**IEEE RTCSA 2019 Technical Program**

**Aug. 19**

**Session 1: Autonomous Navigation [Room] (13:30-15:00)**

**Session Chair:**

**“V2V-based Synchronous Intersection Protocols for Mixed Traffic of Human-Driven and Self-Driving Vehicles”**

Shunsuke Aoki and Raj Rajkumar

**“Fast and Accurate Trajectory Tracking for Unmanned Aerial Vehicles based on Deep Reinforcement Learning”**

Yilan Li, Hongjia Li, Zhe Li, Haowen Fang, Amit K Sanyal, Yanzhi Wang and Qinru Qiu

**“Temporal and Spatial Routing for Large Scale Safe and Connected UAS Traffic Management in Urban Areas”**

Ziyi Zhao, Zhao Jin, Chen Luo, Haowen Fang, Franco Basti, Mustafa Cenk Gursoy, Carlos Enrique Caicedo Bastidas and Qinru Qiu

**Session 2: Real-Time Scheduling & Schedulability Analysis [Room] (15:30-17:00)**

**Session Chair:**

**“Cutting the Unnecessary Deadlines in EDF”**

Enrico Bini

**Short Paper: “EDF-Based Mixed-Criticality Scheduling with Graceful Degradation by Bounded Lateness”**

Kecheng Yang and Zhishan Guo

**Short Paper: “Pay-Burst-Only-Once in Real-Time Calculus”**

Yue Tang, Yuming Jiang, Xu Jiang and Nan Guan

**Short Paper: “Stack memory requirements of AUTOSAR/OSEK-compliant scheduling policies”**

Reinder J. Bril, Sebastian Altmeyer and Paolo Gai

**Short Paper: “Scheduling Shared Data Acquisition for Real-time Decision Making”**

Tai-Sheng Cheng and Tarek Abdelzaher

**Aug. 20**

**Session 3: Predictable Architectures [Room] (09:00-10:30)**

**Session Chair:**

**“Worst-Case Reaction Time Optimization on Deterministic Multi-Core Architectures”**

Nicolas Hili, Alain Girault and Eric Jenn

**“Memory Bandwidth Regulation for Multiframe Task Sets”**

Muhammad Ali Awan, Pedro F. Souto, Konstantinos Bletsas, Benny Akesson and Eduardo Tovar

**Short Paper: “Code generation for multi-phase tasks on a multi-core distributed memory platform”**

Frédéric Fort and Julien Forget

**Short Paper: “Evaluating Software Diversity in Branch Prediction Analyses for static WCET Estimation”**

Joachim Fellmuth, Jonas David Zell and Sabine Glesner

**Session 4: Multiprocessor and GPU Scheduling [Room] (11:00-12:30)**

**Session Chair:**

**“Improving QoS for Global Dual-Criticality Scheduling on Multiprocessors”**

Lin Huang, I-Hong Hou, Sachin Sapatnekar and Jiang Hu

**“Partitioned Scheduling for Dependency Graphs in Multiprocessor Real-Time Systems”**

Junjie Shi, Niklas Ueter, Georg von der Brüggen and Jian-Jia Chen

**Short Paper: “STGM: Spatio-Temporal GPU Management for Real-Time Tasks”**

Sujan Saha, Yecheng Xiang and Hyoseung Kim

**Short Paper: “Adaptive Local Assignment Algorithm for Scheduling Soft-Aperiodic Tasks on Multiprocessors”**

Duy Doan and Kiyofumi Tanaka

**Session 5: Resilient System Design [Room] (13:30-15:00)**

**Session Chair:**

**“Fault-Tolerant Regularity-Based Real-Time Virtual Resources”**

Albert Cheng, Guangli Dai, Pavan Kumar Paluri, Mansoor Ansari, Yu Li and Darrell Knape

**“Mixed-Trust Computing for Real-Time Systems”**

Dionisio de Niz, Bjorn Andersson, Mark Klein, John Lehoczky, Amit Vasudevan, Hyoseung Kim and Gabriel A. Moreno

**“Automatic Generation of Hierarchical Contracts for Resilience in Cyber-Physical Systems”**

Zhiheng Xu, Daniel Jun Xian Ng and Arvind Easwaran

**Social Program (15:30-18:50): Visiting Alibaba or Huawei**

**Banquet (19:00-21:00): Gotoken Restaurant Sekka-tei**

**Aug. 21**

**Session 6: Real-Time Networks [Room] (09:00-10:15)**

**Session Chair:**

**“Slack-based Traffic Shaping for Real-time Ethernet Networks”**

Robin Hofmann, Borislav Nikolic and Rolf Ernst

**“Contract-based Fault-resilient Real-time Communication in Industrial Cyber-physical Systems with Software-defined Networking”**

Rutvij Jhaveri, Rui Tan, Arvind Easwaran and Sagar Ramani

**Short Paper: “Improving Timing Behavior on Encrypted CAN Buses”**

Mingqing Zhang and Alejandro Masrur

**Session 7: Applications [Room] (11:00-12:15)**

**Session Chair:**

**“A Real-Time Server Based Approach for Safe and Timely Intersection Crossings”**

Pratham Oza and Tam Chantem

**“An Environmental-adaptive Wi-Fi Localization Approach with Low Start-up Cost for the Exhibition Industry**”

Joseph K. Ng, Hao Li, Victor C. Cheng and William K. Cheung

**Short Paper: “Learning-Assisted Write Latency Optimization for Mobile Storage”**

Wei-Chu Tsai, Sung-Ming Wu and Li-Pin Chang