

# ICNC 2018 Technical Program

Maui, Hawaii, USA  
March 4-8, 2017  
<http://www.conf-icnc.org>



## Monday, March 5

Monday, March 5, 08:20 - 09:30

Keynote I: Big NoSQL Data, Apache AsterixDB, and Beyond

Prof. Michael J. Carey, University of California

Chair: Honggang Wang (University of Massachusetts, Dartmouth & College of Engineering, USA)

Monday, March 5, 09:30 - 10:00

Coffee Break

Monday, March 5, 10:00 - 12:00

Distinguished Lecture I: Obfuscation of Transmission Fingerprints for Secure Wireless Communications

Prof. Marwan Krunz

Room: Lahaina I

Chair: Honggang Wang (University of Massachusetts, Dartmouth & College of Engineering, USA)

Workshop: CNC I: CIS

Room: Lahaina II

Chair: Kanwalinderjit Kaur Gagneja (Florida Polytechnic University & North Dakota State University, USA)

A Secure Container-based Backup Mechanism to Survive Destructive Ransomware Attacks

Yong Jin, Masahiko Tomoishi, Satoshi Matsuura and Yoshiaki Kitaguchi (Tokyo Institute of Technology, Japan)

An efficient quantum teleportation scheme based on six-particle cluster quantum channel

Nan Zhao, Min Li and Nan Chen (Xidian University, P.R. China)

Compressed Sensing based Intrusion Detection System for Hybrid Wireless Mesh Networks

Tianhe Shi, Wenxiao Shi, Ce Wang and Zhuo Wang (Jilin University, P.R. China)

Cryptanalysis and Improvement of a Biometrics-based Multi-server Authentication Protocol

Yi Gu and Li Sheng Qiang (University of Electronic Science and Technology of China, P.R. China)

Defending Web Servers with Feints, Distraction and Obfuscation

Daniel Fraunholz (German Research Center for Artificial Intelligence, Germany); Hans Dieter Schotten (Deutsches Forschungszentrum für Künstliche Intelligenz GmbH, Germany)

Workshop: CNC II: CQSM & COD

Room: Lahaina III

Chair: Zilong Ye (California State University, Los Angeles, USA)

A Joint Rate and Buffer Control Scheme for Video Transmission over LTE Wireless Networks

Yu-ning Dong and Zheng Wu (Nanjing University of Posts and Telecommunications, P.R. China); Liu Chun (NanJing University of Posts and Telecommunications, P.R. China)

Differentiated Connection Admission Control Strategy for Wireless VoIP Networks with Adaptive Modulation Coding

Mario A. Ramírez-Reyna (CINVESTAV-IPN, Mexico); Felipe A. Cruz-Pérez (Cinvestav-IPN, Mexico); S. Lirio Castellanos-Lopez (UAM, Mexico); Genaro Hernandez-Valdez (UAM-A, Mexico); Mario E. Rivero-Angeles (Instituto Politecnico Nacional & CIC-IPN, Mexico)

SAND: A Social-Aware and Distributed Scheme for Device Discovery in the Internet of Things

James Sunthonlap and Phuoc Nguyen (California State University, Los Angeles, USA); Hao Wang (University of Washington, USA); Mohammad Pourhomayoun, Yuqing Zhu and Zilong Ye (California State University, Los Angeles, USA)

Two Types of Flows Admission control by altruistic behavior based on warning

Sumiko Miyata (Shibaura Institute of Technology, Japan)

Optimal Code Regeneration with Background Traffic Awareness in Distributed Storage

Yangyang Tao and Shucheng Yu (Stevens Institute of Technology, USA); Kenji Yoshigoe (Toyo University, Japan); Junxiu Zhou (University of Arkansas at Little Rock, USA)

Workshop: CNC III: GCNC & MCC

Room: Lahaina IV

Chair: Angelos K. Marnierides (Lancaster University & Lancaster University, United Kingdom (Great Britain))

Appliance-level Short-Term Load Forecasting using Deep Neural Networks

Ghulam Mohi Ud Din (Liverpool John Moores University, United Kingdom (Great Britain)); Andreas U. Mauthe (Lancaster University, United Kingdom (Great Britain)); Angelos K. Marnierides (Lancaster University & Lancaster University, United Kingdom (Great Britain))

Optimal Peak Shaving Using Batteries at Datacenters: Charging Risk and Degradation Model

Neda Nasiriani and George Kesidis (Pennsylvania State University, USA)

Optimal Planning of Renewable Generations for Electric Vehicle Charging Station

Hao Wang (University of Washington, USA); Arish Balasubramani and Zilong Ye (California State University, Los Angeles, USA)

Performance Analysis and Evaluation of Cloud Radio Access Networks

Xinran Zhang (Beijing University of Posts and Telecommunications, P.R. China); Mugen Peng (Beijing University of posts & Telecommunications, P.R. China); Zhen Wang and Sihang Mai (Beijing University of Posts and Telecommunications, P.R. China)

A Flickering Reduction Scheme for Tone Mapped HDR Video

Stelios Ploumis (University of British Columbia, Canada); Mahsa T Pourazad (TELUS Communications Company, Canada); Panos Nasiopoulos (University of British Columbia, Canada)

Workshop : CNC IV: MCC & MCVC

Room: MAUI Suite 4

Chair: Brigitte Jaumard (Concordia University, Canada)

Smooth Streaming With MPEG-DASH using SDN-based Application-Aware Networking

Shuai Zhao (Big Switch Networks & University of Missouri-Kansas City, USA); Goutham Muppala (University of Missouri-Kansas City & CISCO Systems, USA); Li Zhu (University of Missouri - Kansas city, USA); Deep Medhi (University of Missouri-Kansas City, USA)

GPS Improvement System Using Short-Range Communication

Tadashi Ogino (Meisei University, Japan)

Semantic-Aware Clustering-based Approach of Trajectory Data Stream Mining

Samia Tasnim (Florida International University, USA); Juan Caldas (Nova Southeastern University, USA); Niki Pissinou, Sitharama Iyengar and Ziqian Ding (Florida International University, USA)

Adaptive Multimedia Streaming between Heterogeneous Users using D2D and Dynamic Wi-Fi Configuration

Sneha Tipugade and Chetna Singhal (Indian Institute of Technology Kharagpur, India)

Monday, March 5, 12:00 - 13:30

Lunch (on attendee own)

Monday, March 5, 13:30 - 15:30

Distinguished Lecture II: Smart IoT Security

Prof. Xiuzhen Cheng

Room: Lahaina I

Chair: Honggang Wang (University of Massachusetts, Dartmouth & College of Engineering, USA)

Workshop: CNC V: ISA & WC

Room: Lahaina II

Chair: Fatemeh Khalili (Ohio University, USA)

Content-aware Efficient Video Uploading for Crowdsourced Multi-view Video Streaming

Than Than Nu (Osaka University, Japan); Takuya Fujihashi (Ehime University & Graduate School of Science and Engineering, Japan); Takashi Watanabe (Osaka University, Japan)

Scalable Multicast for Content Delivery in Information Centric Networks

Aytac Azgin (Huawei Research, USA); Ravishankar Ravindran (Huawei & Huawei, USA); Guoqiang Wang (Huawei, USA)

THU Face Database for Real-Time Automatic Video Scoring Model

Yifeng Liu, Xiaoming Tao and Ailing Xiao (Tsinghua University, P.R. China)

Short Block Turbo Coded OFDM with near Sphere Packing Bound Performance

Fatemeh Khalili and Jeffrey Dill (Ohio University, USA)

Workshop: CNC VI: NAPE & OGN

Room: Lahaina III

Chair: Ritesh Maheshwari (LinkedIn, USA)

Characterizing Emerging Markets: An Evaluation of TCP congestion control with real internet traffic over HTTP2

Prasanna Vijayanathan, Ritesh Maheshwari, Rahul Malik, Shen Zhang and Siddharth Agarwal (LinkedIn, USA); Anant Rao (LinkedIn, USA); Goksel Genc (LinkedIn, USA)

Computer-Aided Reproducibility

Marcel Marek, Peyman Teymoori and Michael Welzl (University of Oslo, Norway); Stein Gjessing (University of Oslo & Simula Research Lab., Norway)

An Algorithm for Dynamic Multicast Traffic Grooming in Light-trail Optical WDM Mesh Networks

Hwa-Chun Lin and Yuan-Xi Zhuang (National Tsing Hua University, Taiwan)

Enhanced RWA Exact Solution with a New Lightpath Decomposition Algorithm

Julian Enoch and Brigitte Jaumard (Concordia University, Canada)

Robust Data Center Network Design Based on Space Division Multiplexing

Saja Al Mamoori, Arunita Jaekel and Subir Bandyopadhyay (University of Windsor, Canada)

Utilizing Scalable Video to Optimize Video Playback over Passive Optical Networks

David Moore and Rami J. Haddad (Georgia Southern University, USA)

Workshop: CNC VII: SCSC & WN

Room: Lahaina IV

Chair: Yu-Cheng Lin (University of California, Davis, USA)

Poet-based Poetry Generation: Controlling Personal Style with Recurrent Neural Networks

Jia Wei, Qiang Zhou and Yici Cai (Tsinghua University, P.R. China)

Profiling Facebook Public Page Graph

Yunfeng Hong (UC Davis, Davis California, USA); Yu-Cheng Lin, Chun-Ming Lai, Shyhtsun Felix Wu and George Barnett (University of California, Davis, USA)

Graph-based Cooperative Caching in Fog-RAN

Xiaoting Cui, Yanxiang Jiang and Xuan Chen (Southeast University, P.R. China); Fu-Chun Zheng (Harbin Institute of Technology, Shenzhen, P.R. China & University of York, United Kingdom (Great Britain)); Xiaohu You (National Mobile communication Research Lab., Southeast University, P.R. China)

Queueing Network Model and Average Delay Analysis for Mobile Edge Computing

Shuaishuai Guo (King Abdullah University of Science and Technology (KAUST), Saudi Arabia); Dalei Wu (The University of Tennessee at Chattanooga, USA); Haixia Zhang and Dongfeng Yuan (Shandong University, P.R. China)

Workshop: CNC VIII: CIS & WN

Room: MAUI Suite 4

Chair: Kanwalinderjit Kaur Gagneja (Florida Polytechnic University & North Dakota State University, USA)

Secure Payment Routing Protocol for Economic Systems Based on Blockchain

Qi Xia, Emmanuel Sifah, Ke Huang and Ruidong Chen (University of Electronic Science and Technology of China, P.R. China); Xiaojiang Du (Temple University, USA); Jianbin Gao (School of Resources and Environment University of Electronic Science and Technology of China, P.R. China)

Secure Smart Card Signing with Time-based Digital Signature

Hossein Rezaeighaleh (University of Central Florida, USA); Roy Laurens (University of Central Florida, USA & Institute of Business and Informatics STIKOM Surabaya, Indonesia); Cliff Zou (University of Central Florida, USA)

Securing the Internet of Things with Recursive InterNetwork Architecture (RINA)

Toktam Ramezanifarkhani (University of Oslo & University of Oslo, Norway); Peyman Teymoori (University of Oslo, Norway)

Identifying Malicious Traffic in Software-Defined Wireless Local Area Networks

Radoslaw Cwalinski (Brandenburg University of Technology, Germany); Hartmut Koenig (BTU Cottbus, Germany)

IPv6 transmission over BLE Using Raspberry PI 3

Kanwalinderjit Kaur Gagneja (Florida Polytechnic University & North Dakota State University, USA)

CCP: Conflicts Check Protocol for Bitcoin Block Security

Chen Yang (Peking University, School of Software & Microelectronics, P.R. China)

Monday, March 5, 15:30 - 16:00

Coffee Break

Monday, March 5, 16:00 - 18:00

Distinguished Lecture III: Packet Stream Authentication for Covert Channels

Dr. Hamid Sharif

Room: Lahaina I

Chair: Hua Fang (University of Massachusetts, USA)

Workshop: CNC IX: WAHS

Room: Lahaina II

Chair: Moritz Schrey (RWTH Aachen University, Germany)

An O-QPSK modem using an FSK RF front end for IEEE 802.15.4 operation providing Maximum-Likelihood data

Moritz Schrey, Markus Scholl, Tobias Saalfeld and Jan Mueller (RWTH Aachen University, Germany); Vahid Bonehi (RWTH Aachen, Germany); Christoph Beyerstedt and Fabian Speicher (RWTH Aachen University, Germany); Stefan Heinen (RWTH Aachen, Germany)

Bias Based General Framework for Delay Reduction in Backpressure Routing Algorithm

Juntao Gao (Nara Institute of Science and Technology, Japan); Yulong Shen (Xidian University, P.R. China); Minoru Ito (Nara Institute of Science and Technology, Japan); Norio Shiratori (Tohoku University, Japan)

Collision-Aware Neighbor Discovery with Directional Antennas

El khamlichi Btissam (EMI, Morocco); Duy H. N. Nguyen (San Diego State University, USA); El abbadi Jamal (EMI- Mohammed V Agdal University, Morocco); Nathaniel W Rowe (Air Force Research Laboratory, USA); Sunil Kumar (San Diego State University, USA)

Context-Aware Data Cleaning for Mobile Wireless Sensor Networks: A Diversified Trust Approach

Concepcion Sanchez Aleman, Niki Pissinou, Sheila Alemany and Kianoosh G. Boroojeni (Florida International University, USA); Jerry Miller (Florida International University & Applied Research Center (ARC), USA); Ziqian Ding (Florida International University, USA)

Resilient Data Collection Protocol with In-Network Processing for Oil and Gas Refinery Networks

Hongpeng Guo and King-Shan Lui (The University of Hong Kong, Hong Kong); Tianyuan Liu (University of Illinois at Urbana-Champaign, USA); Klara Nahrstedt (University of Illinois, USA)

Workshop : CNC X: WC i

Room: Lahaina III

Chair: Lili Wei (Intel Corporation, USA)

Decoding of Polar Code by Using Deep Feed-Forward Neural Networks

Jihoon Seo, Juyul Lee and Keunyoung Kim (ETRI, Korea)

Experimental Results of a Land-to-Ship Propagation Channel using a Wideband Channel Sounding System at 2.4 GHz

Jae-Hyun Lee (Seoul National University, Korea); Jeong-Sik Choi (Intel Corporation, USA); Lee Jung Yong and Seong-Cheol Kim (Seoul National University, Korea)

Initial Access Techniques for 5G NR: Omni/Beam SYNC and RACH designs

Lili Wei, Clara (Qian) Li and Geng Wu (Intel Corporation, USA)

Low-Complexity Universal-Filtered Multi-Carrier for Beyond 5G Wireless Systems

Korey Cain, Vida Vakilian and Reza Abdolee (California State University, Bakersfield, USA)

Multi-operator Fairness in Transparent RAN Sharing

Ying-Dar Lin and Hsu Tung Chien (National Chiao Tung University, Taiwan); Hsien-Wen Chang (Industrial Technology Research Institute, Taiwan); Chia-Lin Lai (National Cheng Kung University, Taiwan)

Workshop: CNC XI: WC II

Room: Lahaina IV

Chair: Xiaoli Ma (Georgia Institute of Technology, USA)

Multilevel Code-block Group based HARQ-ACK Control Channel Design

Jianming Wu (Fujitsu Laboratory, Japan)

Optimal Power Control and Link Selection Policy for Buffer-Aided Two-Hop Secure Communications

Jing Wan, Deli Qiao and Haifeng Qian (East China Normal University, P.R. China)

Applying Lattice Reduction Technique to Space-Time Coded Multiplexing Systems

Yiming Kong and Xiaoli Ma (Georgia Institute of Technology, USA); Yiyin Wang (Shanghai Jiao Tong University, P.R. China)

Performance Analysis of DC-SSK Scheme and Its Power Allocation in VLC System

Qi Zhang and Zhiqian Bai (Shandong University, P.R. China); Na Zhang (School of Information Science & Engineering, Shandong University, P.R. China); Shangqian Sun (School of Physics, Shandong University, P.R. China); Kyung Sup Kwak (Inha University, Korea)

Reed Solomon Encoding for The Mitigation of Clipping Noise In OFDM-Based Visible Light Communications

Nima Taherkhani (University of Texas at Dallas, USA); Kamran Kiasaleh (University of Texas at Dallas & IEEE, USA)

Workshop: CNC XII: SPC

Room: MAUI Suite 4

Chair: Po-Hsuan Tseng (National Taipei University of Technology, Taiwan)

A Deep Neural Network-Based Indoor Positioning Method using Channel State Information

Guan-Sian Wu and Po-Hsuan Tseng (National Taipei University of Technology, Taiwan)

Adaptive Video Transmission Designs Over Underwater Acoustic Channels

Rongxin Zhang (Xiamen University, P.R. China); Yiming Kong and Xiaoli Ma (Georgia Institute of Technology, USA); Deqing Wang (Xiamen University, P.R. China)

Combating Bit Errors From Stuck Cells in Flash Memory Using Novel Information Theory Techniques

Ravi Hiranand Motwani (Intel Corporation, USA); Zion Kwok (Intel, Canada); Poovaiah Palangappa (University of Pittsburgh & Intel, USA)

Matrix-Based Joint Interference and Channel Order Enumerators for SIMO Systems Suffering From RFI

Tilahun Getu (École de Technologie Supérieure (ETS), Canada); Wessam Ajib (Université du Québec à Montréal, Canada); Rene Jr. Landry (University of Quebec & Ecole de Technologie Supérieure, Canada)

Realizing Data driven and Hampel preprocessor based Adaptive filtering on a Software Defined Radio testbed: A USRP case Study

Anu Jagannath and Ashwin Amanna (ANDRO Computational Solutions, LLC, USA)

Reducing the Computational Complexity of ORVD-Trellis Search Based MIMO Detection

Dominik Auras, Sebastian Birke, Rainer Leupers and Gerd H. Ascheid (RWTH Aachen University, Germany)

## **Tuesday, March 6**

Tuesday, March 6, 08:20 - 08:30

Opening Ceremony

Chairs: Jian Ren (Michigan State University, USA), Honggang Wang (University of Massachusetts, Dartmouth & College of Engineering, USA)

Tuesday, March 6, 08:30 - 09:30

Keynote Talk II: 5G Wireless Illuminating New Directions in Theory

Prof. Robert Calderbank, Duke University, USA

Chair: Enzo Mingozzi (University of Pisa, Italy)

Tuesday, March 6, 09:30 - 10:00

Coffee Break

Tuesday, March 6, 10:00 - 12:00

Invited Talks I:

Room: Lahaina I

Chair: Danda B. Rawat (Howard University, USA)

Recent Advances in Distributed MIMO Transmission Techniques for 5G Mobile Communications

Fumiyuki Adachi (Tohoku University, Japan)

Learning Wireless Networks Footprints and Topologies in Shared Spectrum

Danijela Cabric (University of California Los Angeles, USA)

Energy-Spectral Efficiency Tradeoff for Heterogeneous Networks with QoS constraints

Ender Ayanoglu (University of California, Irvine, USA)

SmartGeo: Toward the Development of Intelligent Geosystems

Tracy Camp (Colorado School of Mines, USA)

Industry Forum

Room: Lahaina II

Chair: Haris Gacanin (Nokia Bell Labs, Belgium)

CIS I:

Room: Lahaina III

Chair: Lei Chen (Georgia Southern University, USA)

Efficient ID-based Message Authentication with Enhanced Privacy in Wireless Ad-hoc Networks

Jian Li, Yun Liu and Zhenjiang Zhang (Beijing Jiaotong University, P.R. China); Bin Li, Hui Liu and Junjun Cheng (China Information Technology Security Evaluation Center, P.R. China)

Source-Location Privacy Based on Dynamic Mix-Ring in Wireless Sensor Networks

Di Tang, Jian Gu, You Yu and Yuanyuan Yang (The Third Research Institute of Ministry of Public Security, P.R. China); Weijia Han (Xidian University, P.R. China); Xiao Ma (Shaanxi Normal University, P.R. China)

Leveraging Distributed Blockchain-based Scheme for Wireless Network Virtualization with Security and QoS Constraints

Danda B. Rawat and Amani Alshaikhi (Howard University, USA)

Exploiting Time and Subject Locality for Fast, Efficient, and Understandable Alert Triage

David Kavalier, Corey Hudson and Michael Bierma (Sandia National Labs, USA)

Diversity Modeling to Evaluate Security of Multiple SDN Controllers

Hellen Maziku (Tennessee State University, USA); Sachin Shetty (Old Dominion University, USA); Dong Jin (Illinois Institute of Technology, USA); Charles A Kamhoua (US Army Research Laboratory & Network Science Division, USA); Laurent Njilla and Kevin Kwiat (Air Force Research Laboratory, USA)

An optimized VM allocation Strategy to Make a Secure and Energy-Efficient Cloud Against Co-residence Attack

Yuhong Liu (Santa Clara University, USA); Xiaojun Ruan (California State University, East Bay, USA); Songjie Cai, Ruiwen Li and Hanxiao He (Santa Clara University, USA)

CQSM

Room: Lahaina IV

Chair: Wei Yu (Towson University, USA)

Mr.Tree: Multiple Realities in Tree-based Monitoring Overlays for Peer-to-Peer Networks

Andreas Disterhöft, Phillip Sandkühler, Andre Ippisch and Kalman Graffi (Heinrich Heine University Düsseldorf, Germany)

Reliable Transport for Mobile Ad Hoc Networks with Constrained Application Protocol (CoAP) over Negative-Acknowledgment Oriented Reliable Multicast (NORM)

James Nguyen (US Army CERDEC, USA); Wei Yu (Towson University, USA); Daniel Ku (CERDC & Space and Terrestrial Communications Directorate, USA)

Low-Computational Complexity Intrusion Detection System for Jamming Attacks in Smart Grids

Brycent Chatfield, Rami J. Haddad and Lei Chen (Georgia Southern University, USA)

Gateway Placement for Reliability Optimization in 5G-Satellite Hybrid Networks

Yurui Cao, Lei Zhao, Yongpeng Shi and Jiajia Liu (Xidian University, P.R. China)

Cross-layer Multiuser Session Control for Improved SDN Cloud Communications

Helber Silva and Felipe Barbalho (Federal University of Rio Grande do Norte, Brazil); Augusto J. Venancio Neto (Federal University of Rio Grande do Norte (UFRN), Brazil & Instituto de Telecomunicações Aveiro, Portugal)

Evaluating QoS for Real-Time Applications Using a Lightweight Simulation of Network Traffic

Tim Humernbrum and Christian Ahlbrand (University of Münster, Germany); Sergey Gorlatch (University of Munster, Germany)

OGN

Room: MAUI Suite 4

Chair: Norihiko Shinomiya (Soka University, Japan)

Cost and Energy Efficient Programmable Architecture for Integrated Hybrid Optical Switching

Carla Raffaelli (University of Bologna, Italy); Norvald Stol (Norwegian University of Science and Technology, Norway)

Traffic Prediction for Inter-Data Center Cross-Stratum Optimization Problems

Michał Aibin (British Columbia Institute of Technology & Wrocław University of Science and Technology, Canada); Soroush Haeri (Simon Fraser University, Canada); Krzysztof Walkowiak (Wrocław University of Science and Technology, Poland); Ljiljana Trajković (Simon Fraser University, Canada)

Energy Efficiency of Dynamic Routing in Elastic Optical Networks with Back-to-Back Regeneration

Krzysztof Walkowiak (Wrocław University of Science and Technology, Poland); Mirosław Klinkowski (National Institute of Telecommunications, Poland)

A Study on the Impact of Inter-Core Crosstalk on SDM Network Performance

Mirosław Klinkowski (National Institute of Telecommunications, Poland); Piotr Lechowicz and Krzysztof Walkowiak (Wrocław University of Science and Technology, Poland)

A Hybrid Testbed for Performance Evaluation of Large-Scale Datacenter Networks

Artur Pilimon and Sarah Ruepp (Technical University of Denmark, Denmark)

Scheduled Lightpath Switching with Spatio-Spectral Resource Affinity

Jeremy M. Plante and Vinod M. Vokkarane (University of Massachusetts Lowell, USA)

Tuesday, March 6, 12:00 - 13:30

Lunch (on attendee own)

Tuesday, March 6, 13:30 - 15:30

Plenary Talk I: Transmitter Power Control in Wireless Networking

Prof. Nick Bambos

Chair: Honggang Wang (University of Massachusetts, Dartmouth & College of Engineering, USA)

Plenary Talk II: Challenges Ahead for Multiple Access in 5G

Prof. Hikmet Sari

Chair: Andrea Zanella (University of Padova, Italy)

Tuesday, March 6, 15:30 - 16:00

Coffee Break

Tuesday, March 6, 16:00 - 18:00

Invited Talks II:

Room: Lahaina I

Chair: Wei Yu (Towson University, USA)

Shared Networks and the Evolution towards 5G

Luiz DaSilva (Trinity College & Trinity College Dublin, Ireland)

Cyber Physical Social Systems: Towards Deeply Integrated Hybridized Systems

Falko Dressler (Paderborn University, Germany)

Cyber-Human Partnerships - Towards a Resilient Ecosystem in Smart Cities

Schahram Dustdar (Vienna University of Technology, Austria)

Learning Nonlinear and Dynamic Network Connectivity and Processes on Graphs

Georgios B. Giannakis (University of Minnesota, USA)

Invited Talks III

Room: Lahaina II

Chair: Lei Chen (Georgia Southern University, USA)

Big Data Analysis for Smart Grid

Zhu Han (University of Houston, USA)

Toward Next Generation Multimedia Data Processing and Sharing

Jiangchuan Liu (Simon Fraser University, Canada)

Content-centric Edge Caching for 5G Mobile Internet and Beyond

Victor C.M. Leung (University of British Columbia, Canada)

CIS II:

Room: Lahaina III

Chair: Saptarshi Debroy (City University of New York & Hunter College, USA)

iShare: Blockchain Based Privacy-aware Multi-Agent Information Sharing Games for Cybersecurity

Danda B. Rawat (Howard University, USA); Laurent Njilla and Kevin Kwiat (Air Force Research Laboratory, USA); Charles A Kamhoua (US Army Research Laboratory & Network Science Division, USA)

Effects of the atmospheric turbulence on the single photon transmission in quantum channel

Nan Zhao, Xiao Yang Wang and Nan Chen (Xidian University, P.R. China)

An Android Malware Detection Approach Using Weight-Adjusted Deep Learning

Wenjia Li, Zi Wang, Juecong Cai and Sihua Cheng (New York Institute of Technology, USA)

A Case Study of Security and Privacy Threats from Augmented Reality (AR)

Song Chen (Binghamton University); Zupei Li, Fabrizio D'Angelo and Chao Gao (University of Massachusetts Lowell, USA); Xinwen Fu (University of Central Florida, USA)

Collaborative Adversarial Modeling for Spectrum Aware IoT Communications

Priyanka Samanta, Elizabeth Kelly and Amina Bashir (City University of New York, USA); Saptarshi Debroy (City University of New York & Hunter College, USA)

An Location-aware Authentication Scheme for Cross-domain Internet of Thing Systems

Chenglong Fu, Tassadit Kezmane and Xiaojiang Du (Temple University, USA); Yat Fu and Colin Morrisseau (Air Force Research Lab, USA)

WCS

Room: Lahaina IV

Chair: Cong Shen (University of Science and Technology of China, P.R. China)

Adaptive Resource Allocation for LTE/WiFi Coexistence in the Unlicensed Spectrum

Jianxin Dai and Cong Shen (University of Science and Technology of China, P.R. China)

COQRC: A Rateless Video Transmission Solution

Lingyu Liu (Tongji University, P.R. China); Jun Wu (Tongji University China, P.R. China); Jian Wu (Tongji Uni, P.R. China)

An Accurate Simple Approximation to the Double-Nakagami (Generalized-K) Fading Channels

Hua FU (University of Sherbrooke & IETR, Canada); Sebastien Roy (University of Sherbrooke, Canada); Julian Cheng (University of British Columbia, Canada)

Modeling and Analysis of Clustered D2D Millimeter-Wave Communications

Wenqiang Yi, Yuanwei Liu and Arumugam Nallanathan (Queen Mary University of London, United Kingdom (Great Britain))

A Bipartite Matching Based User Pairing Scheme for Hybrid VLC-RF NOMA Systems

Yu Han and Xiaotian Zhou (Shandong University, P.R. China); Liuqing Yang (Colorado State University, USA); Shanshan Li (Shandong University, P.R. China)

SPC

Room: MAUI Suite 4

Chair: Hen-Geul Yeh (California State University Long Beach, USA)

New Space-Frequency Conjugate Two-Path Transmission OFDM Systems

Hen-Geul Yeh (California State University Long Beach, USA)

A Novel Approach for Mitigation of AM/PM Delay Mismatch in Polar Transmitters

Basak Can (Intel Corporation, USA); Giuseppe Li Puma (Intel Corporation, Germany)

Joint Estimation of Channel Parameters in Massive MIMO Systems via PARAFAC Analysis

Xiao Wei and Wei Peng (Huazhong University of Science and Technology, P.R. China); Derrick Wing Kwan Ng (University of New South Wales, Australia); Robert Schober (University of British Columbia, Canada); Tao Jiang (Huazhong University of Science and Technology, P.R. China)

Performance Analysis of Hybrid ARQ Buffer Management

Sangmin Kim, Daejung Yoon and Kilsik Ha (Samsung Electronics, Korea)

Tuesday, March 6, 19:00 - 21:00

Welcome Reception

## **Wednesday, March 7**

Wednesday, March 7, 08:30 - 09:30

Keynote Talk III: Internet of Everything for the New Industrial Revolution

Prof. Yunhao Liu

Chair: Jian Ren (Michigan State University, USA)

Wednesday, March 7, 09:30 - 10:00

Coffee Break

Wednesday, March 7, 10:00 - 12:00

Plenary Forum

Future Trends of Technology Innovations

Chair: Haohong Wang (TCL Research America, USA)

Wednesday, March 7, 12:00 - 13:30

Lunch (on attendee own)

Wednesday, March 7, 13:30 - 14:30

Plenary Talk III: Generative Sensing

Prof. Lina Karam

Chair: Jian Ren (Michigan State University, USA)

Wednesday, March 7, 14:30 - 15:30

Plenary Talk IV: The Edge of DOK (Device-Of-Kin): From Mobile Social Networking to Fog Computing

Prof. Junshan Zhang

Chair: Jian Ren (Michigan State University, USA)

Wednesday, March 7, 15:30 - 16:00

Coffee Break

Wednesday, March 7, 16:00 - 18:00

Invited Talks IV

Room: Lahaina I

Chair: Tommaso Melodia (Northeastern University, USA)

Reliable Video Streaming over mmWave with Multi Connectivity and Network Coding

Michele Zorzi (University of Padova, Italy)

The Internet of Things and its Security Challenges

Wenjing Lou (Virginia Tech, USA)

Modeling resource allocation in cellular networks

Marco G Ajmone Marsan (Politecnico di Torino & IMDEA Networks, Italy)

Toward an Optimization-Based Wireless Network Operating System

Tommaso Melodia (Northeastern University, USA)

Invited Talks V:

Room: Lahaina II

Chair: Wenjia Li (New York Institute of Technology, USA)

Demystifying High-Dynamic-Range Technology

Panos Nasiopoulos (University of British Columbia, Canada)

Green Robust Optimization for Energy Saving in Networks under Traffic Uncertainty

Eiji Oki (Kyoto University, Japan)

Spatial Modulation Based on Reconfigurable Antennas - A New Air Interface for the Internet of Things

Marco Di Renzo (Paris-Saclay University / CNRS, France)

New Directions in Wireless Full-duplex

Ashutosh Sabharwal (Rice University, USA)

WN I:

Room: Lahaina III

Chair: Carla Raffaelli (University of Bologna, Italy)

End-to-End Delay in Multi-Hop Wireless Networks With Random Relay Deployment

Yuan Liang, Yu Zheng, Jian Ren and Tongtong Li (Michigan State University, USA)

Energy-Efficient Beamforming for Massive MIMO with Inter-Cell Interference and Inaccurate CSI

Shuai Zhang, Lu Liu and Yu Cheng (Illinois Institute of Technology, USA); Xianghui Cao (Southeast University, P.R. China); Lin X. Cai (Illinois Institute of Technology, USA)

Multi-rate ALOHA Protocols for Machine-Type Communication

Daniel Zucchetto and Andrea Zanella (University of Padova, Italy)

Energy Conservation in Animal Tracking

Hoda Ayatollahi and Cristiano Tapparello (University of Rochester, USA); Malitha N Wijesundara (Sri Lanka Institute of Information Technology & University of Rochester, NY USA, Sri Lanka); Wendi Heinzelman (University of Rochester, USA)

CIS & ISA

Room: Lahaina IV

Chair: Cedric Westphal (Huawei Innovation Center, USA)

Security Mechanisms to Defend against New Attacks on Software-Defined Radio

Ke Li, Xiangzhan Yu and Hongli Zhang (Harbin Institute of Technology, P.R. China); Longfei Wu (Fayetteville State University, USA); Xiaojiang Du (Temple University, USA); Paul Ratazzi (Air Force Research Laboratory, USA); Mohsen Guizani (University of Idaho & University of Idaho, USA)

K-Loop Free Assignment in Conference Review Systems

Longhua Guo (Shanghai Jiaotong University, P.R. China); Jie Wu (Temple University, USA); Wei Chang (Saint Joseph's University, USA); Jun Wu and Jianhua Li (Shanghai Jiao Tong University, P.R. China)

Avoiding Inconsistency in OpenFlow Stateful Applications Caused by Multiple Flow Requests

Walber José Adriano Silva (Federal University of Pernambuco, Brazil)

A Popularity-aware Centrality Metric for Content Placement in Information Centric Networks

Junaid A Khan (INRIA & INSA Lyon, France); Cedric Westphal (Huawei Innovation Center, USA); Yacine Ghamri-Doudane (University of la Rochelle, France)

Software Defined Networking for Quality-aware Management of Multi-hop Spontaneous Networks

Carlo Giannelli (University of Ferrara, Italy); Paolo Bellavista and Domenico Scotece (University of Bologna, Italy)

AgileDC: A Novel Optical Data Center Network Architecture

Dinh Danh Le (Dublin City University, Ireland); Jingyan Wang, Liam Barry and Conor McArdle (Dublin City University, Ireland)

MCC:

Room: MAUI Suite 4

A Hybrid Approach for Name Resolution and Producer Selection in Information Centric Network

Lijun Dong and Guoqiang Wang (Huawei, USA)

JORDAN: A Novel Traffic Engineering Algorithm for Dynamic Adaptive Streaming over HTTP

Jing Ren (University of Electronic Science and Technology of China, P.R. China); Kejie Lu (University of Puerto Rico at Mayaguez, Puerto Rico); Cedric Westphal (Huawei Innovation Center, USA); Jin Wang (Soochow University & City University of Hong Kong, P.R. China); Jinfan Wang (City University of Hong Kong, Hong Kong); Tongyu Song (University of Electronic Science and Technology of China, P.R. China); Shucheng Liu (Huawei Technologies, P.R. China); Jianping Wang (City University of Hong Kong, Hong Kong)

Video QoE Prediction Based on User Profile

Raffael Shalala (Ben-Gurion University of the Negev, Israel); Amit Dvir (Ariel University, Israel); Ran Dubin and Ofer Hadar (Ben-Gurion University of the Negev, Israel)

A Progressive Transmission Technique for the Streaming of Point Cloud Data Using the Kinect

Carlos Moreno (California State University, Fresno, USA); Ming Li (California State University, USA)

Towards UAV Assisted Multi-Path Data Streaming in Mobile Ad-Hoc Networks

Fan Liang (Towson University, USA); James Nguyen (US Army CERDEC, USA); Weichao Gao, William Hatcher and Wei Yu (Towson University, USA)

Scaling 360-degree Adaptive Bitrate Video Delivery Over an SDN Architecture

Brian Hayes (Georgia Institute of Technology, USA); Yusun Chang (Kennesaw State University & The Georgia Institute of Technology, USA); George Riley (Georgia Institute of Technology, USA)

Wednesday, March 7, 19:00 - 21:00

Banquet & Award Ceremony

Room: HALONAKAI

## **Thursday, March 8**

Thursday, March 8, 08:30 - 09:30

Keynote IV: Telecom policy: competition, spectrum, access and technology transitions

Prof. Henning Schulzrinne

Chair: Honggang Wang (University of Massachusetts, Dartmouth & College of Engineering, USA)

Thursday, March 8, 09:30 - 10:00

Coffee Break

Thursday, March 8, 10:00 - 12:00

Distinguished Lecture IV: Vehicular Communications and Networking: Where Benz Meets Marconi

Prof. Liuqing Yang

Room: Lahaina I

Chair: Qing Yang (University of North Texas, USA)

Invited Talks VI:

Room: Lahaina II

Chair: Shaoen Wu (Ball State University, USA)

Cloud Gaming: Improving Quality of Experience with Adaptation and SDN

Shervin Shirmohammadi (University of Ottawa, Canada)

A Fresh Look at an Old Problem: Network Utility Maximization — Convergence, Delay, and Complexity

Ness B. Shroff (The Ohio State University, USA)

Inkjet-/3D-/4D-Printed Wireless Ultrabroadband mmW Modules

Manos M. Tentzeris (Georgia Institute of Technology, USA)

Gridless Compressed Sensing Meets Phase Retrieval

Zhi Tian (George Mason University, USA)

WAHS:

Room: Lahaina III

Chair: Norihiko Shinomiya (Soka University, Japan)

An Opportunistic Medium Access Control Protocol for Visible Light Ad Hoc Networks

Jithin Jagannath (Northeastern University & ANDRO Computational Solutions, LLC, USA); Tommaso Melodia (Northeastern University, USA)

Task Allocation Schemes for Crowdsourcing in Opportunistic Mobile Social Networks

Xiao Chen and Bo Deng (Texas State University, USA)

Enabling Dynamic and Lightweight Management of Distributed Bluetooth Low Energy Devices

Minkeun Ha (KTH Royal Institute of Technology, Sweden); Thomas Lindh (Royal Institute of Technology, Sweden)

Evolutionary Algorithm Optimized Centralized Offline Localization and Mapping

Stephan Schlupkothen, Ahmed Hallawa and Gerd H. Ascheid (RWTH Aachen University, Germany)

Hiding Critical Targets in Smart Grid Networks

Wei Bao and Qinghua Li (University of Arkansas, USA)

MCVC I:

Room: Lahaina IV

Chairs: Kuldip Singh Atwal (University of Central Florida, USA), Wei Yu (Towson University, USA)

A Framework to Enable Multiple Coexisting Internet of Things Applications

Wei Yu, Hanlin Zhang and Yalong Wu (Towson University, USA); David Griffith and Nada Golmie (NIST, USA)

Performance Analysis and Application of Mobile Blockchain

Kongrath Suankaewmanee (Nanyang Technological University, Singapore); Hoang Thai Dinh, Dusit Niyato, Suttinee Sawadsitang and Ping Wang (Nanyang Technological University, Singapore); Zhu Han (University of Houston, USA)

Digital Forensic Analysis of Instant Messaging Applications on Android Smartphones

Hao Zhang and Lei Chen (Georgia Southern University, USA); Qingzhong Liu (Sam Houston State University, USA)

An Efficient Cross-layer Approach for Throughput-Maximal and Delay-Minimal Green Vehicular Networks

Kun Hua (Lawrence Technological University, USA); Xing Liu (Lawrence Tech University, USA); Zheyi Chen (Lawrence Technological University, USA); Ali S Alghamdi (Saudi Red Crescent Authority & Oakland University, USA); Mahdi Ali (Hyundai Motor Company, USA)

SDN-based Mobility Management and QoS Support for Vehicular Ad-hoc Networks

Kuldip Singh Atwal (University of Central Florida, USA); Ajay Guleria (Panjab University Chandigarh, India); Mostafa Bassiouni (University of Central Florida, USA)

5G-UCDA in High Speed Rail with Multi Antenna-to-Logical Cell Circular FIFO Mapping Strategy

Subharthi Banerjee and Michael Hempel (University of Nebraska-Lincoln, USA); Sushanta Mohan Rakshit (University of Nebraska - Lincoln, USA); Hamid Sharif (University of Nebraska-Lincoln, USA)

NAPE I:

Room: MAUI Suite 4

Chair: Theodoros Tsiligkaridis (MIT Lincoln Laboratory, USA)

Distributed Optimization of Multi-Beam Directional Communication Networks

Theodoros Tsiligkaridis (MIT Lincoln Laboratory, USA)

Stationary Distribution of a Generalized LRU-MRU Content Cache

George Kesidis (Pennsylvania State University, USA)

A Novel Approach to Exponential Speedup of Simulation Events in Wireless Networks

Uzoma Onunkwo (Sandia National Lab, USA); Anand Ganti, Brian Van Leeuwen, Michael Scoggin and Richard Schroepel (Sandia National Laboratories, USA)

JumboNet Elephant Tracking Using Delay-Tolerant Routing with Multiple Sinks

Nadir Adam and Cristiano Tapparello (University of Rochester, USA); Malitha N Wijesundara (Sri Lanka Institute of Information Technology & University of Rochester, NY USA, Sri Lanka); Wendi Heinzelman (University of Rochester, USA)

Caching UAV Assisted Secure Transmission in Small-Cell Networks

Fen Cheng (Dalian University of Technology, P.R. China); Guan Gui (Nanjing University of Posts and Telecommunications, P.R. China); Nan Zhao (Dalian University of Technology, P.R. China); F. Richard Yu (Carleton University, Canada); Yunfei Chen (University of Warwick, United Kingdom (Great Britain)); Jie Tang (South China University of Technology, P.R. China); Hikmet Sari (École Supérieure d'Électricité (SUPELEC), France)

Social Data Driven SDN Network Operation using Northbound Interface

Tsumugi Tairaku (Ochanomizu University, Japan); Akihiro Nakao and Shu Yamamoto (University of Tokyo, Japan); Saneyasu Yamaguchi (Kogakuin University, Japan); Masato Oguchi (Ochanomizu University, Japan)

Thursday, March 8, 12:00 - 13:30

Lunch (on attendee own)

Thursday, March 8, 13:30 - 15:30

NAPE II:

Chair: Yuhong Liu (Santa Clara University, USA)

End-to-End Network Performance Monitoring for Dispersed Computing

Quynh Nguyen, Pradipta Ghosh and Bhaskar Krishnamachari (University of Southern California, USA)

Diversity for Detecting Routing Attacks in Multihop Networks

Mai Abdelhakim, Xin Liu and Prashant Krishnamurthy (University of Pittsburgh, USA)

Reducing Network Vulnerability to Malicious Attacks

Maede Rayatidamavandi and Frank Conlon (Texas Tech University, USA); Mahshid Rahnamay Naeini (University of South Florida, USA)

Embedding Chains of Virtual Network Functions in Inter-Datacenter Networks

Hideo Kobayashi (Soka University, Japan); Genya Ishigaki and Riti Gour (The University of Texas at Dallas, USA); Jason P. Jue (University of Texas at Dallas, USA); Norihiko Shinomiya (Soka University, Japan)

Generalized Survivability Models for Many-to-Many Communication

Dylan A.P. Davis and Vinod M. Vokkarane (University of Massachusetts Lowell, USA)

Invited Talks VII

Room: Lahaina I

Chair: Shucheng Yu (Stevens Institute of Technology, USA)

NDN view of the 5G mobile network and IoT

Toshitaka Tsuda (Waseda University & Formerly Fujitsu, Japan)

Learning-Based Ultra-Dense Small Cell Networks in Dynamic Environments

Li-Chun Wang (National Chiao Tung University, Taiwan)

Non-Orthogonal Multiple Access in 5G Wireless Networks

Vincent W.S. Wong (University of British Columbia, Canada)

Optically interconnected resource pool architecture for future backbone network

Naoaki Yamanaka (Keio University, Japan)

GCNC

Room: Lahaina III

Chair: Wei Yu (Towson University, USA)

Modeling and Analysis of Power Amplifier Dissipation Energy in Wireless Handset Transceivers

Farhad E. Mahmood (University of Kansas & Lecturer at University of Mosul, USA); Erik S. Perrins (University of Kansas, USA); Lingjia Liu (Virginia Tech, USA)

Energy Efficient User Association and Power Control for Dense Heterogeneous Networks

Hui Ding and Haixia Zhang (Shandong University, P.R. China); Jie Tian (Shandong Normal University, P.R. China); Shenghao Xu and Dongfeng Yuan (Shandong University, P.R. China)

Performance Evaluation of Energy Efficiency with Sleep Mode in Ultra Dense Networks

Hansong Xu, Wei Yu and Amirshahram Hematian (Towson University, USA); David Griffith and Nada Golmie (NIST, USA)

Performance Analysis of Cooperative Relaying in Diffusion-Based Molecular Communication

Bonan Yin (Beijing University of Posts and Telecommunications, P.R. China); Mugen Peng (Beijing University of posts & Telecommunications, P.R. China)

Efficient Cloudlet Deployment: Local Cooperation and Regional Proxy

Dawei Li (Montclair State University, USA); Jie Wu (Temple University, USA); Wei Chang (Saint Joseph's University, USA)

Analysis on Connectivity of Energy Harvesting Wireless Sensor Networks Based on Simulation

Hanbing Cong, Quanlong Li and Chengchao Zhou (Harbin Institute of Technology, P.R. China); Qing Yang (University of North Texas, USA)

MCVC II:

Room: Lahaina IV

Chair: Shaoen Wu (Ball State University, USA)

An Out-of-band Authentication Scheme for Internet of Things Using Blockchain Technology

Longfei Wu (Fayetteville State University, USA); Xiaojiang Du (Temple University, USA); Wei Wang (Beijing Jiaotong University, P.R. China); Bin Lin (Dalian Maritime University, P.R. China)

Don't Be Surprised: I See Your Mobile App Stealing Your Data

Swarna Gopalan, Aditi Kulkarni, Arpitaben Shah, Jun Dai, Jinsong Ouyang, Pinar Muyan-Ozcelik and Xiaoyan Sun (California State University, Sacramento, USA)

Realtime Software Defined Self-Interference Cancellation Based on Machine Learning for In-Band Full Duplex Wireless Communications

Hanqing Guo, Junhong Xu, Shangyue Zhu and Shaoen Wu (Ball State University, USA)

Automatic Detection of Opioid Intake Using Wearable Biosensor

Md Shaad Mahmud (University of Massachusetts Medical School, USA); Hua Fang (University of Massachusetts Medical School & Dartmouth, USA); Honggang Wang (University of Massachusetts, Dartmouth & College of Engineering, USA); Stephanie Carreiro (University of Massachusetts Medical School, USA); Edward Boyer (Harvard Medical School, USA)

Spatio-Temporal Motifs for Optimized Vehicle-to-Vehicle (V2V) Communications

Tengchan Zeng (Virginia Tech, USA); Omid Semiari (Georgia Southern University, USA); Walid Saad (Virginia Tech, USA)

Secrecy Energy Efficiency Optimization for Cooperative Jamming in Cognitive Radio Networks

Yingkun Wen, Tao Jing, Yan Huo, Zhen Li and Qinghe Gao (Beijing Jiaotong University, P.R. China)

Thursday, March 8, 15:30 - 16:00

Coffee Break

Thursday, March 8, 16:00 - 18:00

Invited Talks VIII:

Room: Lahaina I

Chair: Qing Yang (University of North Texas, USA)

Fundamental Limits on Energy in Wireless Networks

Anders Høst-Madsen (University of Hawaii, USA)

Autonomous and Connected Vehicles: A New Challenge for Smart Cities

Azzedine Boukerche (University of Ottawa, Canada)

Resource Allocation for Green Coordinated Multipoint Communication Systems

Xin Wang (Fudan University, P.R. China)

WN II:

Room: Lahaina II

Chair: Miao Pan (University of Houston, USA)

Joint Mode Selection, VBS Association and Resource Allocation for Cellular D2D  
Communication Networks

Ling Wang, Rong Chai, Hong Chen and Qianbin Chen (Chongqing University of Posts  
and Telecommunications, P.R. China)

Exploiting Magnetic Field Analysis to Characterize MI Wireless Communications in  
Subsea Environments

Debing Wei and Li Yan (University of Houston, USA); Xuanheng Li and Yi Sun (Dalian  
University of Technology, P.R. China); Dongfeng Yuan (Shandong University, P.R.  
China); Jiefu Chen and Miao Pan (University of Houston, USA)

Towards An Integrated Approach for Distributed 5G Cell Association in UDN under  
Interference and Mobility

Sushanta Mohan Rakshit (University of Nebraska - Lincoln, USA); Subharthi Banerjee,  
Michael Hempel and Hamid Sharif (University of Nebraska-Lincoln, USA)

Fairness-Energy-Throughput Optimized Trade-off in Wireless Networks

Cedric Gueguen (University of Rennes 1, France); Malo Manini (B-com, France)

A Novel Fault Tolerance Parallel Routing Mechanism with Network Coding in Hybrid  
Wireless-Optical Broadband Access Network

Hong Zhang and Ruyan Wang (Chongqing University of Posts and Telecommunications,  
P.R. China); Honggang Wang (University of Massachusetts, Dartmouth & College of  
Engineering, USA); Guangkai Wu (Chongqing University of Posts and  
Telecommunications, P.R. China)

GCNC & COG

Room: Lahaina III

Chair: Shaoen Wu (Ball State University, USA)

Distance Based User Localization and Tracking with Mechanical Ultrasonic Beamforming

Shangyue Zhu, Hanqing Guo, Junhong Xu and Shaoen Wu (Ball State University, USA)

Heterogeneous Flow Table Integration for Capacity Enhancement in Software-Defined Networks

Chi-Hsiang Hung, Jheng-Jyun Wang, Li-Chun Wang and Kuochen Wang (National Chiao Tung University, Taiwan); Chain-Wu Lee (Inventec Corporation, Taiwan)

PWiG: A Phase-based Wireless Gesture Recognition System

Dapeng Man, Xin Wang, Wu Yang and Jiguang Lv (Harbin Engineering University, P.R. China); Xiaojiang Du (Temple University, USA); Miao Yu (Chinese Academy of Sciences, P.R. China)

A Novel Authentication Protocol with Tree-based Signature for Green Cloud Computing

Jian Shen, Dengzhi Liu, Qi Liu, Zhihua Xia and Tianqi Zhou (Nanjing University of Information Science and Technology, P.R. China)

Energy vs QoE Tradeoff of Dense Mobile Networks

George Arvanitakis and Florian Kaltenberger (Eurecom, France)

Pilot Length Optimization for Spectral and Energy Efficient D2D Communications Underlay Massive MIMO Networks

Shenghao Xu and Haixia Zhang (Shandong University, P.R. China); Jie Tian (Shandong Normal University, P.R. China); Dalei Wu (The University of Tennessee at Chattanooga, USA); Dongfeng Yuan (Shandong University, P.R. China)

CLD

Room: Lahaina IV

Chair: Shucheng Yu (Stevens Institute of Technology, USA)

PVFlow: Flow-Table Virtualization in POF-based vSDN Hypervisor (PVX)

Shengru Li, Kai Han, Huibai Huang and Zuqing Zhu (University of Science and Technology of China, P.R. China)

Survivable Virtual Network Mapping based on Two-Stage Potential Games for Cloud Infrastructure

Yi Zhu and Jiru Xu (Hawaii Pacific University, USA); Qiong Zhang, Xi Wang and Paparao Palacharla (Fujitsu Laboratories of America, USA); Tadashi Ikeuchi (Fujitsu Laboratories of America, Inc., USA)

Identifying Influential Factors of CDN Performance with Large-scale Data Analysis

Dawei Wang (National Computer Network Emergency Response Technical Team / Coordination Center of China, P.R. China); Shuzhuang Zhang (Beijing University of Post and Telecommunications, P.R. China); Yibo Xue (Tsinghua university, P.R. China); Yingfei Dong (University of Hawaii, USA)

The Identification of Secular Variation in IoT Based on Transfer Learning

Caidan Zhao, Zhibiao Cai, Minmin Huang and Mingxian Shi (Xiamen University, P.R. China); Xiaojiang Du (Temple University, USA); Mohsen Guizani (University of Idaho & University of Idaho, USA)

Cost-Adaptive Load Sharing for Cloud Computing

Zohar Naor (University of Haifa, Israel)

Information Flow Queue Optimization in EC Cloud

Yangyang Tao and Shucheng Yu (Stevens Institute of Technology, USA); Junxiu Zhou (University of Arkansas at Little Rock, USA)

NAPE & SCSD

Room: MAUI Suite 4

Chair: Min Kyung An (Sam Houston State University, USA)

An Empirical Evaluation of Deep Learning for Network Anomaly Detection

Ritesh Malaiya and Donghwoon Kwon (Texas A&M University-Commerce, USA); Jinoh Kim (Texas A&M University-Commerce & Lawrence Berkeley National Laboratory, USA); Sang Suh (Texas A&M University-Commerce, USA); Hyunjoo Kim and Ikkyun Kim (ETRI, Korea)

Hierarchical Agglomerative Aggregation Scheduling in Directional Wireless Sensor Networks

Min Kyung An and Hyuk Cho (Sam Houston State University, USA); Lei Chen (Georgia Southern University, USA)

Location-driven Mobility Support Architecture for Information Centric Networks

Aytac Azgin (Huawei Research, USA); Ravishankar Ravindran (Huawei & Huawei, USA); Guoqiang Wang (Huawei, USA)

eFCM : An Enhanced Fuzzy C-Means Algorithm for Longitudinal Intervention Data

Venkata Sukumar Gurugubelli (University Of Massachusetts Dartmouth, USA); Zhouzhou Li (University of Massachusetts Dartmouth, USA); Honggang Wang (University of Massachusetts, Dartmouth & College of Engineering, USA); Hua Fang (University of Massachusetts Medical School & Dartmouth, USA)

Tensor-Based Efficient Multi-Interferer RFI Excision: Results Using Real-World Data

Tilahun Getu (École de Technologie Supérieure (ETS), Canada); Wessam Ajib (Université du Québec à Montréal, Canada); Omar Yeste (LASSENA Labs, Canada); Rene Jr. Landry (University of Quebec & Ecole de Technologie Supérieure, Canada)