



WCSP 2017

Preliminary Technical Program

October 11, 2017 Wednesday

AHSNS-01: Mobile and Vehicular Ad Hoc Networks

Date: Oct. 11, 2017

Time: 14:00pm – 15:30pm

Room: Unique

Chair: Changle Li, Xidian University, P.R. China

1. **In-Car Shopping: A Data Dissemination Scheme for Vehicular Networks in Urban Areas**
Chen Chen, Cong Wang, Guoxian Zhang and Zhiyuan Ren (Xidian University, P.R. China); Jingjing Ma (Central South University, P.R. China)
2. **An Efficient Adaptive Frame Aggregation Scheme in Vehicular Ad Hoc Networks**
Kui Liu and Changle Li (Xidian University, P.R. China)
3. **HTTP Message Response Time on Destination Node-Driven Routing for Social MANET**
Koichi Hirai and Kazumasa Takami (Soka University, Japan)
4. **A Task Assignment Algorithm Based on Particle Swarm Optimization and Simulated Annealing in Ad-hoc Mobile Cloud**
Bonan Huang, Weiwei Xia, Yueyue Zhang, Jing Zhang, Qian Zou, Feng Yan, Lianfeng Shen (Southeast University, P.R. China)
5. **A Spectrum Penetration Assisted MAC Protocol for Vehicular Communication Networks**
Yu Zhang, Caillian Chen, Jianping He and Xiping Guan (Shanghai Jiao Tong University, P.R. China)
6. **BLE-Horn: A Smartphone-based Bluetooth Low Energy Vehicle-to-Pedestrian Safety System**
Mengfei Wu, Bojiao Ma, Zhenyu Liu, Lingyan Xiu, and Lin Zhang (Beijing University of Posts and Telecommunications, P.R. China)

CTS-01: Coding and Modulation

Date: Oct. 11, 2017

Time: 14:00pm – 15:30pm

Room: Perseverance

Chair: Nan Liu, Southeast University, P.R. China

1. **Distance Spectrum and Optimized Design of Concatenated Polar Codes**
Minzi Xu, Peiyao Chen, Baoming Bai and Sheng Tong (Xidian University, P.R. China)
2. **Photograph QC-LDPC Codes Design for Multi-Level Cell Flash Memories**
Lingjun Kong (Nanjing University of Posts and Telecommunications, P.R. China); Jun Li (Nanjing University of Science and Technology, P.R. China); Pingping Chen (Fuzhou University, P.R. China); Shunwai Zhang (Nanjing University of Posts and Telecommunications, P.R. China)
3. **An Algebraic Approach to Design Low Rate Low Density Parity Check Code**
Zhe Zhang, Liang Zhou, Junyi Du and Shenglong Peng (University of Electronic Science and Technology of China, P.R. China)
4. **Construction of Multiple-Rate LDPC Codes Using Modified PEG**
Tengfei Chu, Xueqin Jiang (Donghua University, P.R. China); Jia Hou (Soochow University, P.R. China); Huiming Wang (Xi'an Jiaotong University, P.R. China); Lingjun Kong (Nanjing University of Posts and Telecommunications, P.R. China)
5. **A Universal Interleaver Design for Bit-Interleaved QC-LDPC Coded Modulation**
Xiaojian Liu and Yuejun Wei (Huawei Technologies, P.R. China); Ming Jiang (Southeast University, P.R. China)
6. **Multilevel Polar-Coded Modulation Based on Cooperative Relaying**
Xuan Ma, Lixin Li, Meng Zhu (Northwestern Polytechnical University, P.R. China); Wei Chen (Tsinghua University, P.R. China); Zhu Han (University of Houston, USA)

SPS-01: Multimedia Signal Processing (I)

Date: Oct. 11, 2017

Time: 14:00pm – 15:30pm

Room: Revolution

Chair: Xin Wei, Nanjing University of Posts and Telecommunications, P.R. China

1. **Supervised and Semi-supervised Speech Enhancement Using Weighted Nonnegative Matrix Factorization**
Xia Zou (PLA Army Engineering University, P.R. China); Yonggang Hu (Australian National University, Australia); Xiongwei Zhang (PLA Army Engineering University, P.R. China)
2. **Expression Recognition in the Wild with Transfer Learning**
Tian Xia, Yifeng Zhang, Yuan Liu and Yibo Sun (Southeast University, P.R. China)
3. **Deformable Deep Convolutional Generative Adversarial Network in a Microwave Based Hand Gesture Recognition System**
Jiajun Zhang and Zhiguo Shi (Zhejiang University, P.R. China)
4. **Limited-view CT Reconstruction Based on Autoencoder-like Generative Adversarial Networks with Joint Loss**
Qingjiang Wu and Xiubin Dai (Nanjing University of Posts and Telecommunications, P.R. China)
5. **Decision Tree Based Fast CU Partition for HEVC Lossless Compression of Medical Image Sequences**
Dongdong Zhang, Xiaojing Duan and Di Zang (Tongji University, P.R. China)
6. **ISAR 2-D Imaging Under Low SNR Based on Improved Compressive Sensing**
Jie Xia, Xinfei Lu and Weidong Chen (University of Science and Technology of China, P.R. China)

WCS-01: Channel Models

Date: Oct. 11, 2017

Time: 14:00pm – 15:30pm

Room: Knowledge A

Chair: Yu Liu, Shandong University, P.R. China

1. **Cluster-based Geometrical Dynamic Stochastic Model for MIMO Scattering Channels**
Xiukun Xie, Zaichen Zhang, Hao Jiang, Jian Dang, Liang Wu (Southeast University, P.R. China)
2. **Algorithm for Modeling Dual-Polarized MIMO Channel in Land Mobile Satellite Communications**
Xin Wang and Chenhao Qi (Southeast University, P.R. China)
3. **Non-Stationary Mobile-to-Mobile Channel Modeling Using the Gauss-Markov Mobility Model**
Ruisi He and Bo Ai (Beijing Jiaotong University, P.R. China); Gordon Stüber (Georgia Institute of Technology, USA); Zhangdui Zhong (Beijing Jiaotong University, P.R. China)
4. **A 3-D HAP-MIMO Channel Model Based on Dynamic Properties of Scatterers**
Jingge Hu, Lingge Jiang, Chen He, Zhuxian Lian and Jing Liu (Shanghai Jiao Tong University, P.R. China)
5. **New Deterministic and Statistical Simulation Models for Non-Isotropic UAV-MIMO Channels**
Yiran Li and Xiang Cheng (Peking University, P.R. China)

6. **High-precision multiple-antenna Indoor Positioning System based on Chirp Signal**
Congchao Wang, Zaichen Zhang, Liang Wu, Jian Dang (Southeast University, P.R. China)

WCS-02: Interference Alignment

Date: Oct. 11, 2017

Time: 14:00pm – 15:30pm

Room: Knowledge B

Chair: Nan Zhao, Dalian University of Technology, P.R. China

1. **Protocol-Sequence-Based Media-Access Control with Successive Interference Cancellation (Invited Paper)**
Kenneth W. Shum (*The Chinese University of Hong Kong, Hong Kong*); Yi Chen (*The Chinese University of Hong Kong, Shenzhen, P.R. China*); Yuan-Hsun Lo (*Xiamen University, P.R. China*); Wing Shing Wong (*The Chinese University of Hong Kong, P.R. China*); Yijin Zhang (*Nanjing University of Science and Technology, P.R. China*)
2. **Beneficial Jamming Design for Interference Alignment Networks**
Jing Guo and Yang Cao (Dalian University of Technology, P.R. China); Zhutian Yang (Harbin Institute of Technology, P.R. China); Nan Zhao (Dalian University of Technology, P.R. China); F. Richard Yu (Carleton University, Canada); Yunfei Chen (University of Warwick, UK); Victor C.M. Leung (University of British Columbia, Canada)
3. **Hedonic Coalition Formation Game for Clustered Interference Alignment**
Fan Zhao, Pengcheng Zhu, Jiamin Li and Xiaohu You (Southeast University, P.R. China)
4. **Topology Attribute and Global Resource-Driven Virtual Network Embedding Algorithm via Novel Node-Ranking Approach**
Haotong Cao and Longxiang Yang (Nanjing University of Posts and Telecommunications, P.R. China)
5. **Congestion-aware User-centric Cooperative Base Station Selection in Ultra-dense Networks**
Mengying Zhang and Xiumei Yang (Shanghai Research Center for Wireless Communications, SIMIT, P.R. China); Tianheng Xu (Shanghai Advanced Research Institute, Chinese Academy of Sciences, P.R. China); Ming-Tuo Zhou (Shanghai Research Center for Wireless Communications, SIMIT, P.R. China)
6. **Embedding Virtual Networks Using a Novel Node-Ranking Approach via Exploiting Topology Attributes and Global Network Resources**
Haotong Cao, Longxiang Yang and Hongbo Zhu (Nanjing University of Posts and Telecommunications, P.R. China)

WNS-01: Resource Allocation (I)

Date: Oct. 11, 2017

Time: 14:00pm – 15:30pm

Room: Zijin

Chair: Sihai Zhang, University of Science and Technology of China, P.R. China

1. **Underlay Spectrum Sharing with Spatially Random Users and Cooperative Wireless Power Transfer**
Chao Zhai (Shandong University, P.R. China); He Chen (University of Sydney, Australia); Xinhua Wang (Qingdao University, P.R. China); Ju Liu (Shandong University, P.R. China)
2. **User Pairing and Channel Allocation for Full-Duplex Self-Organizing Small Cell Networks**
Qi Zhang, Qingwei Du and Kun Zhu (Nanjing University of Aeronautics and Astronautics, P.R. China)
3. **Multi-Objective Resource Allocation in NOMA Cognitive Radios Based on a Practical Non-linear Energy Harvesting Model**
Yuhao Wang, Yuhang Wu, and Fuhui Zhou (Nanchang University, P.R. China); Yongpeng Wu (Shanghai Jiao Tong University, P.R. China); Zheng Chu (Middlesex University, UK); Yingjiao Wang (Nanchang University, P.R. China)
4. **QoE-aware Resource Allocation Scheme in the OFDMA-based Cognitive Radio Network with Imperfect CSI Consideration**
Xixi Jin, Lei Xie and Huifang Chen (Zhejiang University, P.R. China)
5. **Effective Resource Consumption in Cellular Networks Based on Batch Latency Update**
Juma Saidi Ally, Wen Wang, Sihai Zhang and Wuyang Zhou (University of Science and Technology of China, P.R. China)
6. **Spectrum Sensing Interval Optimization and Power Control for Energy Efficient Cognitive Radio Networks**
Boyang Liu and Guangyue Lu (Xi'an University of Posts and Telecommunications, P.R. China); Zan Li (Xidian University, P.R. China); Fuhui Zhou (Nanchang University, P.R. China)
3. **Physical Layer Security in D2D Communication System Underlying Cellular Networks**
Lei Wang, Yi Shi, Mingkai Chen, Jingwu Cui and Baoyu Zheng (Nanjing University of Posts and Telecommunications, P.R. China)
4. **Physical Layer Secure Binary Signature Design for Wiretap CDMA Systems**
Guangyu Ti, Ming Li, Xiaowen Tian, Zihuan Wang, Hongyu Li and Qian Liu (Dalian University of Technology, P.R. China)
5. **Physical Layer Security of Non-orthogonal Multiple Access in Cognitive Radio Networks**
Zhongwu Xiang, Yueming Cai, Weiwei Yang, and Xiaoli Sun (PLA Army Engineering University, P.R. China); Yingbo Hu (Troops 75841, PLA, P.R. China)
6. **Hybrid Cache Placement for Improving Physical Layer Security in Cooperative Networks**
Fang Shi, Dongqing Xie, and Weiqiang Tan (Guangzhou University, P.R. China); Xianfu Lei (Southwest Jiaotong University, P.R. China); Lisheng Fan (Guangzhou University, P.R. China)

AHSNS-02: Wireless Sensor Networks

Date: Oct. 11, 2017

Time: 16:00pm – 17:30pm

Room: Unique

Chair: Shuai Han, Harbin Institute of Technology, P.R. China

1. **SADO: State-Associated and Delay-Oriented Data Collection for Intertidal WSNs**
Xinyan Zhou, Yushi Cheng and Xiaoyu Ji (Zhejiang University, P.R. China); Wenyuan Xu (University of South Carolina, USA)
2. **Communication Protocol with Network Coding in Long-chain Wireless Sensor Networks**
Gang Qi and Lin Zheng (Guilin University of Electronic Technology, P.R. China); Jing Zhang (Science and Technology on Communication Networks Laboratory, P.R. China)
3. **En-MAC: Environment-Aware MAC Protocol for WSNs in Intertidal Environment**
Xiaohan Lai (Zhejiang University, P.R. China); Miao Xu (University of South Carolina, USA); Xiaoyu Ji, Wenyuan Xu and Longdao Chen (Zhejiang University, P.R. China)
4. **Matrix Completion Based Sensor Selection Strategies in Wireless Sensor Networks**
Xiaohan Zhang and Changchuan Yin (Beijing University of Posts and Telecommunications, P.R. China)
5. **A Robot-Assisted Topology Control Algorithm in Software-Defined Sensor Networks**
Haohao Yin, Cui Ding, Feng Yan, Weiwei Xia and Lianfeng Shen (Southeast University, P.R. China); Shuguang Deng (Hunan City University, P.R. China)
6. **Quality of Information Maximization for Wireless Sensor Networks With Heterogeneous Traffic**
Chunhui Feng (Xidian University, P.R. China); Peisheng Zhu (Chinese Academy of Sciences, P.R. China); Qinghai Yang (Xidian University, P.R. China)

WNSS-01: Physical Layer Security (I)

Date: Oct. 11, 2017

Time: 14:00pm – 15:30pm

Room: Alliance

Chair: Yi Qian, University of Nebraska Lincoln, USA

1. **Physical Layer Security in Heterogeneous Cellular Networks: A Spatio-Temporal Perspective**
Bing Wang (National Digital Switching System Engineering and Technological Research Center, P.R. China); Chunguo Li (Southeast University, P.R. China); Kaizhi Huang (Information Engineering University, P.R. China); Xiaoming Xu (PLA Army Engineering University, P.R. China); Yi Wang (Zhengzhou University of Aeronautics, P.R. China)
2. **Physical Layer Security in IoT: A Spatial-Temporal Perspective**
Shuai Zhang, Jianhua Peng (National Digital Switching System Engineering and Technological Research Center, P.R. China); Kaizhi Huang (National Digital Switching System Engineering and Technological Research Center, P.R. China); Xiaoming Xu (Army Engineering University, P.R. China); Zhou Zhong (National Digital Switching System Engineering and Technological Research Center, P.R. China)

CTS-02: Coding and Detection

Date: Oct. 11, 2017

Time: 16:00pm – 17:30pm

Room: Perseverance

Chair: Wen Chen, Shanghai Jiaotong University, P.R. China

1. **Design of Precoding Matrix Scheme Based on Maximizing Frobenius Norm to Interference Alignment**
Junhui Zhao and Yunyi Liu (Beijing Jiaotong University, P.R. China); Yi Gong (South University of Science and Technology of China, Shenzhen, P.R. China)
2. **BMST Coded PPM over Free-space Optical Links with Iterative Receiver**
Jinshun Zhu (Sun Yat-sen University, P.R. China); Shancheng Zhao (Jinan University, P.R. China); Xiao Ma (Sun Yat-sen University, P.R. China)
3. **Graph-Merged Detection and Decoding of Polar-Coded MIMO Systems**
Shusen Jing, Junmei Yang, Anlan Yu, Xiaohu You, and Chuan Zhang (Southeast University, P.R. China)
4. **Signal Detection with Channel Estimation Error for Full Duplex Wireless System Utilizing Ambient Backscatter**
Chen Chen and Gongpu Wang (Beijing Jiaotong University, P.R. China); Feifei Gao (Tsinghua University, P.R. China); Yulong Zou (Nanjing University of Posts and Telecommunications, P.R. China)
5. **Secret Key Generation from Correlated Sources and Secure Link**
Daming Cao and Wei Kang (Southeast University, P.R. China)
6. **Compressing Big Graph Data: A Relative Node Importance Approach**
Jiamei Yan and Zhaoyang Zhang (Zhejiang University, P.R. China)

SPS-02: Multimedia Signal Processing (II)

Date: Oct. 11, 2017

Time: 16:00pm – 17:30pm

Room: Revolution

Chair: Xin Wang, Fudan University, P.R. China

1. **Robust Watermarking Based on Spread Transform**
Yingying Li and Yifeng Zhang (Southeast University, P.R. China)
2. **The Face Detection Algorithm Based on Local Elastic Potential Energy Feature**
Cheng Jiang and Yifeng Zhang (Southeast University, P.R. China)
3. **Imaging Experiment of Azimuth-variant Bistatic UWB SAR at UHF Band**
Hongtu Xie (National University of Defense Technology, P.R. China); Shaoying Shi (Air Force Early Warning Academy, P.R. China); Daoxiang An (National University of Defense Technology, P.R. China); Fuhai Li (Hunan University, P.R. China); Guoqian Wang (Affiliated Hospital of Hunan Institute of Traditional Chinese Medicine, P.R. China)

4. **Distributed Compressive Video Sensing with Adaptive Measurements Based on Temporal Correlativity**
Yang Yang, Zhang Dengyin and Fei Ding (Nanjing University of Posts and Telecommunications, P.R. China)
5. **QoE-Driven Centralized Scheduling for HTTP Adaptive Video Streaming Transmission over Wireless Networks**
Tiantian Li and Haixia Zhang (Shandong University, P.R. China); Jie Tian (Shandong Normal University, P.R. China); Shuaishuai Guo (Shandong University, P.R. China)
6. **A New Nonlinear Tracking Differentiator and Its Application in Edge Detection**
Song Xue, Xincheng Jiang and Jimiao Duan (Logistical Engineering University, P.R. China)

WCS-03: Relaying

Date: Oct. 11, 2017

Time: 16:00pm – 17:30pm

Room: Knowledge A

Chair: Boyang Liu, (Xi'an University of Posts and Telecommunications, P.R. China)

1. **DF Relaying Networks in Randomly Distributed Interference Environments**
Xiazhi Lai and Wanxin Zou (Shantou University, P.R. China); Dongqing Xie and Lisheng Fan (Guangzhou University, P.R. China)
2. **Performance Analysis for Full-Duplex Relaying D2D Communications in Cellular Networks**
Yijin Pan, Ming Chen, Zhaohui Yang, and Hao Xu (Southeast University, P.R. China)
3. **Performance Analysis of Cooperative Relaying Communications for Space Information Networks**
Houlian Gao, Jian Jiao, Shaohua Wu, Shushi Gu, and Qinyu Zhang (Harbin Institute of Technology, P.R. China)
4. **Performance Analysis for Cooperative Relaying in Diffusion-Based Molecular Communication**
Bonan Yin, Xiaodong Ji, and Mugen Peng (Beijing University of Posts & Telecommunications, P.R. China)
5. **Throughput Maximization for Block Fading Buffer-Aided Relay Channels with Non-Ideal Transmitter Circuit Power**
Hengjing Liang, Chuan Huang, Zhi Chen, and Shaoqian Li (University of Electronic Science and Technology of China, P.R. China)
6. **Performance Test and Analysis of Multi-hop Network Based on UAV Ad Hoc Network Experiment**
Xudong Wang, Zhichao Mi and Wang Hai (PLA Army Engineering University, P.R. China); Ning Zhao (The 28th Research Institute of China Electronics Technology Group Corporation, P.R. China)

WCS-04: Resource Allocation (I)

Date: Oct. 11, 2017

Time: 16:00pm – 17:30pm

Room: Knowledge B

Chair: Wendong Yang, PLA Army Engineering University, P.R. China

1. **Resource Allocation Based on Clustering Algorithm for Hybrid Device-to-Device Networks**
Hao Ren, Fan Jiang, and Honglin Wang (Xi'an University of Posts and Telecommunications, P.R. China)
2. **Position-based Mode Selection and Resource Allocation for D2D Communications Underlying Cellular Networks**
Xiaoyan Liu, Xiukui Li, and Changsheng Liu (Dalian University of Technology, P.R. China)
3. **Joint Resource Allocation for Multi-homing and Single-network Users in Heterogeneous Cognitive Radio Networks**
Feng Chen and Mingjian Fu (Fuzhou University, P.R. China); Wen-Kang Jia (Chiao Tung University, Taiwan)
4. **Ant Colony Optimization Inspired Resource Allocation for Multiuser Multicarrier Systems**
Chia-Hui Liao and Jen-Ming Wu (Tsing Hua University, Taiwan); Jianbo Du and Liqiang Zhao (Xidian University, P.R. China)
5. **Energy-Efficient User Access Control and Resource Allocation in HCNs with Non-ideal Circuitry**
Yuhao Zhang, Qimei Cui and Ning Wang (Beijing University of Posts and Telecommunications, P.R. China)
6. **Distributed Matching Mechanism for Resource Sharing in Mobile Ad Hoc Cloud**
Li Jin and Ling Tang (Nanjing University of Science and Technology, P.R. China)

WNS-02: Resource Allocation (II)

Date: Oct. 11, 2017

Time: 16:00pm – 17:30pm

Room: Zijin

Chair: Yunlong Cai, Zhejiang University, P.R. China

1. **Energy-Efficient Resource Allocation in Delay-Aware Wireless Virtualized Networks**
Tian Dang, Yitao Mo, Yaohua Sun, and Mugen Peng (Beijing University of posts & Telecommunications, P.R. China)
2. **Achieving Optimum Throughput for LTE and WiFi Coexistence**
Xinghua Sun and Jun Zhang (Nanjing University of Posts and Telecommunications, P.R. China); Victor C.M. Leung (University of British Columbia, Canada); Hongbo Zhu (Nanjing University of Posts and Telecommunications, P.R. China)
3. **An Evolutionary Game for Joint Wireless and Cloud Resource Allocation in Mobile Edge Computing**
Jing Zhang, Weiwei Xia, Zhixu Cheng, Qian Zou and Bonan Huang (Southeast University; Fei Shen (Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences, P.R. China); Feng Yan and Lianfeng Shen (Southeast University, P.R. China)
4. **Enabling Content Aware QoE Network Bandwidth Allocation**

Lu Wang, Yongxiang Zhao, Chunxi Li, and Yuchun Guo (Beijing Jiaotong University, P.R. China)

5. **Share Communication and Energy Resources for Mobile Cloud Computing: An Optimal Cooperative Contract Approach**
Xinsong Dong, Jianchao Zheng, Yueming Cai (PLA Army Engineering University, P.R. China); Jihao Yang (Leshan Normal University, P.R. China); Yida Wang (PLA Army Engineering University, P.R. China)
6. **Lifetime Maximization Based Resource Allocation for M2M Communication Networks**
Zhangfeng Ma, Rong Chai and Qianbin Chen (Chongqing University of Posts and Telecommunications, P.R. China)

WNSS-02: Physical Layer Security (II)

Date: Oct. 11, 2017

Time: 16:00pm – 17:30pm

Room: Alliance

Chair: Jun Li, Nanjing University of Science and Technology, P.R. China

1. **Secrecy Sum Rate Maximization in NOMA Systems with Wireless Information and Power Transfer**
Ganning He, Lixin Li and Xu Li (Northwestern Polytechnical University, P.R. China); Wei Chen (Tsinghua University, P.R. China); Lie-Liang Yang (University of Southampton, UK); Zhu Han (University of Houston, USA)
2. **Secrecy Rate Maximization for MISO System with Energy Harvesting and Eavesdroppers**
Sami Ahmed Haider, Yunlong Cai, and Minjian Zhao (Zhejiang University, P.R. China)
3. **Secure OFDM Transmission in Wireless Networks with Untrusted Relays**
Qiuli Dong and Guobing Li (Xi'an Jiaotong University, P.R. China)
4. **Secure Precise Transmission with Multi-Relay- Aided Directional Modulation**
Wei Zhu and Feng Shu (Nanjing University of Science and Technology, P.R. China); Tingting Liu (Nanjing Institute of Technology, P.R. China); Xiaobo Zhou, Jinsong Hu, Guangzu Liu, Linqing Gui, Jun Li, and Jinhui Lu (Nanjing University of Science & Technology, P.R. China)
5. **Robust Secure Beamforming for MISO SWIPT Broadcast Channels with Confidential Messages**
Yuanlian Huo and Tingting Zhang (Northwest Normal University, P.R. China); Chunguo Li (Southeast University, P.R. China)
6. **Secrecy Analysis of UL Transmission for SWIPT in WSNs with Densely Clustered Eavesdroppers**
Xin Hu, Kaizhi Huang, and Yajun Chen (National Digital Switching System Engineering and Technological Research Center, P.R. China); Xiaoming Xu and Xiaohu Liang (PLA Army Engineering University, P.R. China)

October 12, 2017 Thursday

AHSNS-03: Localization

Date: Oct. 12, 2017

Time: 14:00pm – 15:30pm

Room: Unique

Chair: Cheng Li, Memorial University, Canada

1. **A New Passive Localization Method of the Interference Source for Satellite Communications (Invited Paper)**

Benjian Hao, Di An, Linlin Wang, Zan Li and Yue Zhao (Xidian University, P.R. China)

2. **Holographic Radio Interferometry for Target Tracking in Dense Multipath Indoor Environments**

Bing Xu, Wangdong Qi, Yuexin Zhao and Li Wei (PLA Army Engineering University, P.R. China); Cheng Zhang (PLA Airborne Training Base, P.R. China)

3. **Geographic Information System based Estimation and Correction Algorithm for Outdoor Location**

Yi Zhang, Lin Ma, Shuai Han and Weixiao Meng (Harbin Institute of Technology, P.R. China)

4. **Gaussian Process Based Radio Map Construction for LTE Localization**

Wencan Zhang, Haochen Huang and Xiaohua Tian (Shanghai Jiao Tong University, P.R. China)

5. **Enhancing Direction-Finding Accuracy for Shortwave Fixed Stations**

Ying Ju (Xi'an Jiaotong University & State Radio Monitoring Center, P.R. China); Yuan Chen (Shaanxi Monitoring Station, State Radio Monitoring Center, P.R. China); Xiayi Qiu and Qinye Yin (Xi'an Jiaotong University, P.R. China)

6. **Robust Indoor Localization in Ultra Dense Networks: A Fingerprint Similarity Approach**

Danni Hou, Junyu Liu, Min Sheng, Yan Zhang, Linlin Peng, Yang Zheng and Jiandong Li (Xidian University, P.R. China)

CTS-03: Transmission and Multiple Access

Date: Oct. 12, 2017

Time: 14:00pm – 15:30pm

Room: Perseverance

Chair: Li Chen, Sun Yat-sen University, P.R. China

1. **An Opportunistic-Bit Scheme with IP Styled Communication**

Bingli Jiao (Peking University, P.R. China)

2. **Multi-tap Analog MIMO Self-Interference Cancellation for Full-Duplex Communications**

Yaxin Liu, Donglin Liu, Xudong Li and Chuan Huang (University of Electronic Science and Technology of China, P.R. China)

3. **FFRD: Fragment Forwarding and Reassembly Decoupling Based Chunk Transmission in NDN**

Chengbao Cao and Kaiping Xue (University of Science and Technology of China, P.R. China); Hao Yue (San

Francisco State University, USA); Junjie Xu (University of Science and Technology of China, P.R. China)

4. **Buffer-Aided Secure Two-Hop Communications with Adaptive Link Selection and on/off Power Control**

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

5. **A Rate-Splitting Non-Orthogonal Multiple Access Scheme for Uplink Transmission**

Ye Zhu, Xianbin Wang, Zhaoyang Zhang and Xiaoming Chen (Zhejiang University, P.R. China); Yan Chen (Huawei Technologies, P.R. China)

6. **Feedback-aided Irregular Repetition Slotted ALOHA (F-IRSA)**

Dai Jia, Hanxiao Yu, Ce Sun, Zesong Fei, and Jingming Kuang (Beijing Institute of Technology, P.R. China)

SPS-03: Signal Processing for Localization

Date: Oct. 12, 2017

Time: 14:00pm – 15:30pm

Room: Revolution

Chair: Qinghe Du, Xi'an Jiaotong University, P.R. China

1. **SAILoc: A Novel Acoustic Single Array System for Indoor Localization**

Guinan Li, Lei Zhanglei, Feng Lin, Minlin Chen, and Zhi Wang (Zhejiang University, P.R. China)

2. **Automatic Parking Slot Detection Based on Around View Monitor (AVM) Systems**

Lei Li and Changle Li (Xidian University, P.R. China); Qieshi Zhang (Waseda University, Japan); Tao Guo and Zhifang Miao (Xidian University, P.R. China)

3. **Localization for Visible Light Communication with Practical Non-Gaussian Noise Model**

Yueyue Zhang, Yaping Zhu, Weiwei Xia, Feng Yan, and Lianfeng Shen (Southeast University, P.R. China); Yi Wu (Fujian normal university, P.R. China)

4. **TOA Estimation in Dense Multipath Environment for Mobile Device Using Audible LFM Signal**

Yifan Gu (Zhejiang University, P.R. China); Shumin Chen (Zhejiang Sci-Tech University, P.R. China); Yanbo Xiang, Yiqian Xia, and Yuanxin Xu (Zhejiang University, P.R. China)

5. **Direct Position Determination Based on Unitary Space-time Subspace Data Fusion**

Jie-xin Yin, Rui-rui Liu, Ding Wang, and Ying Wu (Zhengzhou Institute of Information Science and Technology Institute, P.R. China)

6. **Maximum Likelihood Network Localization Using Range Estimation and GPS Measurements**

Hongwei Yu and Yi Jiang (Fudan University, P.R. China)

WCS-05: Resource Allocation (II)

Date: Oct. 12, 2017

Time: 14:00pm – 15:30pm

Room: Knowledge A

Chair: Wei Wang, Zhejiang University, P.R. China

1. **Adaptive Multi-Band Resource Allocation for a Two-User Simultaneous Information and Power Transmission System**

Xiaoyang Li, Zidong Han and Yi Gong (Southern University of Science and Technology, P.R. China)

2. **Underlay Spectrum Sharing with Wireless Power Transfer Towards Primary User**

Chao Zhai (Shandong University, P.R. China); Long Shi (Singapore University of Technology & Design, Singapore); He Chen (University of Sydney, Australia)

3. **Economical-Energy-Efficient Resource Allocation for Cache-Enabled Cloud Radio Access Networks**

Zhipeng Yan and Mugen Peng (Beijing University of posts and Telecommunications, P.R. China)

4. **Resource Allocation Algorithm Based on Energy Cooperation in Two-way Cognitive Radio Relay Networks**

Zhenwei Xie, Qi Zhu and Su Zhao (Nanjing University of Posts and Telecommunications, P.R. China)

5. **Joint Resource Allocation for Outdoor and Indoor UEs in Heterogeneous Data and Energy Integrated Communication Networks**

Yizhe Zhao (University of Electronic Science and Technology of China, P.R. China); Ning Wei (ZTE Corporation, P.R. China); Jie Hu (University of Electronic Science and Technology of China, P.R. China); Kun Yang (University of Essex, UK); Qin Yu and Chuan Huang (University of Electronic Science and Technology of China, P.R. China)

6. **Robust uplink power allocation for two-tier heterogeneous networks**

Yongjun Xu, Yuchao Liu, and Rong Lai (Chongqing University of Posts and Telecommunications, P.R. China)

WCS-06: Power Control

Date: Oct. 12, 2017

Time: 14:00pm – 15:30pm

Room: Knowledge B

Chair: Guan Gui, Nanjing University of Posts and Telecommunications, P.R. China

1. **QoS-Driven Power Control for Energy Harvesting Fading Multiple-Access Channels**

Jingwen Han and Deli Qiao (East China Normal University, P.R. China)

2. **Throughput Maximization for a UAV-Enabled Wireless Power Transfer in Relaying System**

Meng Hua, Chunguo Li, Yongming Huang and Luxi Yang (Southeast University, P.R. China)

3. **Throughput Maximization in Backscatter Assisted Wireless Powered Communication Networks with Battery Constraint**

Bin Lyu, Zhen Yang and Guan Gui (Nanjing University of Posts and Telecommunications, P.R. China)

4. **System Power Minimization for Virtualized Cloud Radio Access Networks with Delay Constraint**

Shirui Wang, Ying Wang, Ruijin Sun and Yuanfei Liu (Beijing University of Posts and Telecommunications, P.R. China)

5. **Position-based Wireless Communications: Power Control and Mode Handover**

Xiukui Li (Dalian University of Technology, P.R. China)

6. **Joint Power Control and User Pairing for Ergodic Capacity Maximization in V2V Communications**

Yinlu Wang, Zhaohui Yang, Yijin Pan and Ming Chen (Southeast University, P.R. China)

WNS-03: Radio Access Networks

Date: Oct. 12, 2017

Time: 14:00pm – 15:30pm

Room: Zijin

Chair: TBD

1. **Energy Efficient Content-Centric Beamforming in Multicast Fog Radio Access Network**

Xihan Chen, Minjian Zhao and Yunlong Cai (Zhejiang University, P.R. China)

2. **Minimum-Latency Communication in Wireless Mesh Networks Under Noisy Physical Interference Model**

Qin Xin (University of the Faroe Islands, Faroe Islands); Xia Yan (University of Hunan, P.R. China)

3. **Random Access Protocol Design and Optimization for Standalone LTE-U Systems**

Chaohui Zhao, Jiantao Yuan, Aiping Huang, and Hangguan Shan (Zhejiang University, P.R. China)

4. **Cell Planning for Millimeter Wave Cellular Networks**

Qiyao Wu, Li Chen, Xiaohui Chen, and Weidong Wang (University of Science and Technology of China, P.R. China)

5. **A Novel Online Incentive Mechanism under Budget Constraint for Crowdsourcing Systems**

Jiawei Zhang, Xiong Wang, Xiaoying Gan and Xiaohua Tian (Shanghai Jiao Tong University, P.R. China)

6. **Big Data Enabled User Behavior Characteristics in Mobile Internet**

Shuai Jiang, Baoshan Wei, Tong Wang, Zhenbang Zhao and Xing Zhang (Beijing University of Posts and Telecommunications, P.R. China)

WNSS-03: Jamming and Secure Transmission

Date: Oct. 12, 2017

Time: 14:00pm – 15:30pm

Room: Alliance

Chair: Caijun Zhong, Zhejiang University, P.R. China

1. **Secure UAV Communication in the Presence of Full-Duplex Active Eavesdropper (Invited Paper)**

Chenxi Liu and Tony Q. S. Quek (Singapore University of Technology and Design, Singapore); Jemin Lee (Daegu Gyeongbuk Institute of Science and Technology, Korea)

2. **Efficient and Unrecognizable OFDM Jamming By Failing the Cyclic Prefix Functionality**

Li Li, Shulin Tian, Jianguo Huang and Peng Zhang (University of Electronic Science and Technology of China, P.R. China)

3. **Achieving Secure Transmission using Feedback-based LT Code with Degree Distribution Updated**
Likang Wang, Jianhua Peng, Yi Ming, and Kaizhi Huang (Zhengzhou Institute of Information Science and Technology, P.R. China); Ai Qin Li (PLA 61062 troops, P.R. China)
4. **Beamformer Design and Performance Analysis of Multi-antenna Wireless Legitimate Surveillance Systems**
Xin Jiang (Zhejiang University, P.R. China); Sheng Yang (CentraleSupélec, France); Caijun Zhong, Fengzhong Qu, Xiaoming Chen, and Zhaoyang Zhang (Zhejiang University, P.R. China)
5. **Secure Transmission of Cognitive Untrusted Relay Networks with Selection Diversity**
Dechuan Chen, Yunpeng Cheng, Weiwei Yang and Jianwei Hu, Yueming Cai (PLA Army Engineering University, P.R. China); Yingbo Hu (PLA 75841 Troops, P.R. China)
6. **UAV Wireless Information Surveillance via Proactive Eavesdropping**
Qingheng Song and Shi Jin (Southeast University, P.R. China); Fu-Chun Zheng (University of York, UK); Shengli Zhang (Shenzhen University, P.R. China)

AHSNS-04: Sensing and Estimation

Date: Oct. 12, 2017

Time: 16:00pm – 17:30pm

Room: Unique

Chair: Hai Wang, PLA Army Engineering University, P.R. China

1. **An Energy-Saving Spectrum Sensing Scheme with Combined Clustering and Censoring in Cognitive Wireless Sensor Networks**
Yitao Liu and Changping Zhu (Hohai University, P.R. China); Peishun Yan (Nanjing University of Posts and Telecommunications, P.R. China)
2. **A Compressive and Adaptive Sampling Approach in Crowdsensing Networks**
Jingjing Chen, Zhonghui Chen, Haifeng Zheng and Xinxin Feng (Fuzhou University, P.R. China)
3. **Collaborative Data Collection with Hybrid Vehicular Crowd Sensing in Smart Cities**
Maoqiang Wu, Dongdong Ye, Jiawen Kang and Rong Yu (Guangdong University of Technology, P.R. China)
4. **PowerSensor: A Method for Power Optimization of Smartphone Through Sensing Wakelock Application**
Bo Chen, Xi Li and Xuehai Zhou (University of Science and Technology of China, P.R. China)
5. **An Unscented Kalman Filter Based Available Bandwidth Estimation Algorithm for Space Bundle Links**
Xiaoli Liao (Harbin Institute of Technology, Shen Zhen, P.R. China); Zhihua Yang (Harbin Institute of Technology,

P.R. China); Peng Yuan (Harbin Institute of Technology, Shenzhen, P.R. China)

6. **Traffic Estimation in Road Networks via Compressive Sensing**
Jiayin Li, Haifeng Zheng, Xinxin Feng and Zhonghui Chen (Fuzhou University, P.R. China)

CTS-04: Performance Analysis

Date: Oct. 12, 2017

Time: 16:00pm – 17:30pm

Room: Perseverance

Chair: Weixiao Meng, Harbin Institute of Technology, P.R. China

1. **Can Channel Output Feedback Enhance the Secrecy Capacity of the Finite State Markov Wiretap Channel with Delayed State Feedback?**
Bin Dai and Zheng Ma (Southwest Jiaotong University, P.R. China)
2. **On the Capacity of an Orbital Angular Momentum Based MIMO Communication System**
Yuqing Yuan, Zhaoyang Zhang, Ji Cang, Huayang Wu and Caijun Zhong (Zhejiang University, P.R. China)
3. **Impact of Adaptive Carrier-Sensing Range on the Performance of Dense Wireless Networks**
Zhaoming Ding (Southeast University, P.R. China); Song Xing (California State University, Los Angeles, USA); Feng Yan, Zhengquan Li, and Lianfeng Shen (Southeast University, P.R. China)
4. **Performance Analysis for Decoding LT Codes over BIAWGN Channels with SNR Mismatch**
Lei Yuan and Jie Pan (Lanzhou University, P.R. China); Lin Yuan (Tianjin Optical Electrical Group Co. Ltd., P.R. China)
5. **Achievable Degrees of Freedom (DoF) Analysis in Multi-user Half-duplex Relay Interference Networks**
Xiaoying Zhang, Chao Wang, Ping Wang and Fuqiang Liu (Tongji University, P.R. China)
6. **Tradeoff Between Efficiency and Delay of Distributed Source Coding for Uplink Transmissions in Machine Type Communications**
Wen Wang, Jinkang Zhu, Sihai Zhang, and Wuyang Zhou (University of Science and Technology of China, P.R. China)

SPS-04: Array Signal Processing

Date: Oct. 12, 2017

Time: 16:00pm – 17:30pm

Room: Revolution

Chair: Xiaofei Zhang, Nanjing University of Aeronautics and Astronautics, P.R. China

1. **Sum and Difference Coarrays Based 2-D DOA Estimation with Co-Prime Parallel Arrays**
Junpeng Shi and Guoping Hu (Air Force Engineering University, P.R. China); Xiaofei Zhang and Pan Gong (Nanjing University of Aeronautics and Astronautics, P.R. China)

2. **Calibration for Spaceborne Phased Array Antennas Without Interrupting Satellite Communications**

Yujie Lin (Beijing Institute of Technology, P.R. China); Qiang Ma (China Academy of Space Technology, P.R. China); Shuai Wang, Xiangyuan Bu and Jianping An (Beijing Institute of Technology, P.R. China)

3. **Two Dimensional Angle Estimation Using Separate Nested Acoustic Vector Sensor Array**

Jianfeng Li and Feng Wang (Hohai University, P.R. China); Xiaofei Zhang (Nanjing University of Aeronautics and Astronautics, P.R. China)

4. **Direction-of-Arrival Estimation for Coherently Distributed Sources via Symmetric Uniform Linear Array**

Yan-Mei Ma, Ke Deng, and Zhi-Hao Ding (Xi'an Jiaotong University, P.R. China)

5. **Three-Parallel Co-prime Array Configuration for Two-dimensional DOA Estimation**

Pan Gong and Xiaofei Zhang (Nanjing University of Aeronautics and Astronautics, P.R. China); Junpeng Shi (Air Force Engineering University, P.R. China); Wang Zheng (Nanjing University of Aeronautics and Astronautics, P.R. China)

6. **A Novel 2D DOA Estimation via Tensor Modeling for Cylindrical Conformal Array**

Xiaoyu Lan and Yufeng Li (Shenyang Aerospace University, P.R. China)

WCS-07: OFDM and Multi-Carrier

Date: Oct. 12, 2017

Time: 16:00pm – 17:30pm

Room: Knowledge A

Chair: Gang Wu, University of Electronic Science and Technology of China, P.R. China

1. **Information Rates of Unipolar OFDM Schemes in Gaussian Optical Intensity Channel**

Jing Zhou and Wenyi Zhang (University of Science and Technology of China, P.R. China)

2. **MMSE Precoding With Configurable Sizes for GFDM Systems**

Hong Wang and Rongfang Song (Nanjing University of Posts and Telecommunications, P.R. China)

3. **A Time-domain Calibration Scheme of Channel Reciprocity for TDD MIMO-OFDM System with IQ Imbalance**

Yan Liang, Rongfang Song, Fei Li and Xueyun He (Nanjing University of Posts & Telecommunications, P.R. China); Hongbin Li (Stevens Institute of Technology, USA)

4. **On the Practical Benefit of Hexagonal Multicarrier Faster-than-Nyquist Signaling**

Siming Peng, Aijun Liu, Xinhai Tong, Xiaohu Liang and Ke Wang (PLA Army Engineering University, P.R. China)

5. **Combination-Selection Algorithm for FBMC-IM System**

Jian Zhang, Minjian Zhao, Jie Zhong and Tianhang Yu (Zhejiang University, P.R. China)

WCS-08: Detection and Estimation

Date: Oct. 12, 2017

Time: 16:00pm – 17:30pm

Room: Knowledge B

Chair: Caijun Zhong, Zhejiang University, P.R. China

1. **Robust Beam Management Scheme Based on Simple 2-D DOA Estimation**

Xiao Chen, Zaichen Zhang, Liang Wu, Jian Dang (Southeast University, P.R. China); Pen-Shun Lu (Sony China Research Lab, Taiwan); Chen Sun (SONY, P.R. China)

2. **Asynchronous Detection for Machine-to-Machine Systems with Code Division Multiple Access**

Zhaohui Yang, Ming Chen, Yijin Pan, Hao Xu, and Jianfeng Shi (Southeast University, P.R. China)

3. **Relaxed-Bound K-Best Sphere Detection for Differential Unitary Space-Time Modulation**

Yipeng (Beijing University of Science and Technology, P.R. China); Shuangshuang Han (Institute of Automation, Chinese Academy of Sciences, P.R. China); Jian Liu (University of Electronic Science and Technology of China, P.R. China); Yinghua Zhang (Beijing University of Science and Technology, P.R. China)

4. **Joint Energy and Spectrum Detection in Cooperative Cognitive Radio under Noise Uncertainty**

Yazhou Hu, Jing Hu, Tiecheng Song, Yueyue Zhang, and Zhixu Cheng (Southeast University, P.R. China)

5. **A Novel Robust Spatial Spectrum Sensing Algorithm**

Ming Wu, Tiecheng Song, Lianfeng Shen, Zhengquan Li, Ziyang Jia, and Rui Zhang (Southeast University, P.R. China)

6. **Low Complexity K-best Detectors for MIMO-OFDM-IM Systems**

Jian Zhang, Minjian Zhao, Jie Zhong, and Tianhang Yu (Zhejiang University, P.R. China)

WNS-04: Data Caching (I)

Date: Oct. 12, 2017

Time: 16:00pm – 17:30pm

Room: Zijin

Chair: Junhui Zhao, Beijing Jiaotong University, P.R. China

1. **Joint Pushing and Caching Communication with 2-Dimensional Queue Model: Delay-cost Tradeoff (Invited Paper)**

Meng Wang and Wei Chen (Tsinghua University, P.R. China); Anthony Ephremides (University of Maryland, USA)

2. **Joint Caching and Sleep-Active Scheduling for Energy-Harvesting Based Small Cells**

Dan Xu, Hao Jin, Chenglin Zhao, and Dong Liang (Beijing University of Posts and Telecommunications, P.R. China)

3. **A Contextual Multi-Armed Bandit Approach to Caching in Wireless Small Cell Network**

Chenxi Zhang, Pinyi Ren, and Qinghe Du (Xi'an Jiaotong University, P.R. China)

4. **Mobility-Embedded and Social-Aware Distributed Caching for D2D Content Sharing**
Wei Zhang, Dan Wu, Xiaoming Chen; Junyue Qu, and Yueming Cai (PLA Army Engineering University, P.R. China)
5. **Machine Learning based Small Cell Cache Strategy for Ultra Dense Networks**
Shen Gao, Pei Li, Zhiwen Pan, Nan Liu, and Xiaohu You (Southeast University, P.R. China)

WNSS-04: Privacy and Content Protection

Date: Oct. 12, 2017

Time: 16:00pm – 17:30pm

Room: Alliance

Chair: Zhou Su, Shanghai University, P.R. China

1. **Data Leakage Between C/S Communication: A Case Study on Android Music App**
Huanhuan Li, Qian Luo, Shubin Zhang, Haibin Zhang, and Jiajia Liu (Xidian University, P.R. China)
2. **Scalable Protection Scheme for the H.264/SVC Video Streaming**
Ting Ma (Southwest Petroleum University, P.R. China)

3. **Secure and Privacy-preserving Task Announcement in Vehicular Cloud**
Abdulrahman Alamer and Yong Deng (University of Ontario Institute of Technology, Canada); Xiaodong Lin (Wilfrid Laurier University, Canada)
4. **Location Privacy-Aware Task Recommendation for Spatial Crowdsourcing**
Abdulrahman Alamer (University of Ontario Institute of Technology, Canada); Jianbing Ni (University of Waterloo, Canada); Xiaodong Lin (Wilfrid Laurier University, Canada); Sherman Shen (University of Waterloo, Canada)
5. **WebLogger: Stealing Your Personal PINs Via Mobile Web Application**
Rui Song, Yubo Song, Qihong Dong and Hu Aiqun (Southeast University, P.R. China); Shang Gao (The Hong Kong Polytechnic University, Hong Kong)
6. **Multi-authority Attribute-based Access Control Scheme in mHealth Cloud with Unbounded Attribute Universe and Decryption Outsourcing**
Qi Li and Hongbo Zhu (Nanjing University of Posts and Telecommunications, P.R. China)

October 13, 2017 Friday

AHSNS-05: Wireless Network Analysis

Date: Oct. 13, 2017

Time: 8:30am – 10:00am

Room: Unique

Chair: Shuai Han, Harbin Institute of Technology, P.R. China

1. **Characteristics Analysis of DOPs for Dual-GNSS Constellations with Uncertain Clock Offset**
Man Yao, Gangming Lv, Qiuli Dong, and Tantan Zhao (Xi'an Jiaotong University, P.R. China)
2. **The Fundamental Analysis of the Road Efficiency for Internet of Vehicles**
Kai Xiong, Supeng Leng (University of Electronic Science and Technology of China, P.R. China); Caixing Shao (Southwest University for Nationalities, P.R. China); Quanxin Zhao and Guanhua Qiao (University of Electronic Science and Technology Of China, P.R. China)
3. **Mobility Patterns Analysis of Beijing Residents based on Call Detail Records**
Lixing Shi and Wen Wang, Wei Cai (University of Science and Technology of China, P.R. China); Zhen Wang (China Telecom Corporation Limited, P.R. China); Sihai Zhang, and Wuyang Zhou (University of Science and Technology of China, P.R. China)
4. **Multi-hop Links Quality Analysis of 5G Enabled Vehicular Networks**
Shikuan Li, Zipeng Li, Ge Xiaohu and Jing Zhang (Huazhong University of Science and Technology, P.R. China); Minho Jo (Korea University, Korea)
5. **Impact of Mobility on Energy Consumption in Mobile Ad hoc Networks**
Yongshan Ma and Qinghai Yang (Xidian University, P.R. China); Kyung Sup Kwak (Inha University, Korea)

6. **Throughput Maximization for Energy Harvesting Cognitive Radio Networks with Finite Horizon**
Fan Zhang, Tao Jing, Yan Huo, and Kaiwei Jiang (Beijing Jiaotong University, P.R. China)

SPS-05: Beamforming for MIMO Systems

Date: Oct. 13, 2017

Time: 8:30am – 10:00am

Room: Perseverance

Chair: Nan Zhao, Dalian University of Technology, P.R. China

1. **Coordinated Beamforming Scheme for Heterogeneous Networks with Band-limited Backhaul Constraint**
Fasheng Zhou, Gaoyong Luo and Lisheng Fan (Guangzhou University, P.R. China); Jie Tang (South China University of Technology, P.R. China)
2. **Robust Beamforming Designs for Downlink Cloud Radio Access Networks**
Dongliang Yan, Rui Wang, and Erwu Liu (Tongji University, P.R. China)
3. **Hybrid Precoding for Millimeter Wave Massive MIMO with Analogy Combining**
Shaoqing Zhou, Wei Xu, Hua Zhang, and Xiaohu You (Southeast University, P.R. China)
4. **Sub-array Based Hybrid Precoding Design for Downlink Millimeter-Wave Multi-User Massive MIMO Systems**
Yuehong Guo, Lixin Li, and Xiaocong Wen (Northwestern Polytechnical University, P.R. China); Wei Chen (Tsinghua University, P.R. China); Zhu Han (University of Houston, USA)

5. **Nonsmooth Optimization for Joint Multicast Beamforming and User Scheduling in Massive MIMO Systems**
Saide Xu (Tsinghua University, P.R. China); Longfei Zhou (Peking University, P.R. China); Yuhao Dong (Tsinghua University, P.R. China)
6. **Robust Beamforming Against Direction-of-Arrival Mismatch via Signal-to-Interference-plus-Noise Ratio Maximization**
Wan Huan, Huiping Huang, Bin Liao, and Zhi Quan (Shenzhen University, P.R. China)

SPS-06: Signal Processing for MIMO and Radar Systems

Date: Oct. 13, 2017

Time: 8:30am – 10:00am

Room: Revolution

Chair: Xianfu Lei, Southwest Jiaotong University, P.R. China

1. **An Improved Algorithm for Doppler Ambiguity Resolution Using Multiple Pulse Repetition Frequencies**
Yang Li, Chunmei Xu, Xin Yan, and Qi Liu (Southeast University, P.R. China)
2. **Range and Velocity Estimation for OFDM-Based Radar-Radio Systems**
Xuanxuan Tian, Tingting Zhang, and Qinyu Zhang and Hongguang Xu (Harbin Institute of Technology, Shenzhen, P.R. China); Zhaohui Song (East China Normal University, P.R. China)
3. **Adaptive Filtering Based 3D Massive MIMO Sparse Channel Estimation**
Chan Wang, Guan Gui, and Fei Li (Nanjing University of Posts and Telecommunications, P.R. China)
4. **A Symmetric Accumulated Cross-Correlation Method of Parameter Estimation Based on Fractional Fourier Transform for ISAR Motion Compensation**
Jiayin Xue, Xiao Han, and Qinyu Zhang (Harbin Institute of Technology, Shenzhen, P.R. China)
5. **Spectral and Energy Efficiency of Cell-Free Massive MIMO Systems with Hardware Impairments**
Jiayi Zhang and Yinghua Wei (Beijing Jiaotong University, P.R. China); Emil Björnson (Linköping University, Sweden); Yu Han (Southeast University, P.R. China); Xu Li (Beijing Jiaotong University, P.R. China)
6. **Secure Energy Efficiency Optimization for MISO Cognitive Radio Network with Energy Harvesting**
Miao Zhang, Kanapathippillai Cumanan, and Alister G. Burr (University of York, UK)

WCS-09: NOMA (I)

Date: Oct. 13, 2017

Time: 8:30am – 10:00am

Room: Knowledge A

Chair: Rose Qingyang Hu, Utah State University, USA

1. **Dynamic Power Splitting between Information and Power Transfer in Non-orthogonal Multiple Access (Invited Paper)**
Rose Qingyang Hu and Zekun Zhang (Utah State University, USA)

2. **Uplink Simultaneous Wireless Information and Power Transfer with Non-Orthogonal Multiple Access**
Xiangmei Cheng and Yuan Liu (South China University of Technology, P.R. China)
3. **Power Control, User Scheduling and Resource Allocation for Downlink NOMA Systems with Imperfect Channel State Information**
Zihan Zhang, Qinghong Xia, Guanding Yu, and Rui Liu (Zhejiang University, P.R. China)
4. **Energy-Efficient Power Allocation for Non-orthogonal Multiple Access with Imperfect Successive Interference Cancellation**
Hong Wang, Zhaoyang Zhang, and Xiaoming Chen (Zhejiang University, P.R. China)
5. **Power Allocation Optimization for Uplink Non-Orthogonal Multiple Access Systems**
Huiling Zuo and Xiaofeng Tao (Beijing University of Posts and Telecommunications, P.R. China)

WCS-10: Massive MIMO (I)

Date: Oct. 13, 2017

Time: 8:30am – 10:00am

Room: Knowledge B

Chair: Xiumei Yang, Shanghai Research Center for Wireless Communications, P.R. China

1. **DASTPC: Performance of Dual-polarized Antenna Based Space-Time-Polarization Precoding over Ricean-K Channel with Imperfect CSI (Invited Paper)**
Chenggui Lou, Qinyu Zhang, Bin Cao, and Tingting Zhang (Harbin Institute of Technology, Shenzhen, P.R. China)
2. **On the Design of Massive Access**
Xiaoming Chen, Zhaoyang Zhang, Caijun Zhong, and Rundong Jia (Zhejiang University, P.R. China)
3. **A Layered Iterative Sampling Algorithm for Near-Optimal Detection in Uplink Massive MIMO Systems**
Nutian Zhang, Chao Fei, Zhenbing Zhang, Jianhao Hu, and Jienan Chen (University of Electronic and Technology of China, P.R. China)
4. **Measurements of Massive MIMO Channel in Real Environment with 8-Antenna Handset**
Jun She, Chen Gao, Yu Yu, Peng-fei Cui, and Wenjun Lu (Nanjing University of Posts and Telecommunications, P.R. China); Shi Jin (Southeast University, P.R. China); Hong-Bo Zhu (Nanjing University of Posts and Telecommunications, P.R. China)
5. **A Novel Beamforming to Improve Secrecy Rate in a DAJ Based Untrusted Relay Network**
Tamer Mekkawy, Rugui Yao, Fei Xu, Yanan Lu, and Ling Wang (Northwestern Polytechnical University, P.R. China)

WNS-05: Data Caching (II)

Date: Oct. 13, 2017

Time: 8:30am – 10:00am

Room: Zijin

Chair: Philippe Martins, TELECOM ParisTech, France

1. **Incentive Cooperative Caching for Localized Information-Centric Networks**
Junjie Xu, Kaiping Xue, and Chengbao Cao (University of Science and Technology of China, P.R. China); Hao Yue (San Francisco State University, USA)
2. **Adverse Selection Based Incentive Mechanism for Cooperative Caching in Distributed Storage Systems**
Ruqiu Ma, Li Wang, and Yinan Ding (Beijing University of Posts and Telecommunications, P.R. China); Zhu Han (University of Houston, USA); Bingli Jiao (Peking University, P.R. China)
3. **Clustered Small Base Stations for Cache-Enabled Wireless Networks**
Yan Niu, Shen Gao, Nan Liu, Zhiwen Pan, and Xiaohu You (Southeast University, P.R. China)
4. **Joint Computation Offloading and Data Caching with Delay Optimization in Mobile-Edge Computing System**
Haixia Wang, Rongpeng Li, Lu Fan, and Honggang Zhang (Zhejiang University; P.R. China)
5. **A Learning-Based Approach for Proactive Caching in Wireless Communication Networks**
Yuyang Wang, Yun Chen, Haibo Dai, Yongming Huang, and Luxi Yang (Southeast University, P.R. China)

WNSS-05: Wireless Network Security

Date: Oct. 13, 2017

Time: 8:30am – 10:00am

Room: U Lake

Chair: Huifang Chen, Zhejiang University, P.R. China

1. **Steady-State Performance Analysis of Consensus-based Distributed Detection under Sensing Data Falsification Attack**
Xiaoyan Zheng, Lei Xie and Huifang Chen (Zhejiang University, P.R. China)
2. **A Novel Method against the Firewall Bypass Threat in OpenFlow Networks**
Yicong Zhang and Jie Li (University of Tsukuba, Japan); Lin Chen (The University of Paris-Sud, France); Yusheng Ji (National Institute of Informatics, Japan); Feilong Tang (Shanghai Jiao Tong University, P.R. China)
3. **An Intelligent HoneyNet Architecture Based on Software Defined Security**
Xiangjun Meng, Zhifeng Zhao, Rongpeng Li, and Honggang Zhang (Zhejiang University, P.R. China)
4. **Three Lower Bounds on Secrecy Capacity for Indoor Visible Light Communications**
Cheng Liu (Southeast University, P.R. China); Jin-Yuan Wang (Nanjing University of Posts and Telecommunications, P.R. China); Jun-Bo Wang, Jian-Xia Zhu and Ming Chen (Southeast University, P.R. China)
5. **Self-Organizing Map-Based Scheme Against Probabilistic SSDF Attack in Cognitive Radio Networks**
Zhixu Cheng, Tiecheng Song, Jing Zhang, Jing Hu, Yazhou Hu, Lianfeng Shen, Xi Li and Jun Wu (Southeast University, P.R. China)
6. **Secure Content Sharing Protocol for D2D Users Based on Profile Matching in Social Networks**

Lei Wang, Zhonglei Li and Mingkai Chen (Nanjing University of Posts and Telecommunications, P.R. China); Aiqing Zhang (Anhui Normal University, P.R. China); JingWu Cui and Baoyu Zheng (Nanjing University of Posts and Telecommunications, P.R. China)

WCS-11: NOMA (II)

Date: Oct. 13, 2017

Time: 10:30am – 12:00pm

Room: Unique

Chair: Lin Bai, Beihang University, P.R. China

1. **Researches on Non-Orthogonal Multiple Access in Multiple-Antenna 5G Relaying Networks**
Xiaopeng Yan, Jianhua Ge, and Yangyang Zhang (Xidian University, P.R. China)
2. **Parallel-Implemented Message Passing Algorithm for SCMA Decoder based on GPGPU**
Yunfeng Qi, Gang Wu and Su Hu (University of Electronic Science and Technology of China, P.R. China); Gao Yuan (Tsinghua University, P.R. China)
3. **ACK Feedback based UE-to-CTU Mapping Rule for SCMA Uplink Grant-Free Transmission**
Jiali Shen, Wen Chen, Fan Wei, and Yongpeng Wu (Shanghai Jiao Tong University, P.R. China)
4. **A NOMA-PSO Based Cooperative Transmission Method in Satellite Communication Systems**
Ruimin Wan, Lina Zhu, Tian Li, and Lin Bai (Beihang University, P.R. China)
5. **Joint Detection and Decoding of Polar-Coded SCMA Systems**
Shusen Jing, Chao Yang, Junmei Yang, Xiaohu You, and Chuan Zhang (Southeast University, P.R. China)

SPS-07: Resource Allocation for Communication Systems

Date: Oct. 13, 2017

Time: 10:30am – 12:00pm

Room: Perseverance

Chair: Lei Wang, Nanjing University of Posts and Telecommunications, P.R. China

1. **Efficient and Fair Pilot Allocation for Multi-cell Massive MIMO Systems**
Jianhua Liu (Shandong University, P.R. China); Yueheng Li (University of Bremen, Germany); Haixia Zhang and Shuaishuai Guo (Shandong University, P.R. China)
2. **Sidelobe Interference Reduced Scheduling Algorithm in Millimeter Wave Networks**
Lei Wang, Siran Liu, Mingkai Chen, Jingwu Cui and Baoyu Zheng (Nanjing University of Posts and Telecommunications, P.R. China)
3. **Power Allocation for Multicell Mixed-ADC Massive MIMO Systems in Rician Fading Channels**
Mengjiao Zhang (Southeast University, P.R. China); Weiqiang Tan (Guangzhou University, P.R. China); Junhui Gao, Xi Yang and Shi Jin (Southeast University, P.R. China)
4. **Relay Power Allocation for Security Enhancement in Three-Phase AF Two-Way Relaying Systems**

Zonghao Ma, Ning Wang, Yanhui Lu and Dalong Zhang
(Zhengzhou University, P.R. China)

5. **Modulation Order Selection and Power Allocation for Energy Efficient VLC-OFDM Systems**
Pengfei Ge, Xiao Liang, Jiaheng Wang and Chunming Zhao (Southeast University, P.R. China)
6. **Maximum Uplink SNR User Association in MISO HetNets with Decoupled Access**
Ran Li, Kai Luo and Tao Jiang (Huazhong University of Science and Technology, P.R. China)

SPS-08: Interference Suppression and Multiplexing

Date: Oct. 13, 2017
Time: 10:30am – 12:00pm
Room: Revolution
Chair: TBD

1. **A Novel Windowing Scheme to Suppress Spectral Sidelobes for OFDMA Systems**
Lei Wang (PLA University of Science and Technology, P.R. China)
2. **A Residual Interference Mitigation Technique for Frequency-Domain Interference Suppression in DSSS Communication Systems**
Zonghan Wei and Ran Tao (Beijing Institute of Technology, P.R. China)
3. **Self-Correction Phase Noise Compensation Based on Decision Feedback in SC-FDE Satellite Systems**
Xu Chen, Cheng Wang, Gaofeng Cui, Weidong Wang, and Xiuhua Li (Beijing University of Posts and Telecommunications, P.R. China)
4. **Compressed Sensing for Clipping Noise Cancellation in DCO-OFDM Systems Based on Observation Interference Mitigation**
Pu Miao (Qingdao University, P.R. China); Chenhao Qi and Lenan Wu (Southeast University, P.R. China); Bingcheng Zhu (Nanjing University of Posts and Telecommunications, P.R. China); Kangjian Chen (Southeast University, P.R. China)
5. **Angle Domain Sparse Code Multiplexing for the Massive MIMO Networks**
Weidong Shao, Shun Zhang, Hongyan Li and Jianpeng Ma (Xidian University, P.R. China)
6. **Performance Analysis of Drone Small Cells under Inter-cell Interference**
Jiejie Xie, Hai Wang, Aijing Li (PLA Army Engineering University, P.R. China)

WCS-12: Massive MIMO (II)

Date: Oct. 13, 2017
Time: 10:30am – 12:00pm
Room: Knowledge A
Chair: Zhongfeng Wang, Nanjing University, P.R. China

1. **Beam Domain PAPR Reduction for Massive MIMO Downlink**
Luyao Ni and Shi Jin (Southeast University, P.R. China); Feifei Gao (Tsinghua University, P.R. China); Hai Lin (Osaka Prefecture University, Japan)

2. **Downlink Performance of Hybrid Precoding in Massive MIMO Systems Subject to Phase Noise**
Yu Zhang, Dongming Wang Xinjiang, and Xiaohu You (Southeast University, P.R. China)
3. **Energy-Efficient Hybrid Precoding for Broadband Millimeter Wave Communication Systems**
Fusheng Zhu, Shiwen He, Rui Li, Yongming Huang, and Xiaohu You (Southeast University, P.R. China)
4. **Antenna Selection in Massive MIMO Systems Utilizing the Submodular Function**
Jie Zhang, Jiangtao Wang, and Yongchao Wang (Xidian University, P.R. China)
5. **Joint User Scheduling and Hybrid Precoding Design for MIMO C-RAN**
Qi Hou, Shiwen He, Yongming Huang, Haiming Wang and Luxi Yang (Southeast University, P.R. China)

6. **Low-complexity Hybrid Precoding for Energy-efficient mmWave Transmission**
Xiumei Yang, Mengying Zhang, Huaxia Chen, Ming-Tuo Zhou and Yang Yang (Shanghai Research Center for Wireless Communications, P.R. China)

WCS-13: Massive MIMO (III)

Date: Oct. 13, 2017
Time: 10:30am – 12:00pm
Room: Knowledge B
Chair: Gang Wu, University of Electronic Science and Technology of China, P.R. China

1. **Power Allocation for Massive MIMO Systems with Jointly Correlated Rician Fading**
Wenjie Zhu, Wenjin Wang, Xiao Li and Xiqi Gao (Southeast University, P.R. China)
2. **Antenna Grouping Assisted Spatial Modulation for Massive MIMO Systems**
Xingxuan Zuo, Jiankang Zhang and Xiaomin Mu (Zhengzhou University, P.R. China)
7. **Semidefinite Programming based Omni-directional Beamforming for Massive MIMO**
Dongliang Su, Yi Jiang and Xin Wang (Fudan University, P.R. China)
3. **Joint Power and Admission Control for Multi-pair Massive MIMO AF Relaying System**
Yiping Zuo, Jian Zhu, Xuesong Liang (Nanjing University of Posts and Telecommunications, P.R. China); Shi Jin (Southeast University, P.R. China); Kai-Kit Wong (University College London, UK)
4. **Uplink Pilot Power Control with Genetic Algorithm for Massive MIMO Networks**
Xiaoqing Zhang and Ju Liu (Shandong University, P.R. China); Shangbin Wu (Samsung R&D Institute UK); Chao Zhai and Shanshan Yu (Shandong University, P.R. China)
5. **Pilot Design for FDD Massive MIMO Systems with Channel Sparsity in Delay-Angle Domain**
Xiangyu Yan, Huarui Yin, and Guo Wei (University of Science and Technology of China, P.R. China)

WNS-06: Routing and Grouping

Date: Oct. 13, 2017

Time: 10:30am – 12:00pm

Room: Zijin

Chair: Aijing Li, PLA Army Engineering University, P.R. China

1. **A Robust Backup Routing Protocol for Neighbor Area Network in the Smart Grid**
Zhuoran Ma, Xinyan Zhou, Ouyang Xuan, Xiaoyu Ji and Wenyan Xu (Zhejiang University, P.R. China)
2. **A User-centric Clustering Method for Mobility Management in Ultra-dense Networks**
Bo Hu, Yingying Wang, Chuanan Wang and Lei Wang (Beijing University of Posts and Telecommunications, P.R. China)
3. **User-Interest-Aware Multicast Group Formation in OFDM networks Using Matching Theory**
Jie Zhao, Wenjun Xu, Xue Li and Jiaru Lin (Beijing University of Posts and Telecommunications, P.R. China)
4. **Signal Strength Assistant Grouping for Lower Hidden Node Collision Probability in 802.11ah**
Laipeng Zhang (Shanghai Jiao Tong University, P.R. China); Hua Li (Chongqing Qianwei Technologies Group Co., Ltd., P.R. China); Zhe Guo (Shanghai Research Institute of Microwave Technology, P.R. China); Lianghui Ding, Feng Yang, Liang Qian (Shanghai Jiao Tong University, P.R. China)
5. **Virtual Network Forwarding Graph Embedding Based on Tabu Search**
Wenzhe Wang, Peilin Hong, Defang Lee, Jianing Pei and Lei Bo (University of Science and Technology of China, P.R. China)
6. **Short-Term Traffic Flow Prediction with Conv-LSTM**
Yipeng Liu, Haifeng Zheng, Xinxin Feng and Zhonghui Chen (Fuzhou University, P.R. China)

WCS-14: mmWave

Date: Oct. 13, 2017

Time: 10:30am – 12:00pm

Room: U Lake

Chair: Chenhao Qi, Southeast University, P.R. China

1. **Beamforming Design for Interference Management in Millimeter Wave Cellular Networks with Partial CSI**
Ying Ju and Xiayi Qiu (Xi'an Jiaotong University, P.R. China); Yuan Chen (Shaanxi Monitoring Station, State Radio Monitoring Center, P.R. China); Ke-Wen Huang, Qinye Yin and Hui-Ming Wang (Xi'an Jiaotong University, P.R. China)
2. **Robust Channel Estimation for Switch-Based mmWave MIMO Systems**
Rui Hu, Jun Tong, Jiangtao Xi, Qinghua Guo and Yanguang Yu (University of Wollongong, Australia)
3. **Measurements and Modeling of Millimeter-Wave Channel at 28 GHz in the Indoor Complex Environment for 5G Radio Systems**
Shuangde Li (Nanjing University of Posts and Telecommunications, P.R. China)

4. 60 GHz Channel Measurements and Ray Tracing Modeling in an Indoor Environment

Andong Zhou, Jie Huang, Jian Sun (Shandong University, P.R. China); Zhu Qiuming (Nanjing University of Aeronautics and Astronautics, P.R. China); Chengxiang Wang (Heriot-Watt University, UK); Yang Yang (Shanghai Reserach Center for Wireless Communication, P.R. China)

5. A 6-bit Active Phase Shifter for Ku-Band Phased Arrays

Yan Yao, Zhiqun Li, Guoxiao Cheng and Lei Luo (Southeast University, P.R. China)

6. System Performance Evaluation for Millimeter Wave Wireless Communication

Wenzheng Wang and Shiwen He (Southeast University, P.R. China); Yongpeng Wu (Shanghai Jiao Tong University, P.R. China); Haiming Wang, Yongming Huang and Luxi Yang (Southeast University, P.R. China)

WCS-15: NOMA (III)

Date: Oct. 13, 2017

Time: 14:00pm – 15:30pm

Room: Unique

Chair: Rose Qingyang Hu, Utah State University, USA

1. Performance Analysis of Non-regenerative Relay Assisted NOMA System

Di Zhang (North China Electric Power University, P.R. China); Yuanwei Liu (King's College London, UK); Zhiguo Ding (Lancaster University, UK); Zhenyu Zhou (North China Electric Power University); Arumugam Nallanathan (Queen Mary University of London, UK)

2. Resource Allocation for Downlink Joint Space-Time and Power Domain Non-Orthogonal Multiple Access

Hong Wang, Zhaoyang Zhang and Xiaoming Chen (Zhejiang University, P.R. China)

3. A Low-Complexity Non-Orthogonal Multiple Access System Based on Rate Splitting

Ye Zhu, Zhaoyang Zhang and Xianbin Wang (Zhejiang University, P.R. China); Liang Xuesong (Nanjing University of Posts and Telecommunications, P.R. China)

4. An Minorization-Maximization based Hybrid Precoding in NOMA-mMIMO

Yuyan Zhao (Nanjing University of Posts and Telecommunications, P.R. China); Wei Xu and Shi Jin (Southeast University, P.R. China)

5. Effect of Clipping on the Achievable Rate of Non-Orthogonal Multiple Access with DCO-OFDM

Weiwen Chu, Jian Dang, Zaichen Zhang and Liang Wu (Southeast University, P.R. China)

SPS-09: Signal Processing for Emerging Communication Systems

Date: Oct. 13, 2017

Time: 14:00pm – 15:30pm

Room: Perseverance

Chair: Weiwei Yang, PLA Army Engineering University, P.R. China

1. **Modeling the energy consumption of programs: thermal aspects and energy/frequency convexity rule (Invited Paper)**
Karel De Vogeleer (Hypervirtu, Belgium), Kameswar Rao Vaddina, Florian Brandner (LTCI - TELECOM ParisTech - University of Paris-Saclay, France), Pierre Jouvelot (MINES ParisTech, PSL Research University, France), Gerard Memmi (LTCI - TELECOM ParisTech - University of Paris-Saclay, France)
2. **Exploiting NOMA into Socially Enabled Computation Offloading**
Yutong Ai and Li Wang (Beijing University of Posts and Telecommunications, P.R. China); Bingli Jiao (Peking University, P.R. China); Kwang-Cheng Chen (University of South Florida, USA)
3. **Capacity of Wireless Powered Communication Systems over Rician Fading Channels**
Feiran Zhao (Zhejiang University, P.R. China); Hai Lin (Osaka Prefecture University, Japan); Caijun Zhong (Zhejiang University, P.R. China); Zoran Hadzi-Velkov (Ss. Cyril and Methodius University in Skopje, Macedonia, the former Yugoslav Republic of); George K. Karagiannidis (Aristotle University of Thessaloniki, Greece); Zhaoyang Zhang (Zhejiang University, P.R. China)
4. **Density Evolution Analysis of LDPC-coded SCMA Systems**
Yanming Hao, Kexin Xiao, Zhiyong Chen and Bin Xia (Shanghai Jiao Tong University, P.R. China)
5. **A Construction of (5,3) MDS Codes with Optimal Repair Capability for Distributed Storage Systems**
Sheng Guan, Haibin Kan and Xin Wang (Fudan University, P.R. China)
6. **A Hybrid Interference Suppression Scheme for Global Navigation Satellite Systems**
Kun Dong (University of Science and Technology of China, P.R. China); Zilong Zhang (The 28th Research Institute of China Electronics Technology Group Corporation, P.R. China); Xiaodong Xu (University of Science and Technology of China, P.R. China)
4. **A Signal Detection Algorithm Based on Chebyshev Accelerated Symmetrical Successive Over-Relaxation Iteration for Massive MIMO Systems**
Xiaoxiang Liu and Jing Zhang (Nanjing University of Posts and Telecommunications, P.R. China)
5. **Residual Correlation Matrix Detection Based Blind Sub-Nyquist Spectrum Sensing for Cognitive Radio Networks**
Peihan Qi, Zan Li, Wenchi Cheng, Jiangbo Si (Xi'dian, P.R. China); Qihui Wu (Nanjing University of Aeronautics and Astronautics, P.R. China)

WCS-16: Massive MIMO-Channel Estimation

Date: Oct. 13, 2017

Time: 14:00pm – 15:30pm

Room: Knowledge A

Chair: Feng Shu, Nanjing University of Science and Technology, P.R. China

1. **Pilot Reuse with a Large Number of Antennas: Performance Analysis and Pilot Contamination Reduction**
Junhui Zhao and Shanjin Ni (Beijing Jiaotong University, P.R. China); Yi Gong (South University of Science and Technology of China, P.R. China); Feifei Gao (Tsinghua University, P.R. China)
2. **Massive MIMO Uplink Transmission with Pilot Extension and System-Level Analysis**
Yang Li (Xi'an Jiaotong University, P.R. China); Rui Wang (The South University of Science and Technology of China, P.R. China); Haisheng Tan (University of Science and Technology of China, P.R. China); Yifan Chen (The University of Waikato, New Zealand); Qingfeng Zhang (South University of Science and Technology of China, P.R. China)
3. **Low-Complexity Channel Estimation Based on Weighted Kapteyn Series Expansion for Massive MIMO Systems**
Zhengquan Li, Bing Wang, Yaoyao Sun and Feng Yan (Southeast University, P.R. China); Song Xing (California State University, Los Angeles, USA); Lianfeng Shen (Southeast University, P.R. China)
4. **Millimeter-Wave Channel Estimation with Interference Cancellation and DOA Estimation in Hybrid Massive MIMO Systems**
Weihan Liu (Shanghai Jiao Tong University, P.R. China); Yang Li (Wuhan Maritime Communication Research Institute, P.R. China); Feng Yang, Lianghui Ding and Cheng Zhi (Shanghai Jiao Tong University, P.R. China)
5. **Low Complexity Signal Detector Based on SSOR Iteration for Large-Scale MIMO Systems**
Yaoyao Sun, Zhengquan Li, Chi Zhang, Rui Zhang, Feng Yan and Lianfeng Shen (Southeast University, P.R. China)
6. **RaptorQ Code based Concurrent Transmissions in Dual Connectivity LTE Network**
Jiaying Li and Cunqing Hua (Shanghai Jiao Tong University, P.R. China)

SPS-10: Estimation and Detection (I)

Date: Oct. 13, 2017

Time: 14:00pm – 15:30pm

Room: Revolution

Chair: Wei Xu, Southeast University, P. R. China

1. **Underwater Acoustic Channel Estimation via Fast Bayesian Matching Pursuit**
Huajian Chen and Chenhao Qi (Southeast University, P.R. China)
2. **Training Sequence Design for Channel Estimation and IQ Imbalance Compensation in GFDM Systems**
Nan Tan, Shiwen He, Haiming Wang, Yongming Huang and Luxi Yang (Southeast University, P.R. China)
3. **Regularized Equalization for OFDM Systems with BEM-Based Channel Estimation**
Wei Han, Jun Tong, Qinghua Guo, Jiangtao Xi and Yanguang Yu (University of Wollongong, Australia)

WCS-17: Massive MIMO-Detection

Date: Oct. 13, 2017

Time: 14:00pm – 15:30pm

Room: Knowledge B

Chair: Zhongfeng Wang, Nanjing University, P.R. China

1. **Reduced Complexity Message Passing Detection Algorithm in Large-Scale MIMO Systems**
Haochuan Zhu, Jun Lin and Zhongfeng Wang (Nanjing University, P.R. China)
2. **Iterative SOR Detection and Decoding for LDPC-Coded Massive MIMO Systems**
Anlan Yu and Shusen Jing (Southeast University, P.R. China); Yeong-Luh Ueng (Tsing Hua University, Taiwan); Xiaohu You and Chuan Zhang (Southeast University, P.R. China)
3. **On Uplink Performance of Massive MIMO Relaying with Hybrid Multiuser Detection**
Yucheng Wang, Jindan Xu, Hong Shen and Wei Xu (Southeast University, P.R. China)
4. **Belief Propagation Detection Based on Max-Sum Algorithm for Massive MIMO Systems**
Yaping Zhang, Lulu Ge, Xiaohu You and Chuan Zhang (Southeast University, P.R. China)
5. **Low-complexity Detection Algorithms Based on Matrix Partition for Massive MIMO**
Haijian Wu and Jun Lin (Nanjing University, P.R. China); Chuan Zhang (Southeast University, P.R. China); Zhongfeng Wang (Nanjing University, P.R. China)
6. **D Hybrid Eavesdropping Approach Against Energy-Ratio-Based Detection**
Menghan Wang, Hao Wei, and Dongming Wang (Southeast University, P.R. China); Xiaoyun Hou (Nanjing University of Posts and Telecommunications, P.R. China)

WNS-07: Scheduling and QoS

Date: Oct. 13, 2017

Time: 14:00pm – 15:30pm

Room: Zijin

Chair: Feng Yan, Southeast University, P.R. China

1. **Energy-Efficient Scheduling for Buffer-Aided Relaying with Opportunistic Spectral Access (Invited Paper)**
Kunlun Wang, Yang Yang, and Ming-Tuo Zhou (Shanghai Research Center for Wireless Communications, P.R. China); Wen Chen (Shanghai Jiao Tong University, P.R. China); Guoqiang Mao (The University of Technology Sydney Data 61, Australia)
2. **Group-DCI Based Scheduling Scheme for Ultra-Reliable and Low Latency Communications**
Ting Liu, Man Dai and Fei Zesong (Beijing Institute of Technology, P.R. China); Shuqiang Xia, Xianghui Han, and Jing Shi (ZTE Corporation, P.R. China)
3. **Optimal Energy Harvesting-Aided Spectrum Sensing Sensors Scheduling in Cognitive Radio Networks**
Yuxi Qiang, Guangyue Lu, Boyang Liu, and Yuxin Li (Xi'an University of Posts and Telecommunications, P.R. China)

4. **Elastic Local Breakout Strategy and Implementation for Delay-Sensitive Packets with Local Significance**
Yongkang Li, Zhiyuan Jiang, An Xu, Sheng Zhou, and Zhisheng Niu (Tsinghua University, P.R. China)
5. **IPTV User QoE Prediction Based on the LSTM Network**
Jiali Mao, Ruochen Huang, Xin Wei, and Qiuxia Bao (Nanjing University of Posts and Telecommunications, P.R. China); Zhenjiang Dong (Cloud & IT Institute, ZTE Corporation, P.R. China); Yi Qian (University of Nebraska - Lincoln, USA)
6. **A Resource Scheduling Scheme Based on Utility Function in CoMP Environment**
Xing Xu, Zhifeng Zhao, Rongpeng Li, and Honggang Zhang (Zhejiang University, P.R. China)

WCS-18: Visible Light Communication

Date: Oct. 13, 2017

Time: 14:00pm – 15:30pm

Room: U Lake

Chair: Liang Wu, Southeast University, P.R. China

1. **Optical Spatial Modulation Based Visible Light Communications with an Arbitrary Number of Transmitters**
Jian-Xia Zhu (Southeast University, P.R. China); Jin-Yuan Wang (Nanjing University of Posts and Telecommunications, P.R. China); Nan Li, Jun-Bo Wang and Ming Chen (Southeast University, P.R. China)
2. **On the BER Performance of Relay-Aided Free-Space Optical Communications in the Presence of Input-Dependent Noise**
Jin-Yuan Wang (Nanjing University of Posts and Telecommunications, P.R. China); Jun-Bo Wang, Jian-Xia Zhu, Cheng Liu and Ming Chen (Southeast University, P.R. China)
3. **Design of Polar Codes for Multicolor Visible Light Communication Systems**
Ming Jiang, Qiuyu Zhu, Chunming Zhao (Southeast University, P.R. China)
4. **Optical Spatial Modulation with DHT-Based OFDM in Visible Light Communication Systems**
Yali Cao, Xiaotian Zhou, Jian Sun (Shandong University, P.R. China); Wensheng Zhang (Shandong University, P.R. China); Chengxiang Wang (Heriot-Watt University, UK)
5. **Outage Performance Analysis for Outdoor Vehicular Visible Light Communications**
Sheng-Hong Lin (Nanjing Institute of Mechatronic Technology, P.R. China); Jin-Yuan Wang (Nanjing University of Posts and Telecommunications, P.R. China); Xu Bao and Yun Li (Huaiyin Institute of Technology, P.R. China)
6. **An advanced polar coding scheme for Visible Light Communication system**
Chunmei Yao, Jian Song, Wensheng Zhang and Xiaotian Zhou (Shandong University, P.R. China)

WCS-19: Cooperative MIMO and DAS

Date: Oct. 13, 2017

Time: 16:00pm – 17:30pm

Room: Unique

Chair: Dongming Wang, Southeast University, P.R. China

1. **Sparse Beamforming Based Energy Efficiency Optimization for Distributed Antenna Systems**
Jun Xu, Pengcheng Zhu, Jiamin Li, Xiaohu You (Southeast University, P.R. China)
2. **Interference Channel State Based User-Centric Cell Clustering for Uplink Multicell Cooperation**
Zhe Zhang, Ning Wang, Jiankang Zhang, Jin Jin and Xiaomin Mu (Zhengzhou University, P.R. China)
3. **Downlink Ergodic Rate Analysis of DAS with Linear Beamforming under Pilot Contamination**
Lingling Zhang, Pengcheng, Jiamin Li, and Juan Cao (Southeast University, P.R. China)
4. **Sparse Beamforming for Interlaced Clustering in Distributed Antenna Systems**
Xinjiang Xia, Yu Zhang, Jiamin, Pengcheng Zhu, Dongming Wang, and Xiaohu You (Southeast University, P.R. China)
5. **Coastal Communications Based on Cellular Networks with Distributed Antennas**
Xu Yanli, Feng Liu and Shengming Jiang (Shanghai Maritime University, P.R. China); Xujie Li (Hohai University, P.R. China)
6. **A High Efficient Cooperative Transmission Method for Multi-satellite Collocation Systems**
Qiuyuan Tang, Lina Zhu, Tian Li, and Lin Bai (Beihang University, P.R. China)

SPS-11: Estimation and Detection (II)

Date: Oct. 13, 2017

Time: 16:00pm – 17:30pm

Room: Perseverance

Chair: Jun Li, Nanjing University of Science and Technology, P.R. China

1. **Compressive Sensing Based Multiuser Detection for Asynchronous Machine-to-Machine Systems**
Zhaohui Yang, Ming Chen, Yinlu Wang and Yijin Pan (Southeast University, P.R. China)
2. **Detection with Compressive Measurements Corrupted by Sparse Errors**
Wenbo Xu and Zhihua Yan (Beijing University of Posts and Telecommunications, P.R. China); Yun Tian (People's Public Security University of China, P.R. China); Yupeng Cui and Jiaru Lin (Beijing University of Posts and Telecommunications, P.R. China)
3. **A Joint Algorithm of Parameters Estimation for Frequency-Hopping Signal Based on Sparse Recovery**
Xiaolin Zhang, Xiaofang Hu and Xue Dong (Harbin Engineering University, P.R. China)
4. **FompNet: Compressive Sensing Reconstruction with Deep Learning over Wireless Fading Channels**
Lei Bo, Hancheng Lu, Yujiao Lu, and Jianwen Meng and Wenzhe Wang (University of Science and Technology of China, P.R. China)
5. **Fast Recovery of Non-Negative Sparse Signals Under Heterogeneous Noise**
Lei Hu, Zemin Wu, Lei Zhang and Chang Tian (PLA Army Engineering University, P.R. China)

6. **A Low Side-lobe Waveform Design Method for Random Hopping Frequency Signal**
Zhikun Liao, Dawei Lu, Jiemin Hu and Jun Zhang (National University of Defense Technology, P.R. China)

SPS-12: Emerging Signal Processing and Its applications

Date: Oct. 13, 2017

Time: 16:00pm – 17:30pm

Room: Revolution

Chair: TBD

1. **A Compilation Method for Zero Overhead Loop in DSPs with VLIW**
Rui Chang, Jun Wu, and Haoqi Ren (Tongji University, P.R. China)
2. **Reversible Data Hiding Based on Directional Prediction and Multiple Histograms Modification**
Song Chang and Yifeng Zhang (Southeast University, P.R. China); Guojun Lu (Monash University, Australia)
3. **A Synthesis Flow for Fast Convolution Unit Based on Molecular Reactions**
Yuchen Zhuang, Lulu Ge (Southeast University, P.R. China); Wei Wei and Jing Zhao (Nanjing University, P.R. China); Xiaohu You and Chuan Zhang (Southeast University, P.R. China)
4. **Synthesizing Markov Chain with Reversible Unimolecular Reactions**
ZiYuan Shen and Lulu Ge (Southeast University, P.R. China); Wei Wei and Jing Zhao (Nanjing University, P.R. China); Xiaohu You and Chuan Zhang (Southeast University, P.R. China)
5. **Efficient Fast Convolution Architecture Based on Stochastic Computing**
Runing Xu (Southeast University, P.R. China); Bo Yuan (City University of New York, USA); Xiaohu You and Chuan Zhang (Southeast University, P.R. China)
6. **Convergence Analysis of a Correntropy Induced Metric Constrained Mixture Error Criterion Algorithm**
Yanyan Wang and Yingsong Li (Harbin Engineering University, P.R. China); Felix Albu (Valahia University of Targoviste, Romania); Rui Yang (Huazhong Agricultural University, P.R. China)

WCS-20: HetNets

Date: Oct. 13, 2017

Time: 16:00pm – 17:30pm

Room: Knowledge A

Chair: Feng Yan, Southeast University, P.R. China

1. **On the Local Delay and Energy Efficiency of HetNets under Poisson Cluster Processes**
Xiaojie Dong (Harbin Institute of Technology, Shenzhen, P.R. China); Fu-Chun Zheng (University of York, UK); Xu Zhu (University of Liverpool, UK)
2. **Utility Function Optimization based Joint User Association and Content Placement in Heterogeneous Networks**
Hong Chen, Qianbin Chen, and Rong Chai (Chongqing University of Posts and Telecommunications, P.R. China); Dongmei Zhao (McMaster University, Canada)

3. **Analysis of Non-Best User Association Scheme in K-tier Heterogeneous Networks**

Meng Zhou, Xiangdong Jia, Mangang Xie, and Weijie Tan (Northwestern Polytechnical University, P.R. China); Weiqiang Tan (Guangzhou University, P.R. China)

4. **Network-Sensitive Adaptive LAA LBT Strategy for Downlink LAA-WiFi coexistence**

Wei Wang, Pingping Xu, and Yuan Zhang (Southeast University, P.R. China); Hongyun Chu (Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, P.R. China)

5. **Performance Analysis of LBT Cat4 Based Downlink LAA-WiFi Coexistence in Unlicensed Spectrum**

Wei Wang, Pingping Xu, and Yuan Zhang (Southeast University, P.R. China); Hongyun Chu (Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences, P.R. China)

6. **The Cell Zooming Algorithm for Energy Efficiency Optimization in Heterogeneous Cellular Networks**

Zhen Zhang, Fangfang Liu and Zhimin Zeng (Beijing University of Posts and Telecommunications, P.R. China)

WCS-21: System and Network Design

Date: Oct. 13, 2017

Time: 16:00pm – 17:30pm

Room: Knowledge B

Chair: Jiaheng Wang, Southeast University, P.R. China

1. **Fill the Gap: A Bidirectional Message Ferry System for Wireless Devices**

Yongan Guo (Nanjing University of Posts and Telecommunications, P.R. China); Jie Deng (Queen Mary University of London, UK)

2. **Design and Implementation of a Novel 100G Optical Interface Protocol Converter**

Kaixiong Zhou, Xin Huang and Chaoxiang Shi (Chongqing University of Posts and Telecommunications, P.R. China); Jianxin Chang and Meng Gao (CNMP Networks, INC Beijing, P.R. China)

3. **Optimal Design of 3D MIMO SWIPT Systems with Tilt Adaptation**

Lixing Fan (Southeast University, P.R. China); Honghui Wang (Northwestern Polytechnical University, P.R. China); Yongming Huang and Luxi Yang (Southeast University, P.R. China)

4. **Design and Demonstration of An Indoor Visible Light Communication Network with Dynamic User Access and Resource Allocation**

Mian Zeng, Kaixiong Zhou, Chen Gong, Shun Lou, Xianqing Jin, and Zhengyuan Xu (University of Science and Technology of China, P.R. China)

5. **Pseudo-Analog Wireless Stereo Video Transmission in Hardware Acceleration**

Yao Jiang, Pengfei Xia, Jun Wu, Shi Chen, and Baoye Zhang (Tongji University, P.R. China)

6. **Neural Networks for Demodulating the Output Signals of Nonlinear Systems with Memory**

Xiaomin Li, Chunming Zhao, and Ming Jiang (Southeast University, P.R. China)

WNS-08: Software Defined Networks

Date: Oct. 13, 2017

Time: 16:00pm – 17:30pm

Room: Zijin

Chair: Xiaohu Ge, Huazhong University of Science and Technology, P.R. China

1. **State Reduction in Wireless Software Defined Network with LSP Multiplexing**

Liaoruo Huang, Qingguo Shen, Feng Zhou and Xiaoyu Cui (PLA Army Engineering University, P.R. China); Wenjuan Shao (Nanjing University of Science and Technology, P.R. China)

2. **Control Plane Delay Minimization based SDN Controller Placement Scheme**

Lei Zhu, Rong Chai and Qianbin Chen (Chongqing University of Posts and Telecommunications, P.R. China)

3. **Dynamic Switch Migration Algorithm with Q-learning Towards Scalable SDN Control Plane**

Min Zhu, Hua Qu and Jihong Zhao (Xi'an Jiaotong University, P.R. China)

4. **Coflow-Aware Dynamic Routing for SDN-based Data Center Networks**

Yifan Li and Jie Li (University of Tsukuba, Japan); Yusheng Ji (National Institute of Informatics, Japan); Yu Gu (Hefei University of Technology, P.R. China)

5. **Delay Minimization based Joint Routing and Flow Allocation for Software Defined Networking**

Feiying Meng, Rong Chai and Chenlu Zhang (Chongqing University of Posts and Telecommunications, P.R. China)

6. **VNF Deployment and Routing for NFV-enabled Multicast: A Steiner Tree-based Approach**

Yulun Cheng and Longxiang Yang (Nanjing University of Posts and Telecommunications, P.R. China)

WCS-22: System Performance Analysis

Date: Oct. 13, 2017

Time: 16:00pm – 17:30pm

Room: U Lake

Chair: Kanglian Zhao, Nanjing University, P.R. China

1. **A General Analytical Approach for Outage Analysis of HARQ-IR over Correlated Fading Channels**

Zheng Shi and Shaodan Ma (University of Macau, P.R. China); Guanghua Yang (Jinan University, P.R. China); Kam Weng Tam (University of Macau, P.R. China); Ming-Hua Xia (Sun Yat-sen University, P.R. China)

2. **Dual-Polarized Spatial Modulation Performance Analysis over Nakagami-m Fading Channels**

Zhilan Lyu, Kanglian Zhao, Wenfeng Li, and Haibo Zhou (Nanjing University, P.R. China)

3. **Channel Capacity and Lower Bound for Ambient Backscatter Communication Systems**

Wenjing Zhao and Gongpu Wang (Beijing Jiaotong University, P.R. China); Feifei Gao (Tsinghua University, P.R. China); Yulong Zou (Nanjing University of Posts and

Telecommunications, P.R. China); Saman Atapattu (University of Melbourne, Australia)

4. **Downlink Spectral Efficiency of Multi-User Distributed Antenna Systems Under a Stochastic Geometry Model**
Baolai Cai, Chentao Yue, Jiamin Li, and Pengcheng Zhu (Southeast University, P.R. China)

5. **Achievable Rate of DCO-FBMC with Low-Resolution ADCs for Optical Wireless Communication**

Mengting Wu, Jian Dang, Zaichen Zhang, and Liang Wu (Southeast University, P.R. China)

6. **Correlation Analysis and Adaptive Carrier Sensing Adjustment in Dense Random Wireless Networks**
Zhaoming Ding (Southeast University, P.R. China); Song Xing (California State University, Los Angeles, USA); Feng Yan (Southeast University, P.R. China); Shuguang Deng (Hunan City University, P.R. China); Lianfeng Shen (Southeast University, P.R. China)