PERIOT 2020
THE FOURTH INTERNATIONAL WORKSHOP ON MOBILE AND PERVASIVE INTERNET OF THINGS

MARCH 27, 2020, AUSTIN, TEXAS, USA

Friday, March 27 8:45 - 9:00

Session 1: Introduction and Opening Remarks

Chair: Farzana Rahman (Syracuse University)

Friday, March 27 9:00 - 10:00

Session 2: Keynote Talk (**Chair:** Farzana Rahman, Syracuse University)

- **Keynote**: A Cross-Domain Machine Learning Framework for Pervasive Sensing by **Nirmalya Roy** (University of Maryland Baltimore County, USA)

Friday, March 27 10:30 - 12:00

Session 3: IoT Systems (**Chair:** Mohammad Arif Ul Alam, UMass Lowell)

1. A Framework for Transit Monitoring System Using IoT Technology: Two Case Studies. (Samy S. El-Tawab (James Madison University, USA); Ismail Arai (James Madison Univ, USA); Ahmad Salman (James Madison University, USA); B. Brian Park (University of Virginia, USA))

2. A NAS Integrated File System for On-site IoT Data Storage. (Okamoto Yuki (Graduate School of Information Science and Technology, Japan); Kenichi Arai and Toru Kobayashi (Nagasaki University, Japan); Shunsuke Saruwatari and Takashi Watanabe (Osaka University, Japan))

3. Towards Longevity of Smart Home Systems. Peter Zdankin, Marian Waltereit and Viktor Matkovic (University of Duisburg-Essen, Germany); Torben Weis (Universität Duisburg-Essen, Germany)

Friday, March 27 1:30 - 3:00

Session 4: IoT Implementation (**Chair:** Ahmad Salman, James Madison University)

1. Towards Optimal Kinetic Energy Harvesting for the Batteryless IoT. Muhammad Moid Sandhu (The University of Queensland, Australia); Kai Geissdoerfer (Technische Universität Dresden, Germany); Sara Khalifa (Data61, CSIRO, Australia); Raja Jurdak (Queensland University of Technology & CSIRO, Australia); Marius Portmann (University of Queensland, Australia); Branislav Kusy (Commonwealth Scientific and Industrial Research Organisation (CSIRO) ICT Centre, Australia)

2. Machine Vision Smart Parking Using Internet of Things (IoTs) In A Smart University. Mohammad Almalag, Noah Sieck and Cameron Calpin (Christopher Newport University, USA)

3. LoRange - Studying Longest LoRa Coverage Using IoT and Vessels in Aquatic Sensing. Miguel Ribeiro (Madeira-ITI, University of Madeira, Portugal); Marko Radeta (ITI/LARSYS, University of Madeira, Tigerwhale, Portugal); Dinarte Vasconcelos (M-ITI, Portugal); Hildegardo Noronha and Nuno Nunes (ITI/LARSYS, Técnico - ULisbon, Portugal)

Friday, March 27 3:30 - 5:00

Session 5: IoT Applications (**Chair:** Farzana Rahman, Syracuse University)

1. An Embedded CNN Implementation for On-Device ECG Analysis. Alwyn Burger, Chao Qian and Gregor Schiele (University of Duisburg-Essen, Germany); Domenik Helms (OFFIS Institute, Germany).

2. Panel: Evolving IoT Tech Enables Aging in Place. Mohammad Alam (University of Massachusetts Lowell, USA & Cognitive Ubiquitous Computing and Systems, unknown); Nabil Alshurafa (Northwestern University, USA); Ahmad Salman (James Madison University, USA); Abhishek Mukherji (Accenture Inc. & Worcester Polytechnic Institute, USA); Hironobu Takagi (IBM Research – Tokyo, Japan)