IEEE MASS 2019 – DAY 1
November 4, 2019, Monday

8:30 – 10:00 Workshops - 1st Sessions

Vista Del Mar The First International Workshop on Machine Learning Security and Privacy: Experiences and Applications

Big Sur Ballroom Sixth National Workshop for REU Research in Networking and Systems

10:00 – 10:30 Coffee Break – Big Sur Ballroom & Vista del Mar Pore Cochere

10:30 – 12:00 Workshops - 2nd Sessions

Vista Del Mar The First International Workshop on Machine Learning Security and Privacy: Experiences and Applications

Big Sur Ballroom Sixth National Workshop for REU Research in Networking and Systems

12:00 – 13:30 Lunch – Pacific Grille

13:30 – 15:00 Workshops - 3rd Sessions

Vista Del Mar IEEE International Workshop on Mobile Systems and Networks

Big Sur Ballroom Sixth National Workshop for REU Research in Networking and Systems

15:00 – 15:30 Coffee Break – Big Sur Ballroom & Vista del Mar Pore Cochere

15:30 – 17:00 Workshops - 4th Sessions

Vista Del Mar IEEE International Workshop on Mobile Systems and Networks

Big Sur Ballroom Sixth National Workshop for REU Research in Networking and Systems
IEEE MASS 2019 - DAY 2
November 5, 2019, Tuesday

08:30 – 10:00 Keynote Speech by Prof. Archan Misra, Singapore Management University - Big Sur Ballroom

Collaborative Machine Intelligence: Promoting Energy-Efficient IoT Sensing & Edge Analytics

10:00 – 10:30 Coffee Break - Big Sur Ballroom & Vista del Mar Pore Cochere

10:30 – 12:00 Session 1: Intelligent Transportation Systems – Vista del Mar

System Level Analysis for ITS-G5 and LTE-V2X Performance Comparison

Pierre Roux (CEA LIST, France); Stefania Sesia (Renault Software Labs, France); Valérian Mannoni (CEA, France); Eric Perraud (Software Labs, France)

Recognizing Driver Talking Direction in Running Vehicles with a Smartphone

Haipeng Dai (Nanjing University & State Key Laboratory for Novel Software Technology, P.R. China); Alex X. Liu (Michigan State University, USA); Zeshui Li, Wei Wang and Fengmin Zhang (Nanjing University, P.R. China); Chao Dong (Nanjing University of Aeronautics and Astronautics, P.R. China)

Optimizing In-motion Wireless Charging Service Efficiency for EVs: A Game Theoretic Approach

Li Yan and Haiying Shen (University of Virginia, USA)

Challenges of Designing Computer Vision-based Pedestrian Detector for Supporting Autonomous Driving

Peng Sun and Azzedine Boukerche (University of Ottawa, Canada)

10:30 – 12:00 Session 2: Crowdsensing, Crowdsourcing – Presidio Room

On Decision Making In Human-Machine Networks

Baocheng Geng and Pramod Varshney (Syracuse University, USA)

Sitara: Spectrum Measurement Goes Mobile Through Crowd-sourcing
Phillip Smith (United States, USA); Anh Luong (Carnegie Mellon University, USA); Shamik Sarkar, Harsimran Singh, Neal Patwari and Sneha Kumar Kasera (University of Utah, USA); Kurt Derr and Samuel Ramirez (Idaho National Laboratory, USA)

**Incentive Mechanisms for Spatio-temporal Tasks in Mobile Crowdsensing**

Jia Xu and Chengcheng Guan (Nanjing University of Posts and Telecommunications, P.R. China); Haipeng Dai (Nanjing University & State Key Laboratory for Novel Software Technology, P.R. China); Dejun Yang (Colorado School of Mines, USA); Lijie Xu and Jianyi Kai (Nanjing University of Posts and Telecommunications, P.R. China)

**Cost-Efficient Worker Trajectory Planning Optimization in Spatial Crowdsourcing Platforms**

Ning Wang (Rowan University, USA); Jie Wu (Temple University, USA)

12:00 – 13:30 Lunch-Pacific Grille

13:30 – 15:00 Session 3: RFID, Sensors, Sensing—Vista del Mar

**Achieving Sensing k-Coverage Using Hexagonal Tiling: Are We Done Yet?**

Habib M. Ammari (Texas A&M University-Kingsville, USA)

**Towards Accurate Bit Error Simulation in Wireless Sensor Networks including Environmental Influences**

Sven Pullwitt (Technische Universität Braunschweig, Germany); Robert Hartung (TU Braunschweig, Germany); Ulf Kulau (DSI Aerospace Technology, Germany); Lars C Wolf (Technische Universität Braunschweig, Germany)

**A BLE-based multi-gateway network infrastructure with handover support for mobile BLE peripherals**

Mathias Baert (Ghent University, Belgium); Pieterjan Camerlynck (Televisc Healthcare NV, Belgium); Pieter Crombez (Televisc Health Care NV, Belgium); Jeroen Hoebekhe (Ghent University - imec, Belgium)

**Multiple Resolution Bit Tracking Protocol for Continuous RFID Tag Identification**
Weiping Zhu and Mingzhe Li (Wuhan University, P.R. China); Jiannong Cao (Hong Kong Polytechnic Univ, Hong Kong); Zongjian He (University of Auckland, New Zealand); Rong Xie (Wuhan University, P.R. China)

13:30 – 15:00 Session 4: Privacy & Security-Presidio Room

**SHAD: Privacy-friendly Shared Activity Detection and Data Sharing**

Feng Han, Lan Zhang, Xuanke You, Guangjing Wang and Xiang-Yang Li (University of Science and Technology of China, P.R. China)

**A Privacy-Preserving Order Dispatch Scheme for Ride-Hailing Services**

Yubin Duan (Temple University, USA); Guoju Gao and Mingjun Xiao (University of Science and Technology of China, P.R. China); Jie Wu (Temple University, USA)

**FDTLS: Supporting DTLS-based Combined Storage and Communication Security for IoT Devices**

EunSeong Boo (Ajou University, Korea); Shahid Raza (RISE Research Institutes of Sweden, Sweden); Joel Höglund (SICS, Sweden); JeongGil Ko (Yonsei University, Korea)

**Falcon - A Flexible Architecture For Accelerating Cryptography**

Kevin N Kinningham (Stanford University, USA); Philip Levis (Stanford, USA); Mark Anderson, Maurice Shih and Mark Horowitz (Stanford University, USA); Dan Boneh (Stanford, USA)

15:00 – 15:30 Coffee Break- Vista del Mar Pore Cochere & Presidio Foyer

15:30 – 17:00 Posters & Demos- Big Sur Ballroom

18:00 – 20:00 Welcome Reception- Big Sur Ballroom
IEEE MASS 2019- DAY 3

November 6, 2019, Wednesday

08:30 – 10:00 Keynote Speech by Prof. P. R. Kumar, Texas A&M University - Big Sur Ballroom

**Dynamic Watermarking for Security of Cyberphysical Systems**

10:00 – 10:30 Coffee Break- Big Sur Ballroom & Vista del Mar Pore Cochere

10:30 – 12:00 Session 5: Unmanned Aerial Vehicles- Vista del Mar

**Securing ADS-B with Multi-point Distance-bounding for UAV Collision Avoidance**

Zachary Languell and Qijun Gu (Texas State University, USA)

**Enabling the Mobile IoT: Wake-up Unmanned Aerial Systems for Long-lived Data Collection**

Stefano Basagni (Northeastern University, USA); Georgia Koutsandria (University of Rome, "La Sapienza", Italy); Chiara Petrioli (University of Rome "La Sapienza", Italy)

**AirBeam: Experimental Demonstration of Distributed Beamforming by a Swarm of UAVs**

Subhramoy Mohanti, Carlos Bocanegra and Jason Meyer (Northeastern University, USA); Gokhan Secinti (Istanbul Technical University, Turkey); Mithun Diddi, Hamumant Singh and Kaushik Chowdhury (Northeastern University, USA)

**Evaluating LTE Coverage and Quality from an Unmanned Aircraft System**

Michael Nekrasov (University of California Santa Barbara, USA); Vivek Adarsh, Udit Paul and Esther Showalter (UC Santa Barbara, USA); Ellen Zegura (Georgia Institute of Technology, USA); Morgan Vigil-Hayes (Northern Arizona University, USA); Elizabeth Belding (University of California, Santa Barbara, USA)
10:30 – 12:00 Session 6: Channel Access- Presidio

**KALOHA: ike i ke ALOHA**

JJ Garcia-Luna-Aceves (University of California at Santa Cruz & Palo Alto Research Center, USA)

**Improving Carrier-Sense Multiple Access Using Cues of Channel Utilization**

JJ Garcia-Luna-Aceves (University of California at Santa Cruz & Palo Alto Research Center, USA)

**Cross-Technology Clear Channel Assessment for Low-Power Wide Area Networks**

Charalampos Orfanidis (KTH Royal Institute of Technology & Uppsala University, Sweden); Laura Marie Feeney (Uppsala University, Sweden); Martin Jacobsson (KTH Royal Institute of Technology & Uppsala University, Sweden); Per Gunningberg (Uppsala University, Sweden)

**AWARE: Adaptive Wi-Fi Power Save Operation Coexisting with LTE-U**

Hwijae Kwon (TmaxSoft, Korea); Seongwon Kim (SK Telecom, Korea); Youngwook Son and Changmok Yang (Seoul National University, Korea); Seongho Byeon (Samsung, Korea); Sunghyun Choi (Seoul National University, Korea)

12:00 – 13:30 Lunch-Pacific Grille

13:30 – 15:00 Session 7: Internet of Things- Vista del Mar

**GaaS: Adaptive Cross-Platform Gateway for IoT Applications**

Mohamed Abdelaal, Mochamad Dandy, Marwan Abdelgawad, Frank Dürr and Kurt Rothermel (University of Stuttgart, Germany)

**rIoT: Enabling Seamless Context-Aware Automation in the Internet of Things**

Jie Hua, Chenguang Liu and Tomasz Kalbarczyk (University of Texas at Austin, USA); Catherine Wright and Gruia-Catalin Roman (University of New Mexico, USA); Christine Julien (University of Texas at Austin, USA)
ForeSee: A Cross-layer Vulnerability Detection Framework for the Internet of Things
Zheng Fang, Hao Fu and Tianbo Gu (University of California, Davis, USA); Zhiyun Qian (University of California, Riverside, USA); Trent Jaeger (PSU, USA); Prasant Mohapatra (University of California, Davis, USA)

Congestion-Tolerant Framework for IoT Applications
Zygmunt J. Haas and Zijing Tian (University of Texas at Dallas, USA)

13:30 – 15:00 Session 8: Deep Learning- Presidio

Towards Wireless Environment Cognizance by Incremental Learning
Aniqua Baset (University of Utah, USA); Christopher Becker (Idaho National Laboratory & University of Utah, USA); Kurt Derr and Samuel Ramirez (Idaho National Laboratory, USA); Sneha Kumar Kasera and Aditya Bhaskara (University of Utah, USA)

Evaluating and Boosting Reinforcement Learning for Intra-domain Routing
Qian Xu and Yifan Zhang (City University of Hong Kong, Hong Kong); Kui Wu (University of Victoria, Canada); Jianping Wang (City University of Hong Kong, Hong Kong); Kejie Lu (University of Puerto Rico at Mayaguez, Puerto Rico)

Deep Neural Network Ensembles against Deception: Ensemble Diversity, Accuracy and Robustness
Ling Liu, Wendi Wei and Ka-Ho Chow (Georgia Institute of Technology, USA); Margaret Loper (Georgia Tech Research Institute, USA); Emre Gursoy, Stacey Truex and Yanzhao Wu (Georgia Institute of Technology, USA)

Using Graphical Models as Explanations in Deep Neural Networks
Mudhakar Srivatsa (IBM T.J. Watson Research Center, USA); Franck Le (IBM T. J. Watson, USA); Krishna Reddy and Kaushik Roy (Purdue University, USA)

15:00 – 15:30 Coffee Break- Vista del Mar Pore Cochere & Presidio Foyer
15:30 – 17:00 Panel 1- Presidio
19:00 – 21:00 Gala Dinner- Big Sur Ballroom
IEEE MASS 2019- DAY 4
November 7, 2019, Thursday

08:30 – 10:00 Keynote Speech by Prof. Ramesh Govindan, University of Southern California- Big Sur Ballroom

Living at the Edge: Designing Accurate and Efficient Visual Sensing Systems

10:00 – 10:30 Coffee Break- Big Sur Ballroom & Vista del Mar Pore Cochere

10:30 – 12:00 Session 9: Edge, Proxies, Relays- Vista del Mar

Privacy-Preserving MEC-Enabled Contextual Online Learning via SDN for Service Selection in IoT

Difan Mu and Pan Zhou (Huazhong University of Science and Technology, P.R. China); Qinghua Li (University of Arkansas, USA); Ruixuan Li (Huazhong University of Science and Technology, P.R. China); Jie Xu (University of Miami, USA)

Energy-Latency-aware Task Offloading and Approximate Computing at the Mobile Edge

Ayman Younis, Tuyen X Tran and Dario Pompili (Rutgers University, USA)

QoS Provisioning in 60 GHz Communications by Physical and Transport Layer Coordination

Matteo Drago and Michele Polese (University of Padova, Italy); Stepan Kucera (Bell Labs, Alcatel-Lucent Ltd., Ireland); Dmitry Kozlov and Vitalii Kirillov (Nokia Bell Labs, Ireland); Michele Zorzi (University of Padova, Italy)

EV-CAST: Interference and Energy-Aware Video Multicast Exploiting Collaborative Relays

Yeonchul Shin (Samsung Electronics, Korea); Jaewon Hur and Gyujin Lee (Seoul National University, Korea); Jonghoe Koo (Samsung Electronics, Korea); Junyoung Choi (Seoul National University, Korea); Sung-Ju Lee (KAIST, Korea); Sunghyun Choi (Seoul National University, Korea)
10:30 – 12:00 Session 10: Opportunistic, Disruptive, and Challenging Networks
Big Sur Ballroom

**Bio-DRN: Robust and Energy-efficient Bio-inspired Disaster Response Networks**

Vijay K. Shah (Virginia Tech, USA); Satyaki Roy (Missouri University of Science and Technology, USA); Simone Silvestri (University of Kentucky, USA); Sajal K. Das (Missouri University of Science and Technology, USA)

**Mobile Energy Balancing in Heterogeneous Opportunistic Networks**

Aashish Dhungana and Eyuphan Bulut (Virginia Commonwealth University, USA)

**Identifying User Communities Using Deep Learning and Its Application to Opportunistic Networking**

Danielle Lopes Ferreira (UCSC, USA); Cláudio Souza (Federal University of the State of Rio de Janeiro, Brazil); Katia Obrazcka (University of California, Santa Cruz, USA); Carlos Alberto Vieira Campos (Federal University of the State of Rio de Janeiro, Brazil)

**Age of Information for Wireless Energy Harvesting Secondary Users in Cognitive Radio Networks**

Shiyang Leng (The Pennsylvania State University, USA); Xiaoyong Ni (University of Electronic Science and Technology of China); Aylin Yener (Pennsylvania State University, USA)

12:00 – 13:30 Lunch -Pacific Grille

13:30 – 15:00 Session 11: Systems & Applications Vista del Mar

**Storage on the Edge: Evaluating Cloud Backed Edge Storage in Cyberphysical Systems**

Sanjeev Sondur and Krishna Kant (Temple University, USA); Slobodan Vucetic (Vucetic, USA)

**DeepHeart: Accurate Heart Rate Estimation from PPG Signals based on Deep Learning**

Xiangmao Chang and Gangkai Li (Nanjing University of Aeronautics and Astronautics, P.R. China); Linlin Tu (Michigan State University, USA);
Guoliang Xing (The Chinese University of Hong Kong, Hong Kong); Tian Hao (IBM T. J. Watson Research Center, USA)

**UW-SVC: Scalable Video Coding Transmission for In-network Underwater Imagery Analysis**

Mehdi Rahmati and Dario Pompili (Rutgers University, USA)

**QBT: Queue-size based Busy Tones for Protecting Multihop Low-power Networks**

Jinwoo Ock (Seoul National University, Korea); Jeongyeup Paek (Chung-Ang University, Korea); Saewoong Bahk (Seoul National University, Korea)

13:30 – 15:00 Session 12: Algorithms and Theory- Big Sur Ballroom

**Multicast Scheduling Algorithms for Battery-Free Wireless Sensor Networks**

Bingkun Yao (Harbin Institute of Technology, P.R. China); Hong Gao (University of Harbin Institute Technology, P.R. China); Jianzhong Li (Harbin Institute of Technology, P.R. China)

**Facility Location Strategy for Minimizing Cost in Edge-Based Mobile Crowdsensing**

En Wang, Dongming Luan and Yongjian Yang (Jilin University, P.R. China); Jie Wu (Temple University, USA)

**Liam: An Architectural Framework for Decentralized IoT Networks**

Piet De Vaere (ETH Zürich, Switzerland); Adrian Perrig (ETH Zurich Switzerland & Carnegie Mellon University, USA)

**Distributed Dataset Synchronization in Disruptive Networks**

Tianxiang Li and Zhaoning Kong (University of California, Los Angeles, USA); Spyridon Mastorakis (University of Nebraska, Omaha, USA); Lixia Zhang (University of California at Los Angeles, USA)

15:00 – 15:30 Coffee-Break- Big Sur Ballroom & Vista del Mar Pore Cochere

15:30 – 17:00 Session 13: Localization and Prediction Vista del Mar

**RadioLoc: Learning Vehicle Locations with FM Signal in All-Terrain Environments**
Device-Free Acoustic Motion Tracking over Targets with Large Sizes

Yuqi Li, Ruirong Chen, Xingzhe Song and Wei Gao (University of Pittsburgh, USA); Wei Chen and Erick Forno (Children's Hospital of Pittsburgh, USA)

Solar-TK: A Data-driven Toolkit for Solar PV Performance Modeling and Forecasting

Noman Bashir (University of Massachusetts Amherst, USA); Dong Chen (Florida International University, USA); David Irwin and Prashant Shenoy (University of Massachusetts, Amherst, USA)

15:30 – 17:00 Session 14: Monitoring and Detection- Big Sur Ballroom

Securing IoT Protocol Implementations Through Hardware Monitoring

Arman Pouraghiliy (University of Massachusetts, Amherst, USA); Tilman Wolf (University of Massachusetts, USA)

DeepWiTraffic: Low Cost WiFi-Based Traffic Monitoring System Using Deep Learning

Myounggyu Won (University of Memphis, USA); Sayan Sahu (South Dakota State University, USA); Kyung-Joon Park (DGIST, Korea)

LAD: Learning Access Control Polices and Detecting Access Anomalies in Smart Environments

Tomasz Kalbarczyk, Chenguang Liu, Jie Hua and Christine Julien (University of Texas at Austin, USA)

AMAZE: Recognizing Speakers with Amazon's Echo Dot Device

Tiffany Kalin (Colorado School of Mines), Kerri Stone (LGS Labs), and Tracy Camp (Colorado School of Mines)

17:00 – 17:30 Closing Remarks and Conference Adjournment- Big Sur Ballroom