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Technical Program

Tuesday, March 12

Tuesday, March 12 9:00 - 10:00

Keynote 1

Chair: Christian Becker (Universität Stuttgart, Germany) Keynote: The sound of health and fitness sensing Cecilia Mascolo (University of Cambridge, United Kingdom (Great Britain))

Tuesday, March 12 10:30 - 12:00

S1: Learning on Resource Constrained Devices

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

UR2M: Uncertainty and Resource-Aware Event Detection on Microcontrollers 1 Hong Jia and Young D. Kwon (University of Cambridge, United Kingdom (Great Britain)); Dong Ma (Singapore Management University, Singapore); Nhat Pham (Cardiff University, United Kingdom (Great Britain)); Lorena Qendro (Nokia Bell Labs, United Kingdom (Great Britain)); Tam Vu (University of Colorado Boulder, USA); Cecilia Mascolo (University of Cambridge, United Kingdom (Great Britain))

SAWEC: Sensing-Assisted Wireless Edge Computing N/A Khandaker Foysal Haque (Northeastern University, USA); Francesca Meneghello (University of Padova, Italy); Md Ebtidaul Karim and Francesco Restuccia (Northeastern University, USA)

Leveraging On-board UAV Motion Estimation for Lightweight Macroscopic Crowd Identification Khizar Anjum (Rutgers University, USA); Tahmeed S Chowdhury (Rutgers University, New Brunswick & JP Morgan Chase, USA); Sreeram Mandava, Benedetto Piccoli and Dario Pompili (Rutgers University, USA)

End-to-End Multi-Modal Tiny-CNN for Cardiovascular Monitoring on Sensor Patches 18 Mustafa Fuad Rifet Ibrahim (Hamburg University of Applied Sciences & Hamburg University of Technology & NXP Semiconductors, Germany); Tunc Alkanat and Maurice Meijer (NXP Semiconductors, The Netherlands); Alexander Schlaefer (Hamburg University of Technology, Germany); Peer Stelldinger (Hamburg University of Applied Sciences, Germany)

Tuesday, March 12 1:30 - 3:00

S2: Innovations in Middleware and Networking

Chair: Carlo Vallati (University of Pisa, Italy) Co-zyBench: Using Co-Simulation and Digital Twins to Benchmark Thermal Comfort Provision 25 in Smart Buildings

Jun Ma and Dimitrije Panic (Telecom SudParis, France); Roberto Yus (University of Maryland,

Baltimore County, USA); Georgios Bouloukakis (Telecom SudParis, France)

Adopting User-Space Networking for DDS Message-Oriented Middleware 36 Vincent Bode (Technical University of Munich, Germany); David Buettner and Tobias Preclik (Siemens AG, Germany); Carsten Trinitis (TU Müncheng, Germany); Martin Schulz (Technical University of Munich, Germany)

Furcifer: a Context Adaptive Middleware for Real-world Object Detection exploiting Local, Edge, 47 and Split Computing in the Cloud Continuum

Matteo Mendula and Paolo Bellavista (University of Bologna, Italy); Marco Levorato and Sharon Ladron de Guevara Contreras (University of California, Irvine, USA)

Tuesday, March 12 3:00 - 3:30

Teaser Madness 1

Chairs: Qin Lv (University of Colorado Boulder, USA), François Portet (Université Grenoble Alpes, France)

Tuesday, March 12 3:30 - 6:30

Welcome Reception - Phd Poster & Demos

Chairs: Qin Lv (University of Colorado Boulder, USA), François Portet (Université Grenoble Alpes, France)

Wednesday, March 13

Wednesday, March 13 9:00 - 10:00

Keynote 2

Chair: Sajal K. Das (Missouri University of Science and Technology, USA) Keynote: Climate Smart Computing: A Perspective Shashi Shekhar (UMN, USA)

Wednesday, March 13 10:30 - 12:00

S3: Best Paper Candidates

Chair: Chiara Boldrini (IIT-CNR, Italy)

Practical Latency-aware Scheduling for Low-latency Elephant VR Flows in Wi-Fi Networks
 Shao-Jung Lu and Wei-Xun Chen (National Chiao Tung University, Taiwan); Yu-Shao Su (National Yang Ming Chiao Tune University, Taiwan); Yu-Shuo Chang (National Chiao Tung University, Taiwan); Yao-Wen Liu and Chi-Yu Li (National Yang Ming Chiao Tung University, Taiwan); Guan-Hua Tu (Michigan State University, USA)

DiTMoS: Delving into Diverse Tiny-Model Selection on Microcontrollers 69

Xiao Ma, Shengfeng He, Hezhe Qiao and Dong Ma (Singapore Management University, Singapore)

Stitching Satellites to the Edge: Pervasive and Efficient Federated LEO Satellite Learning 80 Mohamed Elmahallawy and Tony T. Luo (Missouri University of Science and Technology, USA)

Wednesday, March 13 1:30 - 3:00

S4: Smart Environments

Chair: Gabriele Civitarese (University of Milan, Italy)

OpenPack: A Large-scale Dataset for Recognizing Packaging Works in IoT-enabled Logistic 90 **Environments**

Naoya Yoshimura, Jaime Morales, Takuya Maekawa and Takahiro Hara (Osaka University, Japan)

Semi-Automated Framework for Digitalizing Multi-Product Warehouses with Large Scale 98 Camera Arrays

Keisuke Higashiura, Kodai Yokoyama, Yusuke Asai, Hironori Shimosato, Kazuma Kano, Shin Katayama, Kenta Urano, Takuro Yonezawa and Nobuo Kawaguchi (Nagoya University, Japan)

SmartEx: A Framework for Generating User-Centric Explanations in Smart Environments 106 Mersedeh Sadeghi, Lars Herbold, Max Unterbusch and Andreas Vogelsang (University of Cologne, Germany)

Is Your Kettle Smarter Than a Hacker? A Scalable Tool for Assessing Replay Attack 114 Vulnerabilities on Consumer IoT Devices

Sara Lazzaro (University Mediterranea of Reggio Calabria, Italy); Vincenzo De Angelis (University of Calabria, Italy); Anna Maria Mandalari (University College London, United Kingdom (Great Britain)); Francesco Buccafurri (University Mediterranea of Reggio Calabria, Italy)

Wednesday, March 13 3:00 - 3:30

Teaser Madness 2

Chair: Hirozumi Yamaguchi (Osaka University, Japan)

Wednesday, March 13 3:30 - 5:00

Coffee break and WIP posters

Chair: Hirozumi Yamaguchi (Osaka University, Japan)

Wednesday, March 13 5:00 - 6:10

S5: Spatial Analysis and Risk Prediction

Chair: Daniela Nicklas (University of Bamberg & Faculty Information Systems and Applied Computer

Science, Germany)

AnchorLoc: Large-scale, Real-Time Visual Localisation through Anchor Extraction and Detection 125
 Chun Ho Park (HKUST, Hong Kong); Ahmad Alhilal (Hong Kong University of Science and Technology, Hong Kong); Tristan Braud (The Hong Kong University of Science and Technology, Hong Kong); Pan Hui (Hong Kong University of Science and Technology & University of Helsinki, Hong Kong)

Early Detection of Driving Maneuvers for Proactive Congestion Prevention135Debasree Das (Indian Institute of Technology Kharagpur, India); Shameek Bhattacharjee (Western
Michigan University, USA); Sandip Chakraborty and Bivas Mitra (Indian Institute of Technology
Kharagpur, India); Sajal K. Das (Missouri University of Science and Technology, USA)

Decentralized Landslide Disaster Prediction for Imbalanced and Distributed Data 143 Ren Ozeki, Haruki Yonekura, Hamada Rizk and Hirozumi Yamaguchi (Osaka University, Japan)

Thursday, March 14

Thursday, March 14 8:30 - 10:00

Panel

Chair: Daniela Nicklas (University of Bamberg & Faculty Information Systems and Applied Computer Science, Germany)

Panel: AI for Pervasive Computing: Curse or Blessing? 151 Daniela Nicklas (University of Bamberg & Faculty Information Systems and Applied Computer Science, Germany)

Thursday, March 14 10:30 - 12:00

S6: Wearables and Human-Computer Interaction

Chair: Tristan Braud (The Hong Kong University of Science and Technology, Hong Kong) PA2BLO: Low-Power, Personalized Audio Badge 154

Hemanth Sabbella and Dulaj Sanjaya Weerakoon (Singapore Management University, Singapore); Manoj Gulati (National University of Singapore, Singapore); Archan Misra (Singapore Management University, Singapore)

BLEAR: Practical Wireless Earphone Tracking under BLE protocol 164

Linfei Ge (The Hong Kong University of Science and Technology & Southern University of Science and Technology, China); Wentao Xie (The Hong Kong University of Science and Technology, Hong Kong); Jin Zhang (Southern University of Science and Technology, USA); Qian Zhang (Hong Kong University of Science and Technology, Hong Kong)

UltraWrite: A Lightweight Continuous Gesture Input System with Ultrasonic Signals on COTS 174 Devices

Weiyu Chen, Canlin Zheng, Wenfeng He and Yongpan Zou (Shenzhen University, China); Kaishun Wu (Hong Kong University of Science and Technology (Guangzhou), China)

Thursday, March 14 1:30 - 3:00

Industry Track

Chair: Archan Misra (Singapore Management University, Singapore)

Thursday, March 14 3:30 - 5:00

S7: Personal Health Monitoring and Personality Recognition

Chair: Franca Delmastro (IIT-CNR, Italy)

Affective-NLI: Towards Accurate and Interpretable Personality Recognition in Conversation Zhiyuan Wen (The Hong Kong Polytechnic University, Hong Kong); Jiannong Cao (Hong Kong Polytechnical University, Hong Kong); Yu Yang, Ruosong Yang and Shuaiqi Liu (The Hong Kong Polytechnic University, Hong Kong)

iMove: Exploring Bio-impedance Sensing for Fitness Activity Recognition
194
Mengxi Liu (German Research Center for Artificial Intelligence, Germany); Vitor F Rey
(Deutsches Forschungszentrum für Künstliche Intelligenz & University of Kaiserslautern,
Germany); Yu Zhang (RPTU, Germany); Lala Shakti Swarup Ray (DFKI, Germany); Bo Zhou
(German Research Center for Artificial Intelligence, Germany); Paul Lukowicz (DFKI and
University of Kaiserslautern, Germany)

DeepApnea: Deep Learning Based Sleep Apnea Detection Using Smartwatches 206 Zida Liu and Xianda Chen (The Pennsylvania State University, USA); Fenglong Ma (Pennsylvania State University, USA); Julio Fernandez-Mendoza and Guohong Cao (The Pennsylvania State University, USA)