evaluating the Operation of Public Educational Buildings.** Na Zhu (Sapienza University of rome, Italy); Aris Anagnostopolous and Ioannis Chatzigiannakis (Sapienza University of Rome, Italy)
- PSC9. **Evaluating Retailers in a Smart-buying Environment using Smart City Infrastructures.** Dimitrios Amaxilatis (University of Patras & Computer Technology Institute and Press, Greece); Kalliopi Giannakopoulou (Computer Technology Institute and Press Diophantus & University of Patras, Greece)

The 9th International Workshop on Information Quality and Quality of Service for Pervasive Computing (IQ2S'18)

Location: Vergina

IQ2S-Opening: Opening Remarks

1:15 pm – 1:20 pm

IQ2S-Keynote: Keynote

1:20 pm – 2:15 pm

IQSK. Information Quality of Vibration Energy Harvesters in Kinetic-Powered Wearable Healthcare. Mahbub Hassan, University of New South Wales, Australia

IQ2S-S1: IQ2S Session 1

2:15 pm – 3:00 pm

- IQS1. Efficient Scheduling of Multiple Data Transfers in Mobile Applications.** Giannis Tzouros and Vana Kalogeraki (Athens University of Economics and Business, Greece)
- IQS2. A Framework to Measure Reliance of Acoustic Latency on Smartphone Status.** Duc V. Le, Jacob Kamminga, Hans Scholten and Paul Havinga (University of Twente, The Netherlands)

IQ2S-S2: IQ2S Session 2

3:30 pm – 4:30 pm

- IQS3. Automatic Imputation of Missing Highway Traffic Volume Data.** Mohamed Elshenawy (University of Toronto, Canada); Mohamed El-Darieby (University of Regina, Canada); Baher Abdulhai (University of Toronto, Canada)
- IQS4. Personal Context Recognition via Reliable Human-Machine Collaboration.** Fausto Giunchiglia, Mattia Zeni and Enrico Bignotti (University of Trento, Italy)
- IQS5. Context-as-a-Service Platform Exchange and Share Context in an IoT Ecosystem.** Alireza Hassani (University of Monash, Australia); Alexey Medvedev (Monash University, Australia); Arkady Zaslavsky (CSIRO, Australia); Pari Delir Haghighi (Monash University, Australia); Prem Prakash Jayaraman (Swinburne University of Technology, Australia); Maria indrawan-Santiago and Sea Ling (Monash University, Australia)

IQ2S-Panel: Panel Discussion

4:30 pm – 5:30 pm

Workshop on Human-Centered Computational Sensing (HCCS'18)

Location: Vergina

HCCS-KN: Keynote address

8:35 am – 9:15 am

HCKN. **Technology for Child Independent Mobility: Parent Perspectives.** Christine Julien (University of Texas at Austin, USA)

HCCS-S1: Session 1

9:15 am – 10:00 am

- HC1. **Inattention-Management Middleware for Human-in-the-Loop Multi-Display Applications.** Max Nicosia and Per Ola Kristensson (University of Cambridge, United Kingdom)
- HC2. **Sensing Behaviors of Students in Online vs. Face-to-Face Lecturing Contexts.** Rebecca Medina (Rochester Institute of Technology, USA); Daniel Carpenter (Siena College, USA); Joe Geigel, Reynold Bailey, Linwei Wang and Cecilia Ovesdotter Alm (Rochester Institute of Technology, USA)
- HC3. **Designing Strategy for Resolving Maldistribution of Vehicles in One-Way Car-Sharing through Active Trip Request to Potential Users.** Kotone Senju, Teruhiro Mizumoto and Hirohiko Suwa (Nara Institute of Science and Technology, Japan); Yutaka Arakawa (Nara Institute of Science and Technology & NAIST, Japan); Keiichi Yasumoto (Nara Institute of Science and Technology, Japan)

HCCS-S2: Session 2

10:30 am – 11:15 am

- HC4. **Detecting Social Interactions through Commercial Mobile Devices.** Michele Girolami (CNR- ISTI, Italy); Fabio Mavilia (CNR-ISTI, Italy); Franca Delmastro and Emanuele Distefano (CNR-IIT, Italy)
- HC5. **From Novice to Expert Narratives of Dermatological Disease.** Nse Obot (University of Buffalo, USA); Laura O'Malley (Washington & Jefferson College, USA); Ifeoma Nwogu (Rochester Institute of Technology, USA); Qi Yu (RIT, USA); Wei Shi Shi and Xuan Guo (Rochester Institute of Technology, USA)
- HC6. **Towards an Affective Video Recommendation System.** Yancarlos Diaz, Cecilia Ovesdotter Alm, Ifeoma Nwogu and Reynold Bailey (Rochester Institute of Technology, USA)

HCCS-RT: Roundtable Discussion

11:15 am – 11:50 am

HCRT. **The Future of Human-Centered Computational Sensing**

International Workshop on Context-Awareness for Multi-Device Pervasive Computing (PerCrowd'18)

Location: Macedonia B

PerCrowd-Opening: Opening session

7:45 am – 8:00 am

PerCrowd-Keynote: Keynote Talk

8:00 am – 9:00 am

Chair: **Huber Flores** (University of Helsinki, Finland)

PCKN. **he Internet of People (IoP): A New Wave in Pervasive Mobile Computing.**
Andrea Passarella (IIT-CNR, Italy)

PerCrowd-S1: Context modeling and community formation

9:00 am – 10:00 am

Chair: **Petteri Nurmi** (Lancaster University, UK & University of Helsinki, Finland)

- PC1. **Towards collaborative multi-device computing.** Wenxiao Zhang (Hong Kong University of Science and Technology, Hong Kong); Huber Flores (University of Helsinki, Finland); Pan Hui (Hong Kong University of Science and Technology & University of Helsinki, Hong Kong)
- PC2. **Combining Crowdsourcing and Crowdsensing to Infer the Spatial Context.** Fausto Giunchiglia, Mattia Zeni and Enrico Bignotti (University of Trento, Italy)
- PC3. **Probability of Task Completion and Energy Consumption in Cooperative Pervasive Mobile Computing.** Duc V. Le (University of Twente, The Netherlands); Thuong C. Nguyen (Trusting Social Co., Australia); Hans Scholten and Paul Havinga (University of Twente, The Netherlands)
- PC4. **Pervasive Communities in the Internet of People.** Eemil Lagerspetz (University of Helsinki, Finland); Huber Flores (University of Helsinki, Finland); Niko Makitalo (University of Helsinki, Finland); Pan Hui (Hong Kong University of Science and Technology & University of Helsinki, Hong Kong); Petteri Nurmi (Lancaster University, United Kingdom & University of Helsinki, Finland); Sasu Tarkoma (University of Helsinki, Finland); Andrea Passarella (IIT-CNR, Italy); Joerg Ott (Technische Universität München, Germany); Peter Reichl (University of Vienna, Austria); Marco Conti (IIT-CNR, Italy); Markus Fiedler (Blekinge Institute of Technology, Sweden); Jatinder Singh (University of Cambridge, United Kingdom); Thorsten Strufe (TU Dresden, Germany); Tobias Hoßfeld (University of Duisburg-Essen, Germany); Anders Lindgren (Swedish Institute of Computer Science, Sweden); Daniele Quercia (Bell Labs Cambridge, United Kingdom)

PerCrowd-S2: Use cases for context awareness and decision making

10:30 am – 11:30 am

Chair: **Eemil Lagerspetz** (University of Helsinki, Finland)

- PC5. **Context-Awareness Mobile Devices for Traffic Incident Prevention.** Francesco Mercurio (Consiglio Nazionale delle Ricerche, Italy); Fabio Martinelli (CNR-IIT, Italy); Vittoria Nardone (University of Sannio, Italy); Antonella Santone (University of Molise, Italy); Albina Orlando (IAC-CNR, Italy)
- PC6. **Enhancing Veracity of IoT Generated Big Data in Decision Making.** Xiaoli Liu, Satu Tamminen, Xiang Su and Pekka Siirtola (University of Oulu, Finland); Juha Rönning (Oulu University Secure Programming Group, Finland); Jukka Riekkö (University of Oulu, Finland); Jussi Kiljander (VTT Technical Research Centre of Finland, Finland); Juha-Pekka Soininen (VTT Technical Research Centre, Finland)
- PC7. **A Context Aware Prototype Application for University Students and Lecturers.** Sabiha Nuzhat (Curtin University, United Arab Emirates); Salih Ismail and Talal Shaikh (Heriot Watt University, United Arab Emirates)
- PC8. **Context Aware Telco Churn Prediction Powered by Temporal Feature Engineering.** Ruirui Bai (Soochow University, P.R. China); Weixiong Rao (Tongji University, P.R. China); Mingxuan Yuan (Noah's Ark Lab, Huawei, Hong Kong); Jia Zeng (Noah's Ark Lab, Huawei & Soochow University, Hong Kong); Jianfeng Yan (Huawei Noah's Ark Lab, P.R. China)

PhD Forum training (internal workshop for PhD Forum authors only)

Location: Macedonia B

1:30 pm – 4:30 pm

Chair: **Amy L Murphy** (Fondazione Bruno Kessler, Italy)

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

Panel Discussion Organised by Networking Networking Women

Location: Macedonia B

17:30 pm – 19:00 pm

Organiser: **Shkurta Gashi** (USI, Switzerland)

Panel discussion:

Amy L. Murphy, Bruno Kessler Foundation, Italy

Christine Julien, The University of Texas at Austin, USA

Flora Salim, RMIT, Australia

Tuesday, March 20

Conference Opening

Macedonia Ballroom

8:40 am – 9:00 am Chairs: **Achilles Kameas** (Hellenic Open University, Greece)
George Roussos (Birkbeck College, University of London, UK)

Keynote Lecture

Macedonia Ballroom

9:00 am – 10:00 am Chair: **George Roussos** (Birkbeck College, University of London, UK)

K1. Towards a Secure Internet of Things, Philip Levis (Stanford, USA)

Coffee/Tea Break

Foyer

10:00 am – 10:30 am

Session 1 – Novel Interfaces

Macedonia Ballroom

10:30 am – 12:00 pm Chair: **Christine Julien** (University of Texas at Austin, USA)

- 1A1. **Talk2Me: A Framework for Device-to-Device Augmented Reality Social Network** Jiayu Shu (Hong Kong University of Science and Technology, Hong Kong); Sokol Kosta (Aalborg University Copenhagen & Sapienza University of Rome); Rui Zheng (Hong Kong University of Science and Technology, Hong Kong); Pan Hui (Hong Kong University of Science and Technology & University of Helsinki)
- 1A2. **Shake-n-Shack: Enabling Secure Data Exchange Between Smart Wearables via Handshakes.** Yiran Shen and Fengyuan Yang (Harbin Engineering University, P.R. China); Bowen Du (University of Warwick, United Kingdom); Weitao Xu and Chengwen Luo (Shenzhen University, P.R. China); Hongkai Wen (University of Warwick, United Kingdom)
- 1A3. **Converting Your Thoughts to Texts: Enabling Brain Typing via Deep Feature Learning of EEG Signals.** Xiang Zhang and Lina Yao (University of New South Wales, Australia); Quan Z. Sheng (Macquarie University, Australia); Salil S Kanhere (The University of New South Wales, Australia); Tao Gu (RMIT University, Australia); Dalin Zhang (University of New South Wales, Australia)

Lunch

Amalia Restaurant

12:00 pm – 1:00 pm

Session 2 – Crowd Prediction

Macedonia Ballroom

1:00 pm – 2:30 pm Chair: **Brent Lagesse** (University of Washington Bothell, USA)

- 2A1. **Crowd Counting Through Walls Using WiFi.** Saandeep Depatla (UCSB, USA); Yasamin Mostofi (University of California, Santa Barbara, USA)

- 2A2. **CrowdMeter: Congestion Level Estimation in Railway Stations Using Smartphones.** Moustafa Elhamshary (Egypt-Japan University for Science and Technology & School of Communication and Computer Science, Egypt); Moustafa Youssef (Egypt-Japan University of Science and Technology (EJUST), Egypt); Akira Uchiyama, Hirozumi Yamaguchi and Teruo Higashino (Osaka University, Japan)
- 2A3. **Modeling and Predicting Bike Demand in Large City Situations.** Dimitrios Tomaras, Ioannis Boutsis and Vana Kalogeraki (Athens University of Economics and Business, Greece)

Coffee/Tea Break

Foyer

2:30 pm – 3:00 pm

Session 3 – Enabling Technologies

Macedonia Ballroom

3:00 pm – 4:00 pm Chair: **Amy L Murphy** (Fondazione Bruno Kessler, Italy)

- 3A1. **HiddenCode: Hidden Acoustic Signal Capture with Vibration Energy Harvesting.** Guohao Lan (University of New South Wales & DATA61 CSIRO, Australia); Dong Ma and Mahbub Hassan (University of New South Wales, Australia); Wen Hu (the University of New South Wales (UNSW) & CSIRO, Australia)
- 3A2. **Spatial Interference Detection for Mobile Visible Light Communication.** Tristan Braud (The Hong Kong University of Science and Technology, France); Ali Guler (The Hong Kong University of Science and Technology, Hong Kong); Pan Hui (Hong Kong University of Science and Technology & University of Helsinki)

WiP, Demo and PhD Teaser Madness

Macedonia Ballroom

4:00 pm – 4:30 pm Chairs: **Klaus David** (University of Kassel, Germany), **Vana Kalogeraki** (Athens University of Economics and Business, Greece), **Salil S Kanhere** (The University of New South Wales, Australia), **Amy L Murphy** (Fondazione Bruno Kessler, Italy), **Jamie Payton** (Temple University, USA), **Delphine Reinhardt** (University of Göttingen, Germany)

PhD Forum Poster Session (parallel)

Macedonia Ballroom Foyer

4:40pm – 6:30 pm Chairs: **Vana Kalogeraki** (Athens University of Economics and Business, Greece)
Amy L Murphy (Fondazione Bruno Kessler, Italy)

- F1. **BehavMiner: Mining User Behaviors from Mobile Phone Data for Personalized Services.** Iqbal H. Sarker (Swinburne University of Technology, Australia)
- F2. **Enabling adaptive interactions to leverage interventions for people with mild cognitive impairments.** Nikolaos Liappas (Universidad Politécnica de Madrid & Life Supporting Technologies, Spain)
- F3. **Context-aware Human Intent Inference for Improving Human Machine Cooperation.** Xiang Zhang (University of New South Wales, Australia)

- F4. **Optimizing 360° Video Streaming to Head-Mounted Virtual Reality.** Ching-Ling Fan (National Tsing Hua University, Taiwan)
- F5. **Crowdsourcing techniques for smart urban mobility.** Dimitrios Tomaras (Athens University of Economics and Business, Greece)
- F6. **Self-Adaptive Middleware for Model-Based Network Adaptations.** Martin Pfannemueller (University of Mannheim, Germany)

Demo Session (parallel)

Macedonia Ballroom Foyer

4:40 pm – 6:30 pm

Chairs: **Salil S Kanhere** (The University of New South Wales, Australia)

Delphine Reinhardt (University of Göttingen, Germany)

- D1. **Demo of BANDANA - Body Area Network Device-to-device Authentication Using Natural gAit.** Le Nguyen Ngu Nguyen (Aalto University, Finland); Caglar Yuce Kaya, Arne Bruesch and Dominik Schürmann (TU Braunschweig, Germany); Stephan Sigg (Aalto University, Finland); Lars C Wolf (Technische Universität Braunschweig, Germany)
- D2. **Demo Abstract: Deep Learning on an Elastic Node for the Internet of Things.** Alwyn Burger and Gregor Schiele (University of Duisburg-Essen, Germany)
- D3. **ComFlux: An External Management Regime for Dynamically Creating Pervasive Applications.** Raluca Diaconu (University of Cambridge, United Kingdom); Jie Deng (Queen Mary University of London, United Kingdom); Jean Bacon and Jatinder Singh (University of Cambridge, United Kingdom)
- D4. **Real-Time Congestion Estimation in Sightseeing Spots with BLE Devices.** Kazuhito Umeki (NARA Institute of Science and Technology, Japan); Yugo Nakamura and Manato Fujimoto (Nara Institute of Science and Technology, Japan); Yutaka Arakawa (Nara Institute of Science and Technology & NAIST, Japan); Keiichi Yasumoto (Nara Institute of Science and Technology, Japan)
- D5. **Automated Hidden Sensor Detection in Sensor-Rich Spaces.** Brent Lagesse (University of Washington Bothell, USA); Kevin Wu and Jaynie Shorb (University of Washington, USA); Zealous Zhu (University of Washington Bothell, USA)
- D6. **iGuiding: A Mobile Campus Care and Guidance System Based on Internet of Things Technologies.** Lien-Wu Chen, Tsung-Ping Chen and Da-En Chen (Feng Chia University, Taiwan)
- D7. **BLE Beacon Based Patient Tracking in Smart Care Facilities.** Brad Kennedy (University of Guelph, Canada); Graham Taylor (University of Guelph & Vector Institute for Artificial Intelligence, Canada); Petros Spachos (University of Guelph, Canada)
- D8. **Enabling Crowd Sensing for Non-Experts.** Ajay Reddy Palleri Kesavan and Neil Prakasam (University of Washington, USA); Ambika Hegde (University of WashingtonBothell, USA); Brent Lagesse (University of Washington Bothell, USA)
- D9. **SAMD Apps: Install Once, Run Anywhere Instantly.** Jaehun Lee, Hochul Lee and Byoungjun Seo (Hanyang University, Korea); Min Kyung Chae and Young Choon Lee (Macquarie University, Australia); Hyuck Han (Dongduk Women's University, Korea); Sooyong Kang (Hanyang University, Korea)
- D10. **Demo: Talk2Me - A Framework for D2D Augmented Reality Social Network.**

Jiayu Shu (Hong Kong University of Science and Technology, Hong Kong); Sokol Kosta (Aalborg University Copenhagen & Sapienza University of Rome, Denmark); Rui Zheng (Hong Kong University of Science and Technology, Hong Kong); Pan Hui (Hong Kong University of Science and Technology & University of Helsinki)

Work-in-Progress Poster Session (parallel)

Macedonia Ballroom Foyer

4:40 pm – 6:30 pm

Chairs: **Klaus David** (University of Kassel, Germany)
Jamie Payton (Temple University, USA)

- W1. **Extracting Semantics of Indoor Places based on Context Recognition.** Georgios Pipelidis (TU München, Germany); Frederik Fraaz and Christian Prehofer (Technische Universität München, Germany)
- W2. **Trustworthy Sensing in an Untrusted IoT Environment.** Mamadou Diallo, Nisha Panwar, Sharad Mehrotra and Ardalan Amiri Sani (University of California, Irvine, USA)
- W3. **Pick Me Up and I Will Tell You Who You Are: Analyzing Pick-Up Motions to Authenticate Users.** Maximilian Häring (University of Bonn, Germany); Delphine Reinhardt (University of Göttingen, Germany); Yvonne Omlor (Fraunhofer FKIE, Germany)
- W4. **Accuracy of Multimodal Pedestrian Localisation in Different Terminal Contexts.** Janne Riihijärvi, Xiping Deng and Petri Mähönen (RWTH Aachen University, Germany)
- W5. **Preliminary Investigation of Position Independent Gesture Recognition Using Wi-Fi CSI.** Kazuya Ohara and Takuya Maekawa (Osaka University, Japan); Stephan Sigg (Aalto University, Finland); Moustafa Youssef (Egypt-Japan University of Science and Technology (EJUST), Egypt)
- W6. **Preliminary Investigation of Fine-grained Gesture Recognition with Signal Super-resolution.** Naoya Yoshimura and Takuya Maekawa (Osaka University, Japan); Daichi Amagata (Osaka University & Department of Multimedia Engineering Graduate School of Information Science and Technology, Japan); Takahiro Hara (Osaka University, Japan)
- W7. **Improving Motion-based Activity Recognition with Ego-centric Vision.** Alexander Diete, Timo Sztyler, Lydia Weiland and Heiner Stuckenschmidt (University of Mannheim, Germany)
- W8. **Discovery of Causal Relations in the Challenging Behaviour of People with Dementia.** Kristina Yordanova, Sebastian Bader, Sarah Weschke, Frank Krüger and Judith Henf (University of Rostock, Germany); Stefan Teipel (DZNE, Germany); Thomas Kirste (University of Rostock, Germany)
- W9. **Towards Comprehensive Explanations of Phenomena in Home Automation Systems.** Matthäus Wander and Viktor Matkovic (University of Duisburg-Essen, Germany); Torben Weis (Universität Duisburg-Essen, Germany); Michael Bischof and Lorenz Schwittmann (University of Duisburg-Essen, Germany)
- W10. **Preliminary Investigation of Detecting Events of Indoor Objects with Smartphone Active Sound Sensing.** Thilina Dissanayake and Takuya Maekawa (Osaka University, Japan); Daichi Amagata (Osaka University & Department of

Multimedia Engineering Graduate School of Information Science and Technology, Japan); Takahiro Hara (Osaka University, Japan)

- W11. **Scripting Over-The-Air: Towards Containers on Low-end Devices in the Internet of Things.** Emmanuel Baccelli (INRIA, France); Jörg Dörr (Fraunhofer-Institut für Experimentelles, Germany); Shinji Kikuchi (Fujitsu Laboratories Ltd., Japan); Francisco Acosta and Kaspar Schleiser (INRIA, France); Ian Thomas (Fujitsu, United Kingdom)

- W12. **Representation Learning for Sensor-based Device Pairing.** Le Nguyen Ngu Nguyen and Stephan Sigg (Aalto University, Finland); Ulf Kulau (Technische Universität Braunschweig, Germany)

Reception (parallel to PhD Posters/Demo/WiP)

Foyer

4:40 pm – 6:30 pm

Wednesday, March 21

Announcements

Macedonia Ballroom

8:50 am – 9:00 am

Keynote Lecture

Macedonia Ballroom

9:00 am – 10:00 am

Chair: **Achilles Kameas** (Hellenic Open University & Computer Technology Institute, Greece)

- K2. **High Capacity Wireless Networks through Collaboration and Intelligent Information Storage.** Leandros Tassioulas (Yale University, USA)

Coffee/Tea Break

Foyer

10:00 am – 10:30 am

Session 4 – Best Paper Nominees

Macedonia Ballroom

10:30 am – 12:00 am

Chair: **Gergely Zaruba** (University of Texas at Arlington, USA)

- 4A1. **SAMD: Fine-grained Application Sharing for Mobile Collaboration.** Jaehun Lee and Hochul Lee (Hanyang University, Korea); Young Choon Lee (Macquarie University, Australia); Hyuck Han (Dongduk Women's University, Korea); Sooyong Kang (Hanyang University, Korea)
- 4A2. **Hips Do Lie! A Position-Aware Mobile Fall Detection System.** Christian Krupitzer, Timo Sztyler, Janick Edinger, Martin Breitbach and Heiner Stuckenschmidt (University of Mannheim, Germany); Christian Becker (Universität Mannheim, Germany)
- 4A3. **DeepMag: Sniffing Mobile Apps in Magnetic Field through Deep Convolutional Neural Networks.** Rui Ning, Cong Wang, ChunSheng Xin, Jiang Li and Hongyi Wu (Old Dominion University, USA)

Lunch

Amalia Restaurant

12:00 am – 1:00 pm

Session 5 – Activity Recognition 1

Macedonia Ballroom

1:00 pm – 2:30 pm

Chair: **Flora D Salim** (RMIT University, Australia)

- 5A1. **Stratified Transfer Learning for Cross-domain Activity Recognition.** Jindong Wang (Chinese Academy of Sciences & Institute of Computing Technology, P.R. China); Yiqiang Chen, Lisha Hu and Xiaohui Peng (Institute of Computing Technology, Chinese Academy of Sciences, P.R. China); Philip Yu (University of Illinois at Chicago, USA)
- 5A2. **NECTAR: Knowledge-based Collaborative Active Learning for Activity Recognition.** Gabriele Civitarese and Claudio Bettini (University of Milan, Italy); Timo Sztyler (University of Mannheim, Germany); Daniele Riboni (University of Cagliari, Italy); Heiner Stuckenschmidt (University of Mannheim, Germany)
- 5A3. **SLearn: Shared learning human activity labels across multiple datasets.** Juan Ye (University of St Andrews, United Kingdom)

Coffee/Tea Break

Foyer

2:30 pm – 3:00 pm

Session 6 – Activity Recognition 2

Macedonia Ballroom

3:00 pm – 5:00 pm

Chair: **Petteri Nurmi** (Lancaster University, United Kingdom & University of Helsinki, Finland)

- 6A1. **RFree-ID: An Unobtrusive Human Identification System Irrespective of Walking Cofactors Using COTS RFID.** Qian Zhang, Dong Li, Run Zhao, Dong Wang, Yufeng Deng and Bo Chen (Shanghai Jiao Tong University, P.R. China)
- 6A2. **Regression-based, mistake-driven movement skill estimation in Nordic Walking using wearable inertial sensors.** Adrian Derungs (Universität Erlangen-Nürnberg & Universität Passau, Germany); Sebastian Soller, Andreas Weishäupl, Judith Bleuel and Gereon Berschin (Passau, Germany); Oliver Amft (University of Passau, Germany)
- 6A3. **FeSNOC: A Novel Feature Selection Algorithm Based on Niche Overlapping Coefficient.** Isabel F Hübener and Klaus David (University of Kassel, Germany)
- 6A4. **Activity Classification in Independent Living Environment with JINS MEME Eyewear.** Dillam Jossue Diaz Romero, Nicholas Yee, Christine Daum and Eleni Stroulia (University of Alberta, Canada); Lili Liu (University of Alberta & University of Alberta, Canada)
- 6A5. **Scaling Human Activity Recognition via Deep Learning-based Domain Adaptation.** Md Abdullah Al Hafiz Khan (University of Maryland, Baltimore County, USA); Nirmalya Roy (University of Maryland Baltimore County, USA); Archan Misra (Singapore Management University, Singapore)

Conference Banquet

Orizontes Restaurant

6:30 pm – 9:00 pm

Thursday, March 22

Session 7 – IoT and Urban Sensing

Macedonia Ballroom

8:30 am – 10:00 am

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

- 7A1. **Towards the Partitioning Problem in Software-Defined IoT Networks for Urban Sensing.** Chao Song (University of Electronic Science and Technology of China, P.R. China); Jie Wu (Temple University, USA); Xu Chen, Shi Lei and Ming Liu (University of Electronic Science and Technology of China, P.R. China)
- 7A2. **Distribution of Semantic Reasoning on the Edge of Internet of Things.** Xiang Su, Pingjiang Li, Jukka Riekkki and Xiaoli Liu (University of Oulu, Finland); Jussi Kiljander (VTT Technical Research Centre of Finland, Finland); Juha-Pekka Soininen (VTT Technical Research Centre, Finland); Christian Prehofer (Fortiss GmbH, Germany); Huber Flores (University of Helsinki, Finland); Yuhong Li (Beijing University of Posts and Telecommunications, P.R. China)
- 7A3. **A Platform Solution of Data-Quality Improvement for Internet-of-Vehicle Services.** Mingming Zhang (University of Illinois at Urbana-Champaign & Beihang University, USA); Tianyu Wo (Beihang University, P.R. China); Tao Xie (University of Illinois at Urbana-Champaign, USA)
- 7A4. **Sentio: Distributed Sensor Virtualization for Mobile Apps.** Hillol Debnath, Narain Gehani, Xiaoning Ding, Reza Curtmola and Cristian Borcea (New Jersey Institute of Technology, USA)

Coffee/Tea Break

Foyer

10:00 am – 10:30 am

Panel

Macedonia Ballroom

10:30 am – 12:00 pm

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

- Panelists: **Cristian Borcea** (New Jersey Institute of Technology, USA),
Amy L. Murphy (Fondazione Bruno Kessler, Italy),
Gregor Schiele (University of Duisburg-Essen, Germany),
Janick Edinger (University of Mannheim, Germany),
Guohao Lan (University of New South Wales, Australia)
Delphine Reinhardt (University of Göttingen, Germany)
Leandros Tassioulas (Yale University, USA)
Thanasis Poulakidas (INTRASOFT Intl., Luxembourg)

Lunch

Amalia Restaurant

12:00 pm – 1:00 pm

Session 8 – Middleware

Macedonia Ballroom

1:00 pm – 2:30 pm

Chair: **Gregor Schiele** (University of Duisburg-Essen, Germany)

- 8A1. **Sprinkler: a probabilistic dissemination protocol to provide fluid user interaction in multi-device ecosystem.** Adrien Luxey and Yérom-David Bromberg (Univ Rennes, Inria, CNRS, IRISA, France); Fabio Costa and Vinicius Lima (Universidade Federal de Goiás, Brazil); Ricardo Couto Antunes da Rocha (Federal University of Goiás, Brazil); Francois Taiani (University of Renne 1, France)
- 8A2. **The Right Service at the Right Place: A Service Model for Smart Cities.** Christian Cabrera (Trinity College Dublin, Ireland); Gary White (Distributed Systems Group, SCSS, Trinity College Dublin, Ireland); Andrei Palade (Distributed Systems Group, School of Computer Science and Statistics, Trinity College Dublin, Ireland); Siobhán Clarke (Trinity College Dublin, Ireland)
- 8A3. **IoTpredict: Collaborative QoS Prediction in IoT.** Gary White (Trinity College Dublin, Ireland); Andrei Palade (Distributed Systems Group, School of Computer Science and Statistics, Trinity College Dublin, Ireland); Christian Cabrera and Siobhán Clarke (Trinity College Dublin, Ireland)

Coffee/Tea Break

Foyer

2:30 pm – 3:00 pm

Session 9 – Positioning and Tracking

Macedonia Ballroom

3:00 pm – 5:00 pm

Chair: **Hirozumi Yamaguchi** (Osaka University, Japan)

- 9A1. **Smartphone-based Indoor Localization for Blind Navigation across Building Complexes.** Masayuki Murata (IBM Research - Tokyo, Japan); Dragan Ahmetovic (Carnegie Mellon University, USA); Daisuke Sato (IBM Research - Tokyo, Japan); Hironobu Takagi (IBM Research – Tokyo, Japan); Kris M Kitani (Carnegie Mellon University, USA); Chieko Asakawa (Carnegie Mellon University & IBM Research, USA)
- 9A2. **SOMBE: Self-Organizing Map for Unstructured and Non-Coordinated iBeacon Constellations.** Duc V. Le (University of Twente, The Netherlands); Wouter van Kleunen (Locus Positioning, The Netherlands); Thuong C. Nguyen (Trusting Social Co., Australia); Nirvana Meratnia and Paul Havinga (University of Twente, The Netherlands)
- 9A3. **Towards Large-Scale RFID Positioning: A Low-cost, High-precision Solution Based on Compressive Sensing.** Liqiong Chang (Northwest Unveristy, P.R. China); Xinyi Li and Ju Wang (Northwest University, P.R. China); Haining Meng (Institute of Computing Technology, Chinese Academy of Sciences, P.R. China); Xiaojiang Chen, Dingyi Fang and Zhanyong Tang (Northwest University, P.R. China); Zheng Wang (Lancaster University, United Kingdom)
- 9A4. **Bellrock: Anonymous Proximity Beacons From Personal Devices.** Augustin Zidek, Shyam A Tailor and Robert Harle (University of Cambridge, United Kingdom)

PerCom 2018 Town Hall Meeting

Macedonia Ballroom

5:00 pm – 5:30 pm

Chair: **Mohan J Kumar** (Rochester Institute of Technology, USA)

Friday, March 23, Post-conference Workshops

Morning coffee break: 10:00 am – 10:30 am

Macedonia Ballroom Foyer

Afternoon coffee break: 3:00 pm – 3:30 pm

Macedonia Ballroom Foyer

Lunch: 12:00 pm – 1:00 pm

Amalia Restaurant

Second International Workshop on Pervasive Smart Living Spaces (PerLS)

Location: Pella

PerLS Opening

8:50 am - 9:00 am

Chairs: **Andreas Jacobsson** (Malmö University, Sweden)

Mohan J Kumar (Rochester Institute of Technology, USA)

Delphine Reinhardt (University of Göttingen, Germany)

PerLS-S1

9:00 am - 10:00 am

Chair: **Andreas Jacobsson** (Malmö University, Sweden)

- PLS1. **Rubbinput: An Interaction Technique for Wet Environments Utilizing Squeak Sounds Caused by Finger-Rubbing.** Ryosuke Kawakatsu (Graduate School of Kyoto Sangyo University, Japan); Shigeyuki Hirai (Kyoto Sangyo University, Japan)
- PLS2. **Prototyping the Internet of Things with Web Technologies: Is It Easy.** Bo Peterson and Bahtijar Vogel (Malmö University, Sweden)

PerLS-S2

10:30 am – 11:30 am Chair: **Delphine Reinhardt** (University of Göttingen, Germany)

- PLS3. **An Investigation of Vulnerabilities in Smart Connected Cameras.** Joseph Bugeja (Malmö University, Sweden); Désirée Jönsson (ADB Safegate, Sweden); Andreas Jacobsson (Malmö University, Sweden)
- PLS4. **Enabling the Smart Home Through a Semantic-Based Context-Aware System.** Atieh Mahroo, Daniele Spoladore and Enrico Caldarola (National Research Council, Italy); Gianfranco Modoni (CNR-ITIA, Italy); Marco Sacco (National Research Council, Italy)

PerLS Keynote

11:30 am – 12:15 am Chair: **Mohan J Kumar** (Rochester Institute of Technology, USA)

Second International Workshop on Annotation of useR Data for Ubiquitous Systems (ARDUOUS)

Location: Mycenae

ARDUOUS-S1: Workshop introduction

9:00 am – 10:00 am

Chair: **Kristina Yordanova** (University of Rostock, Germany)

AR1. **Challenges in annotating user behaviour: results from ARDUOUS'17 and roadmap for ARDUOUS'18.** Kristina Yordanova and Adeline Paiement

ARDUOUS-S2: Short presentations

10:30 am – 12:00 pm

Chair: **Adeline Paiement** (Swansea University, UK)

- AR1. **Smart Annotation Tool for Multi-sensor Gait-based Daily Activity Data.** Christine Martindale (Friedrich Erlangen University Erlangen-Nürnberg, Germany); Nils Roth (University of Erlangen-Nuremberg, Germany); Julius Hannink (Friedrich Alexander University Erlangen Nuremberg, Germany); Sebastijan Sprager (University of Ljubljana, Germany); Bjoern M Eskofier (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany)
- AR2. **Collection of a Diverse, Realistic and Annotated Dataset for Wearable Activity Recognition.** Ian Cleland and Mark Donnelly (Ulster University, United Kingdom); Chris Nugent (University of Ulster, United Kingdom); Josef Hallberg (Luleå University of Technology, Sweden); Macarena Espinilla Estevez (University of Jaen, Spain); Matias Garcia-Constantino (Ulster University, United Kingdom)
- AR3. **Assessing annotation consistency in the wild.** Fausto Giunchiglia, Mattia Zeni, Enrico Bignotti and Wanyi Zhang (University of Trento, Italy)
- AR4. **Personalized Online Training for Physical Activity monitoring using weak labels.** Federico Cruciani and Ian Cleland (Ulster University, United Kingdom); Chris Nugent and Paul McCullagh (University of Ulster, United Kingdom); Kåre Synnes (Lulea University of Technology, Sweden); Josef Hallberg (Luleå University of Technology, Sweden)
- AR5. **Activities of Daily Living Ontology for Ubiquitous Systems.** Emma Tonkin and Przemyslaw Woznowski (University of Bristol, United Kingdom)
- AR6. **Providing Semantic Annotation for the CMU Grand Challenge Dataset.** Kristina Yordanova, Frank Krüger and Thomas Kirste (University of Rostock, Germany)

ARDUOUS-S3: Poster Session

1:15 pm – 2:15 pm

Chair: **Kristina Yordanova** (University of Rostock, Germany)

ARDUOUS-S4: Live Annotation Session

2:15 pm – 3:00 pm

Chair: **Adeline Paiement** (Swansea University, UK)

ARDUOUS-S5: Panel Discussion

3:30 pm – 4:45 pm Chair: **Kristina Yordanova** (University of Rostock, Germany)

ARDUOUS-S6: Closing words and workshop summary

4:45 pm – 5:00 pm Chair: **Adeline Paiement** (Swansea University, UK)

2nd International Workshop on emotion awareness for pervasive computing with mobile and wearable devices (EmotionAware)

Location: Macedonia A

EmotionAware OP nad KN1: Opening and Keynote Speaker 1

9:00 am - 10:00 am

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

EAK1. **Attention and Emotion-aware Computing Systems: The Realistic Approach Towards Real-World Deployment.** Tadashi Okoshi (Keio University, Japan)

EmotionAware S1: Session 1

10:30 am - 12:00 am

Chair: **Isabel F Hübener** (University of Kassel, Germany)

- EA1. **Towards Defining a Quality-Metric for Affective Feedback in an Intelligent Environment.** Deba Saha, Thomas L. Martin and Benjamin Knapp (Virginia Tech, USA)
- EA2. **Local emotions - using social media to understand human-environment interaction in cities.** Niklas Strengell (Aalto-university, Finland); Stephan Sigg (Aalto University, Finland)
- EA3. **Physiological Impact of Vibro-Acoustic Therapy on Stress and Emotions through Wearable Sensors.** Franca Delmastro and Flavio Di Martino (IIT-CNR, Italy); Cristina Dolciotti (University of Pisa, Italy)
- EA4. **Accuracy of three commercial automatic emotion recognition systems across different individuals and their facial expressions.** Damien Dupr  (Queen's University Belfast, United Kingdom); Nicole Anđelic and Gawain Morrison (Sensum, United Kingdom); Gary McKeown (Queen's University Belfast, United Kingdom)

EmotionAware KN2: Keynote Speaker 2

1:15 pm – 2:15 pm

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

EAK2. **Emotion Sensing at Your Wrist.** Bj rn W Schuller (Imperial College London, UK & University of Augsburg, Germany)

EmotionAware S2: Session 2

2:15 pm – 3:00 pm

Chair: **Chelsea Dobbins** (Liverpool John Moores University, UK)

- EA5. **Enabling remote assessment of cognitive behaviour through mobile experience sampling.** Jan Wohlfahrt-Laymann and Hermie Hermens (University of Twente, The Netherlands); Claudia Villalonga (Universidad Internacional de La Rioja, Spain); Miriam Vollenbroek-Hutten and Oresti Banos (University of Twente, The Netherlands)

- EA5b. **Emotion Recognition through Gait on Mobile Devices.** Mang Tik Chiu and Jiayu Shu (Hong Kong University of Science and Technology, Hong Kong); Pan Hui (Hong Kong University of Science and Technology & University of Helsinki, Hong Kong)

EmotionAware S3: Session 3

3:30 pm – 4:45 pm Chair: **Oresti Banos** (University of Twente, The Netherlands)

- EA6. **The impact of physical activities on the physiological response to emotions.** Judith Heinisch, Isabel F Hübener and Klaus David (University of Kassel, Germany)
- EA7. **Detecting Negative Emotions During Real-Life Driving via Dynamically Labelled Physiological Data.** Chelsea Dobbins and Stephen Fairclough (Liverpool John Moores University, United Kingdom)
- EA8. **Hyper-parameter Optimization for Emotion Detection using Physiological Signals.** Amani Albraikan, Diana Tob'ón and Abdulmotaleb El Saddik (University of Ottawa, Canada)

EmotionAware Closing: Discussion Session and closing

4:45 pm – 5:00 pm Chair: **Klaus David** (University of Kassel, Germany)

The Fifth International Workshop on Crowd Assisted Sensing, Pervasive Systems and Communications (CASPer)

Location: Edessa

CASPer-S1 Keynote

9:00 am - 10:00 am Chair: **Salil S Kanhere** (The Univ. of New South Wales, AU)

CAK. **Immersive Human-data Interaction with Mobile Augmented Reality.** Pan Hui, University of Helsinki and Hong Kong University of Science and Technology

CASPer-S2: Technical Session 1: Applications

10:30 am - 12:00 pm Chair: **Radu-Ioan Ciobanu** (University Politehnica of Bucharest, Romania)

- CA1. **CrODA-gator: An Open Access CrowdSourcing Platform as a Service.** Michalis Masallas, Andreas Konstantinidis, Achilleas Achilleos and Christos Markides (Frederick University); George Angelos Papadopoulos (University of Cyprus, Cyprus)
- CA2. **This Place is Swarming: Using a Mobile Social App to Study Human Traffic in Cities.** Hao Zhao, Qingyuan Gong, Yang Chen and Jingrong Chen (Fudan University, P.R. China); Yong Li (Tsinghua University, P.R. China); Xiaoming Fu (University of Goettingen, Germany)
- CA3. **Allergymap: A Hybrid mHealth Mobile Crowdsensing System for Allergic Diseases Epidemiology.** Pantelis Tzamalīs (Computer Technology Institute and University of Patras, Greece); Sotiris E. Nikolettseas (University of Patras and Computer Technology Institute, Greece); Nikos Papadopoulos (Allergy Dpt, 2nd Pediatric Clinic, University of Athens, Greece); Lampros Kalogiros (Dpt of Allergology and Clinical Immunology, General Military Hospital, Athens, Greece); Kostas Lagouvardos (National Observatory of Athens, Institute for Environmental Research, Greece)
- CA4. **ParkForU: A Dynamic Parking-Matching and Price-Regulator Crowdsourcing Algorithm for Mobile Applications.** Ellen Mitsopoulou and Vana Kalogeraki (Athens University of Economics and Business, Greece)

CASPer-S3: Technical Session 2: Algorithms, Incentives and Evaluations

1:15 pm – 2:45 pm Chair: **Vana Kalogeraki** (Athens University of Economics and Business, Greece)

CA5. **A Study of the Detection of Pedestrian Flow Using Bluetooth Low Energy.** Tomoya Kitazato and Masaki Ito (The University of Tokyo, Japan); Kaoru Sezaki (University of Tokyo, Japan)

- CA6. **Reaching Consensus in Opportunistic Networks.** Radu Dragan, Radu-Ioan Ciobanu and Ciprian Dobre (University Politehnica of Bucharest, Romania)
- CA7. **Introducing a flexible rewarding platform for mobile crowd-sensing applications.** Lorenz C Klopfenstein, Saverio Delpriori, Alessandro Aldini and Alessandro Bogliolo (University of Urbino, Italy)
- CA8. **Performance Evaluation of Mobile Crowdsensing for Event Detection.** Matthias Hirth and Stanislav Lange (University of Wuerzburg, Germany); Michael Seufert (University of Würzburg, Germany); Phuoc Tran-Gia (University of Wuerzburg, Germany)

The 3rd IEEE International Workshop on Pervasive Context-Aware Smart Cities and Intelligent Transport Systems (PerAwareCity)

Location: Naoussa

PerAwareCity-S1: Inauguration

8:50 am – 9:00 am

PerAwareCity-S2: Keynote Speech

9:00 am – 10:00 am

Chair: **Flora D Salim** (RMIT University, Australia)

PACK. **Experimenting with IoT in the urban space: the case of Trikala.** Leonidas Anthopoulos, TEI of Thessaly.

PerAwareCity-S3: Paper Session 1

10:30 am – 12:00 pm

Chair: **Vaskar Raychoudhury** (Miami University of Ohio, USA)

- PAC1. **Billing Models for Public Displays in Smart Cities.** Jens Naber and Dominik Schäfer (University of Mannheim, Germany); Christian Becker (Universität Mannheim, Germany)
- PAC2. **A Road Condition Service based on a collaborative mobile sensing approach.** João Soares (Universidade do Minho, Portugal); Nuno Silva (University of Minho & Centre Algoritmi, Portugal); Vaibhav Shah (University of Minho, Portugal); Helena Rodrigues (Universidade do Minho, Portugal)
- PAC3. **CoAcT: A Framework for Context-Aware Trip Planning Using Active Transport.** Mohammad Saiedur Rahaman, Margaret Hamilton and Flora D Salim (RMIT University, Australia)

PerAwareCity-S4: Paper Session 2

1:30 pm – 2:30 pm

Chair: **Flora D Salim** (RMIT University, Australia)

- PAC4. **Underpinning IoT for Road Traffic Noise Management in Smart Cities.** Aqeel H. Kazmi (Insight Centre for Data Analytics, National University of Ireland Galway, Ireland); Elias Z. Tragos (NUI Galway and FORTH, Ireland); Martin Serrano (National University of Ireland Galway - NUIG & Insight Centre for Data Analytics (DERI - Digital Enterprise Research Institute), Ireland)
- PAC5. **Real Time Building and Maintaining Causal Congestion Graph for Intelligent Traffic Management.** Vaskar Raychoudhury (Miami University of Ohio, USA); Divya Saxena and Sandeep Kumar (IIT Roorkee, India)

PerAwareCity-S5: Discussion and Closing Remarks

2:30 pm – 2:45 pm

Workshop on Advanced Technologies for Smarter Assisted Living solutions: Towards an open Smart Home infrastructure (SmarterAAL)

Location: Vergina

SmarterAAL-S1: Keynote Talk

9:00 am – 10:00 am

SAALK. **Smart home technologies for AAL - a survey through time.** Mary Panou, Research Director, Centre for Research and Technology - Hellenic Institute of Transport (CERTH-HIT).

SmarterAAL-S2: Presentation of accepted papers

10:30 am – 12:00 pm

- SAAL1. **Towards Cognitive Assisted Living 3.0.** Claudia Steinberger (Alpen-Adria-Universität Klagenfurt & Applied Informatics / Information Systems, Austria); Judith Michael (Alpen-Adria-Universität Klagenfurt, Austria)
- SAAL2. **Low-Cost Automatic Ambient Assisted Living System.** Hossein Malekmohamadi, Armaghan Moemeni, Ahmet Orun and Jayendra Kumar Purohit (De Montfort University, United Kingdom)
- SAAL3. **Multi-Resident Activity Monitoring in Smart Homes: A Case Study.** Son Tran (CSIRO, Australia); Qing Zhang and Mohanraj Karunanithi (CSIRO ICT Centre, Australia); Vanessa Smallbon (CSIRO, Australia)
- SAAL4. **Energy-based decision engine for household human activity recognition.** Anastasios Vafeiadis (CERTH, Greece); Thanasis Vafeiadis (Center for Research & Technology Hellas (CERTH), Greece); Stylianos Zikos (CERTH, Greece); Stelios Krinidis (Information Technologies Institute, Greece); Konstantinos Votis (Information Technologies Institute, Centre For Research and Technology Hellas, Greece); Dimitris Giakoumis (CERTH-ITI, Greece); Dimosthenis Ioannidis and Dimitrios Tzovaras (Information Technologies Institute, Greece); Liming Luke Chen (De Montfort University, United Kingdom); Raouf Hamzaoui (De Montfort University & Faculty of Technology, United Kingdom)
- SAAL5. **A Deep Learning approach for Privacy Preservation in Assisted Living.** Ismini Psychoula (De Montfort University, United Kingdom); Erinc Merdivan and Deepika Singh (Austrian Institute of Technology, Austria); Liming Luke Chen (De Montfort University, United Kingdom); Feng Chen (De Montfort University, P.R. China); Sten Hanke (Austrian Institute of Technology GmbH, Austria); Johannes Kropf (AIT Austrian Institute of Technology, Austria); Andreas Holzinger (Medical University Graz, Austria); Matthieu Geist (Université de Lorraine, France)

SmarterAAL-S3: Panel Discussion

1:15 pm – 2:00 pm

SmarterAAL-S4: Presentation of accepted papers

2:00 pm – 3:00 pm

- SAAL6. **Towards Self-management of Chronic Diseases in Smart homes.** Jose Terius (Universidad Politecnica de Madrid & Life Supporting Technologies, Spain); Georgios Kapidis (Noldus, The Netherlands); Sarah Fallmann (De Montfort University, United Kingdom); Erinc Merdivan (Austrian Institute of Technology, Austria); Sten Hanke (Austrian Institute of Technology GmbH, Austria); Rebeca Isabel García-Betances (Universidad Politécnica de Madrid, Spain); Maria Fernanda Cabrera-Umpierrez (Life Supporting Technologies; Technical University of Madrid, Spain)
- SAAL7. **A Conceptual framework for Adaptive User Interfaces for older adults.** Eduardo Machado (Ingeniería y Soluciones Informáticas, S. L., Spain & De Montfort University, United Kingdom); Deepika Singh (Austrian Institute of Technology, Austria); Federico Cruciani (Ulster University, United Kingdom); Liming Luke Chen (De Montfort University, United Kingdom); Sten Hanke (Austrian Institute of Technology GmbH, Austria); Johannes Kropf (AIT Austrian Institute of Technology, Austria); Andreas Holzinger (Medical University Graz, Austria); Fernando Salvago (Ingeniería y Soluciones Informática, Spain)
- SAAL8. **BLE Beacon-based Activity Monitoring System toward Automatic Generation of Daily Report.** Tatsuya Morita, Kenta Taki, Manato Fujimoto and Hirohiko Suwa (Nara Institute of Science and Technology, Japan); Yutaka Arakawa (Nara Institute of Science and Technology & NAIST, Japan); Keiichi Yasumoto (Nara Institute of Science and Technology, Japan)

SmarterAAL-S5: Presentation of accepted papers

3:30 pm – 5:00 pm Chair: **Rebeca Isabel García-Betances** (Universidad Politécnica de Madrid, Spain)

- SAAL9. **Modelling Activities of Daily Living with Petri nets.** Matias Garcia-Constantino (University of Ulster, United Kingdom); Alexandros Konios (Coventry University, United Kingdom); Chris Nugent (University of Ulster, United Kingdom)
- SAAL10. **A Privacy-Preserving Wearable Camera Setup for Dietary Event Spotting in Free-Living.** Giovanni Schiboni (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany); Fabio Wasner and Oliver Amft (University of Passau, Germany)
- SAAL11. **Where Am I? Comparing CNN and LSTM for Location Classification in Egocentric Videos.** Georgios Kapidis (Noldus Information Technology, The Netherlands); Ronald Poppe (Utrecht University, The Netherlands); Elsbeth van Dam and Lucas Noldus (Noldus Information Technology, The Netherlands); Remco Veltkamp (Utrecht University, The Netherlands)
- SAAL12. **Studying the technological barriers and needs of people with dementia: A quantitative study.** Nikolaos Liappas (Universidad Politécnica de Madrid & Life Supporting Technologies, Spain); Rebeca Isabel García-Betances (Universidad Politécnica de Madrid, Spain); Jose Terius (Universidad Politecnica de Madrid &

Life Supporting Technologies, Spain); Maria Fernanda Cabrera-Umpierrez (Life Supporting Technologies; Technical University of Madrid, Spain)

SAAL13. **Towards Socially Assistive Robots for Elderly: An End-to-end Object Search Framework.** Mohammad Reza Loghmani and Timothy Patten (Technische Universität Wien, Austria); Markus Vincze (Vienna University of Technology, Austria)

Second International Workshop on Smart Edge Computing and Networking (SmartEdge)

Location: Kozani

SmartEdge-Opening: Opening Remarks

8:45 am - 9:00 am

SmartEdge-S1: Edge Communication/Infrastructure

9:00 am - 10:00 am Chair: **Tamer Nadeem** (Virginia Commonwealth University, USA)

- SME1. **Edge-enabled Distributed Network Measurement.** Cody Bumgardner, Caylin Hickey and Victor Marek (University of Kentucky, USA)
- SME2. **Leveraging Neighboring Cooperative Devices for Mobile Storage Offloading.** Ali Elgazar (Carnegie Mellon University, Qatar); Khaled A. Harras (Carnegie Mellon University, USA); Mohammad Aazam (Carnegie Mellon University, Qatar)

SmartEdge-S2: Edge Resource Management

10:30 am – 12:00 am Chair: **Theodoros Salonidis** (IBM Research, USA)

- SME3. **Hybrid Task Scheduling for Mobile Devices in Edge and Cloud Environments.** Dominik Schäfer, Janick Edinger, Jens Eckrich and Martin Breitbart (University of Mannheim, Germany); Christian Becker (Universität Mannheim, Germany)
- SME4. **Where to Process: Deadline-aware Online Resource Auction in Mobile Edge Computing.** Chongyu Zhou and Chen-Khong Tham (National University of Singapore, Singapore)
- SME5. **A Load Balancing Algorithm for Resource Allocation in IEEE 802.15.4e Networks.** Katina Kralevska (Norwegian University of Science and Technology, Norway); Dimitrios J. Vergados (National Technical University of Athens, Greece); Yuming Jiang (Norwegian University of Science and Technology (NTNU), Norway); Angelos Michalas (Technological Education Institute of Western Macedonia, Greece)

SmartEdge Keynote

13:15 pm – 14:45 pm

- SMEK. **Symbiotic Edge-based Operation of Pervasive & IoT Platforms.** Archan Misra (School of Information Systems, Singapore Management University)

SmartEdge-S3: Edge Applications

15:15 pm – 16:45 pm

Chair: **Glenn Ricart** (US Ignite, USA)

- SME6. **Automatic Model Construction for Activity Recognition Using Wearable Devices.** Yuanyuan Bao (China Mobile Research Institute, P.R. China); Wai Chen (China Mobile Research, P.R. China)

- SME7. **The Conjunction of Fog Computing and the Industrial Internet of Things - An Applied Approach.** Andreas Seitz, Dominik Buchinger and Bernd Bruegge (Technische Universität München, Germany)
- SME8. **Implementing Deep Learning and Inferencing on Fog and Edge Computing Systems.** Swarnava Dey (Tata Consultancy Service Limited, India); Arijit Mukherjee (Tata Consultancy Services, India)

SmartEdge-Close: SmartEdge Closing Remarks

16:45 pm – 17:00 pm

International Workshop on Pervasive Flow of Things (PerFoT)

Location: Macedonia B

Keynote Talk

9:00 am – 10:00 am

Chair: **Hirozumi Yamaguchi** (Osaka University, Japan)

FOTK. **Real-Time Reliable Internet of Things.** Vana Kalogeraki (Athens University of Economics and Business, Greece)

PerFoT-S1: Edge Computing Based Systems

10:30 am – 11:45 am

Chair: **Philippe Lalanda** (Grenoble University, France)

- FOT1. **Edge-centric Video Surveillance System Based on Event-driven Rate Adaptation for 24-hour Monitoring.** Airi Sakaushi, Kenji Kanai and Jiro Katto (Waseda University, Japan); Toshitaka Tsuda (Waseda University & Formerly Fujitsu, Japan)
- FOT2. **A Edge-Focused Model for Distributed Streaming Data Applications.** Cody Bumgardner, Victor Marek and Caylin Hickey (University of Kentucky, USA)
- FOT3. **Self-adaptive Resource Allocation for Continuous Task Offloading in Pervasive Computing.** Sunyanan Choochootkaew, Hirozumi Yamaguchi and Teruo Higashino (Osaka University, Japan); Dominik Schäfer and Janick Edinger (University of Mannheim, Germany); Christian Becker (Universität Mannheim, Germany)

PerFoT-S2: Machine Learning and Stream Processing

1:20 pm – 3:00 pm

Chair: **Keiichi Yasumoto** (Nara Institute of Science and Technology, Japan)

- FOT4. **Development of Energy-efficient Sensor Networks by Minimizing Sensors Numbers with a Machine Learning Model.** Zhishu Shen, Kenji Yokota and Atsushi Tagami (KDDI Research, Inc., Japan); Teruo Higashino (Osaka University, Japan)
- FOT5. **Random Forest Based Bus Operation States Classification Using Vehicle Sensor Data.** Takuya Yonezawa and Ismail Arai (Nara Institute of Science and Technology, Japan); Toyokazu Akiyama (Kyoto Sangyo University, Japan); Kazutoshi Fujikawa (Nara Institute of Science and Technology, Japan)
- FOT6. **Smartphone Application Usage Prediction Using Cellular Network Traffic.** Naoto Mizumura and Kizito Nkurikiyeyezu (Aoyama Gakuin University, Japan); Hiroki Ishizuka (KDDI Research Inc, Japan); Guillaume Lopez and Yoshito Tobe (Aoyama Gakuin University, Japan)
- FOT7. **Implementing Personalized Web News Delivery Service Using Tales of Familiar Framework.** Kentaro Noda, Yoshihiro Wada, Sachio Saiki and Masahide Nakamura (Kobe University, Japan); Kiyoshi Yasuda (Chiba Rosai Hospital, Japan)

PerFoT-S3: Pervasive Systems Integration

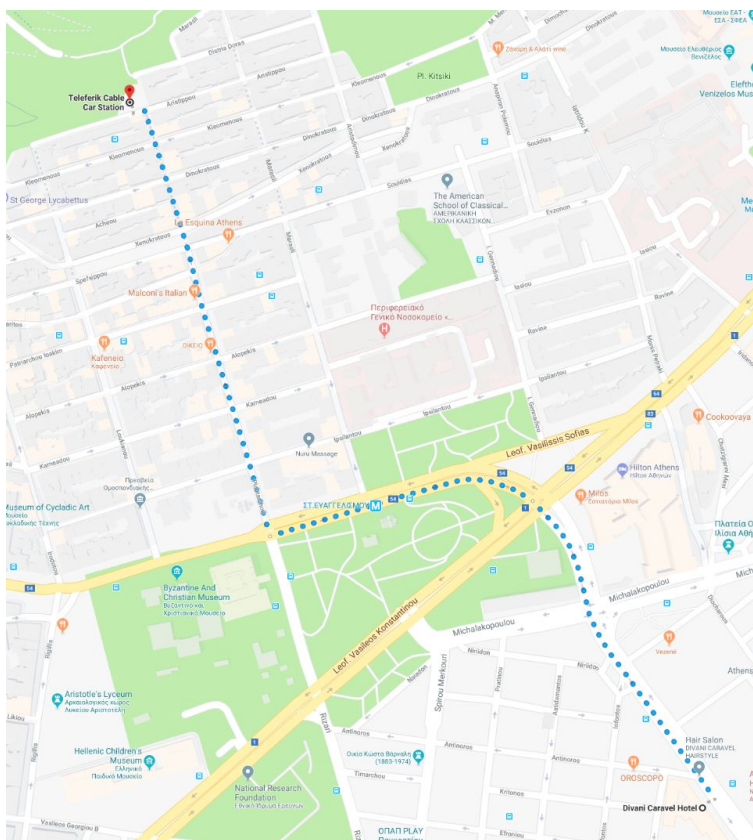
3:30 pm – 5:10 pm

Chair: **Christian Becker** (Universität Mannheim, Germany)

- FOT8. **An Interoperable Notification Service for Pervasive Computing.** Felix M Roth and Martin Pfannemueller (University of Mannheim, Germany); Christian Becker (Universität Mannheim, Germany); Philippe Lalanda (Grenoble University, France)
- FOT9. **Understanding Service Integration of Online Social Networks: A Data-Driven Study.** Fei Li, Yang Chen and Rong Xie (Fudan University, P.R. China); Fehmi Ben Abdesslem and Anders Lindgren (Swedish Institute of Computer Science, Sweden)
- FOT10. **Activity-Tracking Service for Building Operating Systems.** Jakob Hviid and Mikkel Kjaergaard (University of Southern Denmark, Denmark)
- FOT11. **BluMoon: Bluetooth Low Energy Emulation System with Software-Implemented Controller.** Tsubasa Yumura, Kunio Akashi and Tomoya Inoue (National Institute of Information and Communications Technology, Japan)

Directions to Orizotes Restaurant

The conference lycabnet will take place at the Orizotes restaurant located at the top of Lycabettus Hill. Access to the restaurant is via the Teleferik Cable Car as shown below.



Divani Caravel Hotel

Leof. Vasileos Alexandrou 2, Athina 161 21, Greece

- ↑ 1. Walk north-west on Leof. Vasileos Alexandrou towards Antinoros
- ↑ 2. Continue onto Leof. Vasilissis Sofias/E054/E083
- ↪ 3. Turn right onto Ploutarchou
 - 📍 Take the stairs
 - 📍 Destination will be on the right

Teleferik Cable Car Station

Anstippou 1, Athina 106 76, Greece

