# **Technical Program**

# Thursday, October 23

#### 11:00 - 12:30

#### SN&S: Smart Network and Service

Room: B303

# Demystifying the Magic of Cache Thresholds in the Android Media Framework

Jian Huang, Di Wu and Jian He (Sun Yat-Sen University, P.R. China)

# Energy-Efficient Dispatching Policy for Virus Scanning as a Service under N-Version Protection

Weiwen Zhang and Yonggang Wen (Nanyang Technological University, Singapore)

# An Iterative Interference Cancellation Design and Analysis for Uplink Cooperation among Base Stations

Zi Teng (Tongji University, P.R. China); Jun Wu (Tongji University China, P.R. China); Xin-Lin Huang and Zhifeng Zhang (Tongji University, P.R. China)

# Queuing Theory Based Spectrum Allocation in Cognitive Radio Networks

Xin-Lin Huang and Xiang Wu (Tongji University, P.R. China); Jun Wu (Tongji University China, P.R. China); Yuan Xu (Tongji University, P.R. China); Min Wang (Tongji University China, P.R. China)

# **C&CS: Crypto and Cloud Security**

Room: B305

# Lightweight Lattice-based Homomorphic Privacy-Preserving Aggregation Scheme for Home Area Networks

Asmaa R Abdallah and Sherman Shen (University of Waterloo, Canada)

# Data Folding: A New Data Soft Destruction Algorithm

Xiaolong Xu (Nanjing University of Posts & Telecommunications, P.R. China); Peipei Gong and Jia Xu (Nanjing University of Posts and Telecommunications, P.R. China)

# Privacy-preserving Personalized Search over Encrypted Cloud Data Supporting Multi-keyword Ranking

Ruihui Zhao, Hongwei Li, Yi Yang and Yu Liang (University of Electronic Science and Technology of China, P.R. China)

# Practical Private Information Retrieval Supporting Keyword Search in the Cloud

Mengke Yu (USTC, P.R. China); Kaichen Yang (University of Science and Technology of China, P.R. China); Lingbo Wei (Shanghai Jiao Tong University, P.R. China); Jinyuan Sun (University of Tennessee, USA)

# **MS&APP: Mobile Service & Application**

Room: B308

# End-to-End Delay Analysis of WeChat Video Call Service in Live DC-HSPA+ Network

Weijian Sun and Xiaowei Qin (University of Science and Technology of China, P.R. China)

### The Optimal Placement Method of Anchor Nodes toward RSS-based Localization Systems

Rui Zhang (Southeast University, P.R. China); Weiwei Xia, Ziyan Jia and Lianfeng Shen (National Mobile Communications Research Laboratory, Southeast University, P.R. China); Jinghong Guo (China Electric Power Research Institute & Research Institute of Information Technology & Communication, P.R. China)

# Quality of Experience Modeling and Fair Scheduling for Instant Messaging Service

Xiaofeng Xin, Wei Wang, Aiping Huang and Hangguan Shan (Zhejiang University, P.R. China)

# Facing the Signaling Storm: A Method with Stochastic Concept

Hong Zhang and Kaiping Xue (University of Science and Technology of China, P.R. China); Peilin Hong (Dept. EEIS & USTC, P.R. China)

# Interest-based Content Delivery in Wireless Mesh Networks with Hybrid Antenna Mode

Chenlei Pan (Shanghai Jiao Tong Univerdity, P.R. China); Bo Liu (Shanghai Jiao Tong University, P.R. China); Haibo Zhou (University of Waterloo, Canada); Gui Lin (ShangHai JiaoTong University, P.R. China); Jiacheng Chen (Shanghai Jiao Tong University, P.R. China)

# **RC: Relay Communications**

Room: B323

# High-performance Beamforming and Spatial Channel Pairing Schemes at Relay Station for AF-based Multi-pair Two-way Relay Networks

Yu Chen, Feng Shu and Jin Wang (Nanjing University of Science and Technology, P.R. China); Linqing Gui (University of Toulouse, France); Juanjuan Tong (School of Electronic and Optical Engineering, Nanjing University of Science and Technology, P.R. China)

### Joint Subcarriers Suppression and Relay Selection in PLNC based Two-Way OFDM Relaying System

Xianli Shen (PLA University of Science and Technology, P.R. China); Kui Xu (College of Communications Engineering, PLAUST, P.R. China); Ma Wenfeng (PLA University of Science & Technology, P.R. China); Youyun Xu (PLA University of Science & Technology & Shanghai Jioatong University, P.R. China)

# On the Performance of Full-Duplex Decode-and-Forward Relaying over Nakagami-\$m\$ Fading Channels

Youyun Xu (PLA Uuniversity of Science & Technology & Shanghai Jioatong University, P.R. China); Yurong Wang and Cong Wang (PLA University of Science and Technology, P.R. China); Kui Xu (College of Communications Engineering, PLAUST, P.R. China)

# Ergodic Capacity of Dual-hop Fixed Gain Relaying Systems over Mixed Multipath/Shadowing Channels Weijun Cheng (Minzu University of China, P.R. China)

# **CN: Cellular Networking**

Room: B319

### NEMO-based Mobility Management in LISP Network

Yizhen Wu, Ke Chen, Kaiping Xue and Dan Ni (University of Science and Technology of China, P.R. China)

# Spectral and Energy Efficencies of a Hybrid Cellular Network Structure

Jinkang Zhu, Na Deng, Ming Zhao and Wuyang Zhou (University of Science and Technology of China, P.R. China)

# Multi-User Uplink Power Control under Imperfect-CSI and Probabilistic Constraints

Krishna Chitti and Xiaochen Tan (University of Stuttgart, Germany)

# Decentralized Multicell Coordinated Beamforming with Overlapped Clusters

Pan Chen, Shengqian Han and Chenyang Yang (Beihang University, P.R. China)

# Achievable Rate of Multiuser Downlink for LOS-MIMO Systems with Uniform Circular Arrays

WeiQiang Tan and Shi Jin (Southeast University, P.R. China); Jue Wang (Nantong University, P.R. China)

# 14:00 - 15:30

### **SP&BF: Spatial Processing and Beamforming**

Room: B303

# Joint Relay Beamforming and Power Splitting Ratio Optimization in a Multi-Antenna Relay Network

Yi Yuan and Zheng Chu (Newcastle University, United Kingdom); Zhiguo Ding (Lancaster University, United Kingdom); Kanapathippillai Cumanan and Martin Johnston (Newcastle University, United Kingdom)

# A Joint SDMA and Interference Suppression Multiuser Transmission Scheme for Millimeter-Wave Massive MIMO Systems Yu Han, Shi Jin and Xiao Li (Southeast University, P.R. China)

# UCA-based Orbital Angular Momentum Radio Beam Generation and Reception Under Different Array Configurations Huayang Wu, Yuqing Yuan, Zhaoyang Zhang and Ji Cang (Zhejiang University, P.R. China)

# Energy-Efficient Cross-Layer Design of Delay-Aware MIMO Systems

Kunlun Wang, Wen Chen and Meixia Tao (Shanghai Jiao Tong University, P.R. China)

# CA: Comm. Algorithms

Room: B308

# A New Dynamic K-Best SD Algorithm for MIMO Detection

WeiLiang Fan (Peking University, P.R. China); Yang Liu and ZhiJun Wang (School of Electronics Engineering and Computer Science, Peking University, P.R. China); Xinyu Mao (Peking University, P.R. China)

### Unambiguous Receiving Technique for Multiplexed Binary Offset Carrier Signal

Hanqi Li and Canmei Yang (University of Science and Technology of China, P.R. China)

#### A Conflict-free Access Method for Parallel Turbo Decoder

Chen Gong and Xiaoyang Li (Beijing Institute of Technology, P.R. China); Zhenzhi Wu (Linköping University & Beijing Institute of Technology, Sweden); Dake Liu (Beijing Institute of Technology, P.R. China)

### Lower Error Floor of LDPC Codes Based on Trapping Sets Elimination

Le Dong and Ziyu Zhao (National University of Defense Technology, P.R. China); Jing Lei (National University of Defense Technology, P.R. China); Erbao Li (National University of Defense Technology, P.R. China)

# **OWC-I: Optical Wireless Communications I**

Room: B323

### Enhancement of indoor VLC communication system with optical path design and FEC code

Xiang Zhang, Min Zhang, Dahai Han and Qing Li (Beijing University of Posts and Telecommunications, P.R. China)

# Visible Light Communication Based on Wavelet Packet Division Multiplexing

Wei Huang, Chen Gong and Zhengyuan Xu (University of Science and Technology of China, P.R. China)

### Joint Beamformer and Offset Design for Multi-color Visible Light Communications

Qian Gao (University of Science and Technology of China, P.R. China); Rui Wang (Shanghai Jiaotong University, P.R. China); Zhengyuan Xu (University of Science and Technology of China, P.R. China); Yingbo Hua (University of California, Riverside, USA)

# Real-time bi-directional visible light communication system utilizing a phosphor-based LED and RGB LED

Jianyang Shi, Xingxing Huang, Yiguang Wang and Nan Chi (Fudan University, P.R. China)

### Optimal Symmetric Double-sided Signal Clipping in DCO-OFDM Visible Light Communication

Meishuang Yu, Zaichen Zhang and Liang Wu (Southeast University, P.R. China); Jian Dang (Southeast University & National Mobile Communications Research Laboratory, P.R. China)

# Undersampled Phase Shift ON-OFF Keying for Camera Communication

Pengfei Luo, Zabih Ghassemlooy and Hoa Le Minh (Northumbria University, United Kingdom); Xuan Tang (Tsinghua University, P.R. China); Hsin-Mu Tsai (National Taiwan University, Taiwan)

#### MCN: Multi-Cell Networks

Room: B319

# An Improved Spanning Tree Algorithm for Baseband Processing Resource Allocation in the Baseband Pool Structure

Chen Yang, Yuan Zhang and Xiqi Gao (Southeast University, P.R. China)

# Traffic-load Aware User Association in Dense Unsaturated Wireless Networks

Chen Zhao and Cunqing Hua (Shanghai Jiao Tong University, P.R. China)

# Flow-Level Delay Optimization with Traffic Adaption and Inter-Cell Interference Coordination in Cellular Networks

Bei Liu, Ming Zhao, Xiaowen Liang and Jinkang Zhu (University of Science and Technology of China, P.R. China)

### Coordinated Fractional Frequency Reuse for Directional Relays in A Multicell Cellular Network

Jingjing Zhao, Wei Xu and Hua Zhang (Southeast University, P.R. China); Xiaohu You (National Mobile communication

Research Lab., Southeast University, P.R. China); Xiaojian Liu (Shanghai Radio Equipment Research Insitute, P.R. China)

# Random Beamforming Based on Homogeneous Feedback Threshold and O(1) Feedback Constraint for Multi-cell Systems Xingwang Chen (USTC, P.R. China); Xiaodong Xu (University of Science and Technology of China, P.R. China); Xi Kan (USTC, P.R. China); Xuchu Dai (University of Science and Technology of China, P.R. China)

# Max-Min Fair Resource Allocation in Multi-cell Ultra-High Throughput WLAN

Huayue Wu, Weiwei Xia, Junchao Li and Lianfeng Shen (National Mobile Communications Research Laboratory, Southeast University, P.R. China)

# IV&MSP-I: Image, Video, and Multimedia Signal Processing I

Room: B321

### Proportional Fair Resource Allocation Algorithm for Video Transmission in OFDMA Relay System

Yimin Zhang and Guizhong Liu (Xi'an Jiaotong University, P.R. China)

### SIFT-Preserving Compression of Mobile-Captured License Plate Images for Recognition

Dandan Wang and Dong Liu (University of Science and Technology of China, P.R. China)

### An Adaptive Background-frame Based Video Coding Method

Lulu Zhou and Huiming Tang (Zhejiang University, P.R. China)

# Compressed sensing recovery of multi-view video sequences by targeted database

Yong You and Bin Liu (University of Science and Technology of China, P.R. China); Chang Wen Chen (State University of New York at Buffalo, USA)

# MSC-I: Advances in Mobile Satellite Communications, Part I

Rooms: B305, B321

### **Enhanced LT Decoding Scheme in Satellite Communication**

Qixian Zhang, Sihai Zhang and Wuyang Zhou (University of Science and Technology of China, P.R. China)

### Satellite Mobile Multicast for Aeronautical Communication

Esua Jaff, Muhammad Ali, Prashant Pillai and Yim-Fun Hu (University of Bradford, United Kingdom)

# Dynamic Channel Assignment Scheme with Cooperative Beam Forming for Multi-beam Mobile Satellite Networks

Hang Li (Tsinghua University, P.R. China); Masahiro Umehira (Ibaraki University, Japan); Zhe Zhu, Zhen Gao and Wang Jing (Tsinghua University, P.R. China)

### Satellite Radio Interfaces for IMT-Advanced system

Sooyoung Kim (Chonbuk National University, Korea); Hee Wook Kim (Electrionics and Telecommunications Research Institute, Korea); Kunseok Kang (ETRI, Korea); Dae-Ig Chang (Electronics and Telecommunications Research Institute, Korea)

#### 16:00 - 17:30

# **TFDC: Transceivers for Fading Dispersive Channels**

Room: B303

# Performance Analysis of OP-HCM System with DPFFT Demodulation over Doubly-Selective Channels

Yong Li and Xuejun Sha (Communication Research Center, Harbin Institute of Technology, P.R. China)

### Adaptive Vector OFDM System for Transmission Over Doubly Selective Fading Channels

Panyu Fu, Zhaoyang Zhang, Xiqian Luo, Huazi Zhang and Caijun Zhong (Zhejiang University, P.R. China)

### DSP Implementation of OFDM-based Underwater Acoustic Communication Transceiver

Yimin Shi, Zhankui Cao, Haichao Wei, Sihai Zhang and Wuyang Zhou (University of Science and Technology of China, P.R. China)

# A Lloyd-Max based quantizer of L-values for AWGN and Rayleigh Fading channel

Yasser Samayoa (Gottfried Wilhelm Leibniz Universität Hannover, Germany); Joern Ostermann (Leibniz Universitaet Hannover, Germany)

# On the Design of MLC-LDPC-OFDM in DRM MF and HF Channels

Yuan Liang, Shulin Zhang, Pinbiao Gu and Lenan Wu (Southeast University, P.R. China)

# CD: Chip Design

Room: B308

### A Novel Hardware Gaussian Noise Generator using Box-Muller and CORDIC

Yuting Wang (Beijing University of Posts and Telecommunications, P.R. China); Zhisong Bie (BUPT, P.R. China)

# Integrated Chip Design of a 10GHz Band Voltage Controlled Oscillator and Charge-Injected Mixer with Low Phase Noise and Wide Tuning Range

Wen-Cheng Lai (National Taiwan University of Science and Technology, P.R. China)

### Analysis on Scattering Parameters for Coupled Microstrip Lines with Bend Discontinuities

Jiao He, Liangqi Gui, Tao Jiang, Cong Zhou and Lang Lv (Huazhong University of Science and Technology, P.R. China)

### Chip Design of A 10-MHz Switched Capacitor Low-Pass Filter for Wireless Application

Jhin-Fang Huang, Jiun-Yu Wen and Yen-Jung Lin (National Taiwan University of Science and Technology, Taiwan)

#### **OWC-II: Optical Wireless Communications II**

Room: B323

# Lower Bounds on the Capacity for Poisson Optical Wireless Channel

Yingying Yu, Zaichen Zhang and Liang Wu (Southeast University, P.R. China); Jian Dang (Southeast University & National Mobile Communications Research Laboratory, P.R. China)

### **Downlink Scheduling in Visible Light Communications**

Ojemba Babatundi (Prairie View A & M University, USA); Lijun Qian (Prairie View A&M University, USA); Julian Cheng (University of British Columbia, Canada)

### High Speed LED based Visible Light Communication Networks for Beyond 10Gb/s Wireless Access

Yiguang Wang, Nan Chi and Yuanquan Wang (Fudan University, P.R. China); Li Tao (Fudan University, Shanghai, P.R. China); Jianyang Shi (Fudan University, P.R. China)

# Average Bit Error Rate Performance of Direct Current biased Orthogonal Frequency Division Multiplexing in Free-Space Optical Communications over Weak Turbulence

Ying Zhang and ShanShan Tang (College of Electronic and Information Engineering, NUAA, P.R. China); Jin-Yuan Wang (Southeast University, P.R. China)

### Performance of Indoor VLC and Illumination under Multiple Reflections

Jupeng Ding and Zhengyuan Xu (University of Science and Technology of China, P.R. China)

# Impact of Different LED-Spacing in Arrayed LED Transmitter on VLC Channel Modeling

Jupeng Ding, Kun Wang and Zhengyuan Xu (University of Science and Technology of China, P.R. China)

# SE&D: Signal Estimation and Detection

Room: B319

### Underdetermined Blind Identification Based on Charrelation Matrix and Tucker Decomposition

Zhongqiang Luo, Lidong Zhu and Li Chengjie (University of Electronic Science and Technology of China, P.R. China)

# Fourth-Order Cumulant based Sources Number Estimation from Mixtures of Unknown Number of Sources

Fanglin Gu (National University of Defense Technology, P.R. China); Wei Li (Unit 75753 of PLA, P.R. China); Wenwu Wang (University of Surrey, United Kingdom)

### DOA Estimation of the Coherent Sources Based on SVD and the Fractional Lower Order Statistics

Sen Li and Zhenxing Liang (Dalian Maritime University, P.R. China)

# Blind Signal Separation of Complex-valued Sources Based on Gaussian Mixture Model for Time-varying Environment

Liu Yang (PLA University of Science and Technology, P.R. China); Hang Zhang (PLA University of Science & Technology, P.R. China); Xinhai Tong (PLA University of Science and Technology, P.R. China)

# Gibbs sampling based parameter estimation for RSC sub-codes of turbo codes

Peidong Yu, Jing Li and Hua Peng (Zhengzhou Institute of Information Science and Technology, P.R. China)

# Friday, October 24

### 11:00 - 12:30

#### W-Inno.: Wireless Innovation

Room: B303

# Outage and Capacity of Heterogeneous Cellular Networks with Intra-tier Dependence

Na Deng and Wuyang Zhou (University of Science and Technology of China, P.R. China); Martin Haenggi (University of Notre Dame, USA)

### Full Space-Time Network Code

Jian Yang (Institute of Automation, Chinese Academy of Science, P.R. China); Xia Shen and Xiang Cheng (Peking University, P.R. China); Liuging Yang (Colorado State University, USA)

### D-GLDPC Codes with 3-D Single Parity-Check Product Codes as Super Check Nodes

Yejun He, Guiyuan Sun and Jie Yang (Shenzhen University, P.R. China); Francis C.M. Lau (The Hong Kong Polytechnic University, Hong Kong)

# Optimization of OTT Small Data Services: Network Capacity and Cost Analysis

Yuxi Han, Ming Zhao and Wuyang Zhou (University of Science and Technology of China, P.R. China)

# IO-MAC: A Novel Hybrid MAC Protocol with Implicit Ordering in WLANs

Bing Feng, Shuangjun Hong and Zhen Wang (University of Science and Technology of China, P.R. China)

### **OFDM&MC: OFDM & Multicarrier**

Room: B305

# Adaptive Double Thresholds Handover Mechanism in Small Cell LTE-A Network

Qiang Shen (Shanghai JiaoTong University, P.R. China); Jing Liu, Zhangpeng Huang, Xiaoying Gan, Zhifeng Zhang and Dong Chen (Shanghai Jiao Tong University, P.R. China)

### Cyclic Prefix-based Time and Frequency Synchronization for TD-LTE Downlink Transmission

Wei Guo, Su Hu and Shaoqian Li (University of Electronic Science and Technology of China, P.R. China)

### Resource Allocation with Beamforming Technique for MDC Multicast in OFDM-based CRNs

Yidi Yang, Kai Niu and Zhicheng Li (Beijing University of Posts and Telecommunications, P.R. China)

# Exploiting Side Information for Efficient Multicast Transmission in Multicarrier Wireless Networks

Yuan Qi and Cunqing Hua (Shanghai Jiao Tong University, P.R. China)

# Joint Power Allocation and Antenna Selection for Energy-Efficient OFDM D-MIMO Systems

Bo Hu (Nantong Unviersity, P.R. China); Qiang Sun and Jue Wang (Nantong University, P.R. China); Chen Xu (Nantong Unviersity, P.R. China)

# **CH&TrM: Channel and Traffic Modeling**

Room: B308

# Channel Modeling based on Ultra-Wide Bandwidth(UWB) Radar in Soil Environment with different pH values

Miao Liu (University of Electronic Science and Technology of China, P.R. China); Fangqi Zhu (University of Electronic Science and Technology of China, P.R. China); Jing Liang (University of Electronic Science and Technology, P.R. China)

### Radio Propagation Prediction in Restricted Spaces

Feixiang Zhang and Xiangwei Zhou (Southern Illinois University Carbondale, USA)

### The Periodic Data Traffic Modeling Based on Multiplicative Seasonal ARIMA Model

Dandan Miao, Xiaowei Qin and Weidong Wang (University of Science and Technology of China, P.R. China)

# Time-Correlation Analysis of GSM Telephone Traffic in Dense Population District

Dandan Yin, Sihai Zhang and Wuyang Zhou (University of Science and Technology of China, P.R. China); Yi Zheng (Beijing Cloud Vally, P.R. China)

# IV&MSP-II: Image, Video, and Multimedia Signal Processing II

Room: B323

### Moving Object Detection of dynamic scenes using Spatio-temporal Context and background modeling

Chong Shen (University of Science and Technology of China, P.R. China)

# Topology-Based Automatic 3D Modeling from Multiple Images

Long Zhang and Xuejin Chen (University of Science and Technology of China, P.R. China)

### Simple and Effective Image Quality Assessment Based on Edge Enhanced Mean Square Error

Ziguan Cui, Zongliang Gan, Guijin Tang, Feng Liu and Xiuchang Zhu (Nanjing University of Posts and Telecommunications, P.R. China)

# 3D face registration by Depth-based Template Matching and Active Appearance Model

Rong Liu, Haoji (Roland) Hu and Huimin Yu (Zhejiang University, P.R. China)

### **Topics in Comm.: Topics in Communications**

Room: B319

### Construction of 16-QAM Complementary Sequences from Non-standard Generalized Boolean Functions

Fanxin Zeng, Linjie Qian and Zhenyu Zhang (Chongqing Communication Institute, P.R. China)

### The Local Delay in Underwater Acoustic Sensor Networks

Haichao Wei and Wuyang Zhou (University of Science and Technology of China, P.R. China)

# Time Varying Channel Estimation for SC-FDMA System under HST Scenario

Lihua Yang and Yan Liang (Nanjing University of Posts and Telecommunications, P.R. China)

### A Novel Channel Estimation Method Based on Kalman Filter Compressed Sensing for Time-Varying OFDM System

Baohao Chen, Qimei Cui, Fan Yang and Jin Xu (Beijing University of Posts and Telecommunications, P.R. China)

# STD&D: Space-time Detection and Decoding

Room: B321

# A Partial Inter-layer Parallel Sphere Decoder for Multiple-Input Multiple-Output Systems

Adong Fan, Xiaowei Qin and Xuchu Dai (University of Science and Technology of China, P.R. China)

# Low-Complexity Sphere Decoding for Generalised Spatial Modulation

Yuanqiang Wang, Jianhua Ge and Juan Chen (Xidian University, P.R. China)

# Improved K-Best Algorithm for Low-Complexity MIMO Detector

Junmei Yang and Chuan Zhang (National Mobile Communications Research Laboratory, Southeast University, P.R. China); Xiaohu You (National Mobile communication Research Lab., Southeast University, P.R. China); Shugong Xu (Intel Labs, P.R. China)

# Iterative Detection with Soft Decision in Spectrally Efficient FDM Systems

Seyed Javad Heydari Khormizi (Sharif University of Technology, Iran); Mahmoud Ferdosizadeh (ACRI, Iran); Farokh Marvasti (Sharif university of Technology, Iran)

# SDN&SysInnov: SDN and System Innovation

Room: B303

### A Round-Trip-Time based Concurrent Transmission Scheduling for MPTCP

Rui Chen (Nanjing University of Posts and Telecommunication, P.R. China); Wen-Nai Wang (Nanjing University of Posts and Telecommunications, P.R. China); Jing-Ling Zhu (Nanjing University of Posts and Telecommunications, P.R. China); Bing Wang (Nanjing University of Posts and Telecommunications, P.R. China)

### A Load-based Joint Call Admission Control Scheme in Heterogeneous Wireless Networks and Performance Analysis

Weiwei Xia and Lianfeng Shen (National Mobile Communications Research Laboratory, Southeast University, P.R. China); Wang Pei (Southeast University, P.R. China)

### Supporting "One Big AP" Illusion in Enterprise WLAN: an SDN-based solution

Dong Zhao, Ming Zhu and Ming Xu (National University of Defense Technology, P.R. China)

# An Adaptive Scheme for Data Forwarding in Software Defined Network

Liang Xie, Zhifeng Zhao, Yifan Zhou, Gang Wang and Qianlan Ying (Zhejiang University, P.R. China); Honggang Zhang (Université Européenne de Bretagne (UEB) and Supelec & Zhejiang University, France)

# Packet-Level Clustering for Memory-Assisted Compression of Network Packets

Liling Huang (Shanghai Jiao Tong University, P.R. China); Ahmad Beirami (Duke University, USA); Mohsen Sardari and Faramarz Fekri (Georgia Institute of Technology, USA); Bo Liu (Shanghai Jiao Tong University, P.R. China); Gui Lin (ShangHai JiaoTong University, P.R. China)

# SP-Comm-I: Signal Processing for Communications I

Room: B305

# Differential Evolution Algorithm Based Pilot Aided Weighted Data Fusion Scheme for Uplink Base-Station Cooperation System

Zhe Zhang (School of Information Engineering, Zhengzhou University, P.R. China); Jing Yang (Henan University of Technology, P.R. China); Jiankang Zhang and Xiaomin Mu (Zhengzhou University, P.R. China)

# Performance Analysis of Symbol Interleaving for Next Generation mm-Wave MIMO WLAN

Changgeng Li (Southeast University, Nanjing, P.R. China); Shiwen He (School of Information Science and Engineering, Southeast University, P.R. China); Su Gao and Haiming Wang (Southeast University, P.R. China); Xiongsheng Yao (Zte Wavetone, P.R. China); Yongming Huang and Luxi Yang (Southeast University, P.R. China)

### A New Sparse Channel Estimation for 2D MIMO-OFDM Systems Based on Compressive Sensing

Yunqiang Pan, Xin Meng and Xiqi Gao (Southeast University, P.R. China)

# Preamble-based Channel Estimation Methods with High Spectral Efficiency for Pulse Shaping OFDM/OQAM Systems Vigory Chan Minitar Theo and Chanlei Yu (Theiling University P.R. China)

Xiaowu Chen, Minjian Zhao and Chenlei Xu (Zhejiang University, P.R. China)

# Independent Component Analysis for Carrier Synchronization in OFDM Systems

Zhongqiang Luo (University of Electronic Science and Technology of China, P.R. China)

# Distributed Precoding for Wireless Information and Power Transfer in MIMO DF Relay Networks

Bing Fang (College of Communications Engineering, PLA University of Science and Technology, P.R. China); Wei Zhong (College of Communications Engineering, PLAUST, P.R. China); Zuping Qian (PLA University of Sci. & Tech., P.R. China); Shi Jin (Southeast University, P.R. China); Jiaheng Wang (Southeast University & National Mobile Communications Research Lab, P.R. China); Wei Shao (College of Communications Engineering, PLA University of Science and Technology, P.R. China)

# SComm-I: Satellite Communications I

Room: B308

# on Outage Probability Analysis of Uplink in Land Mobile Satellite Cooperative System

Lan Luo, Lei Xie and Huifang Chen (Zhejiang University, P.R. China)

# Wireless Channel Pipeline Stage for LTE Based Satellite Network in OPNET: Design and Implementation

Weilong Ren (University of Science and Technology of China, P.R. China); Bin Fang (University of Science and Technology of China & Wireless Information Network laboratory, P.R. China); Hui Han (Chongqing Communication Institute, P.R. China); Sihai Zhang and Wuyang Zhou (University of Science and Technology of China, P.R. China)

# Satellite Multi-beam Coverage Analysis for Handover Rate Reduction

Yun Chen (University of Science and Technology of China, P.R. China); Bin Fang (University of Science and Technology of China & Wireless Information Network laboratory, P.R. China); Sihai Zhang and Wuyang Zhou (University of Science and Technology of China, P.R. China)

### An Adaptive Coding Method for Dual-Polarized Mobile Satellite Communications

Yang Yang and Xin Xiong (Southeast University, P.R. China); Bin Jiang (Southeast University & National Mobile Communications Research Lab., P.R. China); Xiqi Gao (Southeast University, P.R. China)

### A Novel Multi-Beam Architecture in Mobile Satellite Communications

Zuolin Li, Hengguo Song, Qimei Cui and Baoling Liu (Beijing University of Posts and Telecommunications, P.R. China)

# WN&Tech: Wireless Network & Technology

Room: B323

# Mutual Coupling Calibration for Uniform Circular Array Using a Single Source

Tingting Ouyang, Liang Qian and Lianghui Ding (Shanghai Jiao Tong University, P.R. China); Feng Yang (Shanghai Jiaotong University, P.R. China)

# Joint Design of Density of Access Points and Partially Overlapped Channel Assignment for Capacity Optimization in Wireless Networks

Wei Zhao, Zubair Fadlullah, Hiroki Nishiyama and Nei Kato (Tohoku University, Japan); Kiyoshi Hamaguchi (NICT, Japan)

# Three-dimensional Coverage Control of Common Control Signals for Coverage Holes Elimination and Interference Suppression

Cheng Wang and Aiping Huang (Zhejiang University, P.R. China)

# Research on Improved Coding and Decoding Algorithm for Fountain Codes

Zhu Zhifeng, Liulei Zhou and Jia Hou (Soochow University, P.R. China)

# A Novel Unitary Precoder Design for TIMO Multicasting with SIC Receivers

Zilong Zhang, Xiaodong Xu, Baisheng Du and Jiaqi Ren (University of Science and Technology of China, P.R. China)

# Sec-I: Secrecy and Security I

Room: B319

### A Feedback-based Secrecy Coding Scheme Using Polar Code over Wiretap Channels

Liuyihan Song, Lei Xie, Huifang Chen and Kuang Wang (Zhejiang University, P.R. China)

# Security Analysis of Mobile QQ

Fei Yu (Science and Technology on Communication Security Laboratory, P.R. China); Xinyu Zhao (Shanghai General Recognition Technology Institute, P.R. China); Qingbing Ji and Lijun Zhang (Science and Technology on Communication Security Laboratory, P.R. China)

### Security Analysis for Rayleigh Fading Channel by Artificial Noise

Hao Wei (Southeast University, P.R. China); Xiaoyun Hou (Nanjing University of Posts and Telecommunications, P.R. China); Yan Zhu (Nanjing University of Posts and Telecommunications, P.R. China); Dongming Wang (Southeast University & National Mobile Communications Research Lab., P.R. China)

# Enhancing Physical Layer Security Through Beamforming and Noise Injection

Hao Wang (University of Science and Technology of China, Hefei, P.R. China); Li Chen and Weidong Wang (University of Science and Technology of China, P.R. China)

Room: B303

# FIR Transceiver Design for Broadband MIMO Multicast System

Zilong Zhang, Xiaodong Xu, Zhiyong Chen and Jun Chen (University of Science and Technology of China, P.R. China)

### Full Duplex 2x2 MIMO Radios

Zhiliang Zhang (University of Electronic Science and Technology of China & Jincheng College of Sichuan University, P.R. China); Ying Shen, Shihai Shao, Wensheng Pan and Youxi Tang (University of Electronic Science and Technology of China, P.R. China)

### Low Complexity LMMSE Beamforming Design for Uplink Virtual MIMO Systems

Niwei Wang (Beijing Institute of Technology, P.R. China); Chengwen Xing (Beijing Institute of Technology & University of Hong Kong, P.R. China); Yuan Zhou, Zesong Fei and Jingming Kuang (Beijing Institute of Technology, P.R. China)

# Circular Polarization Benefits In Outdoor to Indoor Scenarios For MIMO Cellular Networks

Zhimeng Zhong (Research Institute of Space Radio Technology, P.R. China); Xuewen Liao (Xi'an Jiaotong University, P.R. China)

# Joint Transceiver Design for Simultaneous Wireless Information and Power Transfer in Multi-User MIMO Interference Networks

Zhiyuan Zong, Hui Feng, Shiyu Zhang and Tao Yang (Fudan University, P.R. China); Bo Hu (Fudan University, Shanghai, P.R. China)

# A Low-complexity Transceiver Scheme Based on Minimum Euclidean Distance Criterion

Zhiyong Chen, Xiaodong Xu and Xuchu Dai (University of Science and Technology of China, P.R. China)

### **SPAPP: Signal Processing Applications**

Room: B305

### Analysis of CMMB signal for Passive Radar Detection

Yang Xu and Lin Sun (USTC, P.R. China); Tianyun Wang (University of Science and Technology of China, P.R. China); Xinfei Lu (USTC, P.R. China); Chang Chen (University of Science and Technology of China, P.R. China); Weidong Chen (University of Science & Technology of China, P.R. China)

# Air Targets Recognition Using a Fuzzy Logic Approach

Fangqi Zhu (University of Electronic Science and Technology of China, P.R. China); Jing Liang (University of Electronic Science and Technology, P.R. China)

### SFT-based Algorithm of Acquisition and Anti-jamming of GPS Signals

Ma Ying (Beijing Institution of Technology, P.R. China); Bu Xiangyuan (Beijing Institute of Technology, P.R. China); Qiaoxian Gong and Hangcheng Han (Beijing Institution of Technology, P.R. China)

# Sparse Damage Localization Using Lamb Waves Based on a Finite Element Model

Pan Pan, Yiyin Wang, Fucai Li, Cailian Chen and Xinping Guan (Shanghai Jiao Tong University, P.R. China)

# Category-Based Dynamic Recommendations Adaptive to User Interest Drifts

Kaixiang Lin and Dong Liu (University of Science and Technology of China, P.R. China)

### A Phase-based Ranging Method for Fast Frequency Hopping System

Yue Liu (PLA University of Science and Technology, P.R. China); Wangdong Qi (Nanjing University of Posts and Telecommunications, P.R. China); Su Zhang and Zhi Wang (PLA University of Science and Technology, P.R. China)

# CR-I: Cognitive Radio I

Room: B308

# Optimal Multi-slot Spectrum Sensing and Transfer in Multichannel Cognitive Radio

Xin Liu, Weizhi Zhong, Qian Hu and Fanqiang Kong (Nanjing University of Aeronautics and Astronautics, P.R. China); Jing Qingfeng (College of Astronautics, Nanjing University of Aeronautics and Astronautic, P.R. China)

# Counteracting Malicious Users in Cognitive Radio Networks over Imperfect Reporting Channels

Jun Du (PLA University of Science & Technology, P.R. China)

# Resource Allocation in Delay-QoS Constrained Multiuser Cognitive Radio Networks

Ding Xu and Qun Li (Nanjing University of Posts and Telecommunications, P.R. China)

# A set of Closed Form Approximate Formulae for Optimal Sensing Duration of Cognitive Radio

Bin Gu (Southeast University & Nanjing College of Information Technology, P.R. China); Tiecheng Song (National Mobile Communications Research Laboratory, Southeast University, P.R. China); Dafei Sun, Lei Zhang, Ming Wu and Jie Guo (Southeast University, P.R. China)

### Energy Efficient Cooperative Sensing in Cognitive Radio Sensor Networks

Wei Yang (Naval Academy of Armament & National University of Defense Technology, P.R. China)

### D2D&EH: D2D, Power Transfer, and Energy Harvesting Communication

Room: B323

### Dedicated Resource Allocation for D2D Communications in Cellular Systems Employing FFR

Wenbin Wu and Yuan Zhang (Southeast University, P.R. China)

# Constructing Conflict Graph for D2D Communications in Cellular Systems

Wenbin Wu and Yuan Zhang (Southeast University, P.R. China)

# Interference-Mitigation Based Antenna Selection Scheme in Device-to-Device Communication Underlaying Cellular Networks

Yuyang Wang and Shi Jin (Southeast University, P.R. China); Yiyang Ni (Nanjing University of Posts and Telecommunications, P.R. China); Kai-Kit Wong (University College London, United Kingdom)

# Opportunistic Interference Alignment Networks for Simultaneous Wireless Information and Power Transfer through User Selection

Nan Zhao (Dalian University of Technology, P.R. China); F. Richard Yu (Carleton University, Canada); Victor CM Leung (The University of British Columbia, Canada)

# Throughput-Optimal User Association in Energy Harvesting Relay-Assisted Cellular Networks

Yanzi Song, Ming Zhao and Wuyang Zhou (University of Science and Technology of China, P.R. China); Hui Han (Chongqing Communication Institute, P.R. China)

### MSC-II: Advances in Mobile Satellite Communications, Part II

Room: B321

# A PAR-DQ Random Access Preamble Detection Algorithm in LTE-Satellite Communication System

Jian Wang (Beijing University of Posts and Telecommunications, P.R. China); Gaofeng Cui (Beijing Unversity of Posts and Telecommunications, P.R. China); Yizhou He (Beijing University of Posts and Telecommunications, P.R. China); Li Jian (Beijing University of Post and Telecommunication, P.R. China); Weidong Wang (Beijing Unversity of Posts and Telecommunications, P.R. China); Yinghai Zhang (Beijing University of Posts and Telecommunications, P.R. China)

### Pilot Sequence Design for GEO Multi-Beam MIMO Satellite Communication System

Bo Qiang (Southeast University, P.R. China); Bin Jiang (Southeast University & National Mobile Communications Research Lab., P.R. China); Xiqi Gao (Southeast University, P.R. China)

# Location-based Centralized Dynamic Channel Assignment with Channel Segregation for Multi-beam Mobile Satellite Networks

Masahiro Umehira and Sunao Fujita (Ibaraki University, Japan); Zhen Gao and Wang Jing (Tsinghua University, P.R. China)

# Saturday, October 25

# EE: Energy Efficiency

Room: B303

# A Balanced and Energy-Efficient Clustering Algorithm for Heterogeneous Wireless Sensor Networks

Jingjing Liu and Yanjun Hu (Anhui University, P.R. China)

# An Energy-Efficient Sensor Selection Strategy Based on Spatial Correlation for Wireless Sensor Networks

Tuanfei Yan (College of Communications Engineering, PLA University of Science and Technology, Nanjing, P.R. China); Zhang JianFeng (PLA University of Science & Technology, P.R. China); Wei Xie and Lianguo Wu (PLA University of Science and Technology, P.R. China)

### Maximizing Energy Efficiency in Analog Network Coding Based Two-Way Relay-assisted System

Ming Zhao, Zhi Zhang, Wuyang Zhou and Jinkang Zhu (University of Science and Technology of China, P.R. China)

# Energy Management Scheme for Mobile Terminals in Energy Efficient Heterogeneous Network

Di Zhang, Pinyi Ren, Yichen Wang, Qinghe Du and Li Sun (Xi'an Jiaotong University, P.R. China)

### Energy Efficient Resource Allocation for OFDM Multi-Relay Cellular Networks

Shuang Yang (College of Communications Engineering, PLA University of Science and Technology, P.R. China); Yueming Cai (Institute of Communications Engineering, PLAUST, P.R. China); Wendong Yang (Institute of Communications Engineering, P.R. China); Jianchao Zheng (Institute of Communications Engineering, PLA University of Science and Technology, P.R. China); Tao Zhang (PLA University of Science and Technology, P.R. China)

# NW&Sec: Network and System Security

Room: B305

### Security Review of Border Gateway Protocol - A Deployment Strategy for BGPSec

Muhammad Nasim (National University of Sciences and Technology, Pakistan); Ali Imran (NADRA, Pakistan); Asif Masood (National University of Sciences and Technology, Pakistan)

### Copyright Protection in Named Data Networking

Xiaobin Tan and Zifei Zhou (University of Science and Technology of China, P.R. China); Cliff Zou (University of Central Florida, USA); Yukun Niu and Xin Chen (University of Science and Technology of China, P.R. China)

# PHY Security Enhancement in Analog Network Coding Based on Artificial Noise

Dan Deng and Zhen-lun Yang (Guangzhou Panyu Polytechnic, P.R. China); Ming Zhao (University of Science and Technology of China, P.R. China)

# An Anonymous Payment System to Protect the Privacy of Electric Vehicles

Tianyu Zhao and Chang Chen (University of Science and Technology of China, P.R. China); Lingbo Wei (Shanghai Jiao Tong University, P.R. China); Mengke Yu (USTC, P.R. China)

# **SLP-CTRL: Sleeping Control**

Room: B308

# A Low Complexity Energy Efficiency Optimization Algorithm Based on Optimal Switching-off eNB Selection in LTE Networks

En Tong (Southeast University, P.R. China); Yu Wan (China Mobile, P.R. China); Zhiwen Pan (Southeast University, P.R. China); Xiaohu You (National Mobile communication Research Lab., Southeast University, P.R. China)

# A Range-Based Sleep Scheduling Algorithm for Desired Area Coverage in Solar-Powered Wireless Sensor Networks Xueyan Li, Hongbin Chen and Feng Zhao (Guilin University of Electronic Technology, P.R. China); Xiao Huan Li (South

China University of Technology, P.R. China)

# Energy Efficient Pico Base Station Switching-on/off in Heterogeneous Cellular Network with Minimum Rate Requirement

Liang Dong and Gang Wu (University of Electronic Science and Technology of China, P.R. China); Zhikun Xu (China Mobile Research Institute, P.R. China); Shaoqian Li (University of Electronic Science and Technology of China, P.R. China)

### A Game-Theoretic Approach for Optimal Base Station Sleeping in Green Cellular Networks

Jianchao Zheng (Institute of Communications Engineering, PLA University of Science and Technology, P.R. China); Yueming Cai (Institute of Communications Engineering, PLAUST, P.R. China); Xianfu Chen (VTT Technical Research Centre of Finland, Finland); Rongpeng Li (Zhejiang University, P.R. China); Honggang Zhang (Université Européenne de Bretagne (UEB) and Supelec & Zhejiang University, France)

### Small Cell Switch Policy: a Reinforcement Learning Approach

Luyang Wang, Xinxin Feng, Xiaoying Gan, Jing Liu and Hui Yu (Shanghai Jiao Tong University, P.R. China)

### Het&SC: HetNets and Small Cells

Room: B323

### Resource Allocation in Heterogeneous Networks with elCIC

Aiyun Li and Ling Qiu (University of Science and Technology of China, P.R. China)

# An Incentivized Offloading Mechanism via Truthful Auction in Heterogeneous Networks

Yulin Jia, Ming Zhao, Kaiwei Wang and Wuyang Zhou (University of Science and Technology of China, P.R. China)

### A User-Centric Load Balance Scheme for Small Cell Networks

Luyang Wang, Xinxin Feng, Xu Wang and Xiaoying Gan (Shanghai Jiao Tong University, P.R. China); Jinsong Wu (Bell Laboratories, Alcatel-Lucent, P.R. China)

# MPSO-based Power Adjustment and User Association Algorithm for Energy Efficiency in LTE Heterogeneous Networks

Mengling Qin, Nan Liu, Huilin Jiang and Zhiwen Pan (Southeast University, P.R. China); Tianle Deng (Huawei Technologies Co. Ltd, P.R. China); Xiaohu You (National Mobile communication Research Lab., Southeast University, P.R. China)

# A Cascaded Precoding Scheme for Two-Tier Heterogeneous Networks

Shengjie Guo and Xiangwei Zhou (Southern Illinois University Carbondale, USA)

### S&A-SP: Speech and Audio Signal Processing

Room: B319

### An Improved Bayesian NMF-Based Speech Enhancement Method Using Multivariate Laplace Distribution

Zhang Liwei (PLA University of Science and Technology, P.R. China)

# Memory Proportionate APSA with Individual Activation Factors for Highly Sparse System Identification in Impulsive Noise Environment

Yi Yu and Haiquan Zhao (Southwest Jiaotong University, P.R. China)

### F0 Prediction from Linear Predictive Cepstral Coefficient

Xueqin Chen, Yibiao Yu and Heming Zhao (Soochow University, P.R. China)

# **Enhancement of Reverberant Speech in Noisy Acoustical Environments**

Marjan Joorabchi (Sharif University of Technology-International Campus, Iran); Seyed Ghorshi (Sharif University of Technology, Iran); Ali Sarafnia (Sharif University of Technology, International Campus, Iran)

# **SN&LOC: Sensor Networks, Localization**

Room: B321

### A Low-Complexity Cooperative Localization Algorithm based on Variational Message Passing in Wireless Networks

Weijie Yuan, Nan Wu and Bin Li (Beijing Institute of Technology, P.R. China); Hua Wang (Modern Comm. Lab, P.R. China); Jingming Kuang (Beijing Institute of Technology, P.R. China)

# Adaptive and distributed homology computation with application to large scale sensor networks

Mengyi Zhang (University of Reims Champagne-Ardenne & CReSTIC, France); Alban Goupil (Université de Reims Champagne-Ardenne, France); Maxime Colas (DéCom/University of REIMS CHAMPAGNE-ARDENNE, France); Guillaume Gelle (University of Reims Champagne-Ardenne & CReSTIC, France)

# Clustering Combined Indoor Localization Algorithms for Crowdsourcing Devices: Mining RSSI Relative Relationship

Zhengyong Huang (Shanghai Jiao Tong University, P.R. China); Jun Xia (Shanghai Jiaotong University, P.R. China); Hui

Yu, Yunfeng Guan and Jiawei Chen (Shanghai Jiao Tong University, P.R. China)

# An Automatic Approach to Fingerprint Construction of Indoor Localization by Crowd Paths

Jun Xia (Shanghai Jiaotong University, P.R. China); Zhengyong Huang, Hui Yu and Xiaoying Gan (Shanghai Jiao Tong University, P.R. China)

# 14:00 - 15:30

D2D&M2M: D2D, M2M & Sensor Network

Room: B303

### Mode Selection for D2D Communication Underlaying a Cellular Network with Shared Relays

Qin Wang (Nanjing University of Posts and Telecommunications, P.R. China); Wei Wang (San Diego State University, USA); Shi Jin (Southeast University, P.R. China); Hongbo Zhu (Nanjing University of Posts and Telecommunications, P.R. China); Naitong Zhang (Communication Research Center, Harbin Institute of Technology, P.R. China)

# Secure Communications of Cellular Users in Device-to-Device Communication Underlaying Cellular Networks

Yuhang Wang and Zhiyong Chen (Shanghai Jiao Tong University, P.R. China); Yao Yao (Huawei Technologies Co., Ltd., P.R. China); Manyuan Shen and Bin Xia (Shanghai Jiao Tong University, P.R. China)

# Uplink Dynamic Resource Sharing of Underlaying D2D and Cellular Communications

Dan Wu and Yueming Cai (Institute of Communications Engineering, PLAUST, P.R. China); Jiannan Qi (The Armed Police Commanding Colledge, P.R. China); Joel J. P. C. Rodrigues (Instituto de Telecomunicações, University of Beira Interior, Portugal)

# A Radio Resource Scheduling Scheme for Periodic M2M Communications in Cellular Networks

Chunhua You and Yuan Zhang (Southeast University, P.R. China)

# A Spectrum Allocation Algorithm for Device-to-device Underlaying Networks Based on Auction Theory

Ang Li (University College London, United Kingdom); Xuewen Liao and Di Zhang (Xi'an Jiaotong University, P.R. China)

# A Distributed Synchronous Clock for Sensor Networks

Liefeng Liu, Jie Wu and Kaiyun Tian (University of Science and Technology of China, P.R. China)

### SP-Comm-II: Signal Processing for Communications II

Room: B305

### QoS-Aware Energy-Efficient Optimization for Massive MIMO Systems in 5G

Yuan Zhou, Dan Li and Haoyu Wang (Beijing Institute of Technology, P.R. China); Ang Yang (Beijing Institute of Technology, P.R. China); Shaozhen Guo (Beijing Institute of Technology, P.R. China)

# Complexity Reduction Techniques for Blind Adaptive Beamforming in OFDM Antenna Arrays

Boya Qin and Yunlong Cai (Zhejiang University, P.R. China); Benoit Champagne (McGill University, Canada); Minjian Zhao (Zhejiang University, P.R. China)

### Compressed Sampling using Structurally Mixed Cyclic Measurement Matrices

Guangjie Xu and Huali Wang (College of Communications Engineering, PLA University of Science and Technology, P.R. China); Weijun Zeng (PLA University of Science and Technology, P.R. China); Qingguo Wang and Jun Jin (College of Communications Engineering, PLA University of Science and Technology, P.R. China)

# Cooperative FPT-based Spectrum Sensing Algorithm With Decision Fusion

Lei Wang, Haitao Xue, Guoping Jiang and Baoyu Zheng (Nanjing University of Posts and Telecommunications, P.R. China); JingWu Cui (Nanjing University of Posts And Telecomm, P.R. China)

### Energy Efficiency Analysis for Cognitive Radio Network With Data Collision

Lei Wang, Haitao Xue, Guoping Jiang and Baoyu Zheng (Nanjing University of Posts and Telecommunications, P.R. China); JingWu Cui (Nanjing University of Posts And Telecomm, P.R. China)

SC-II: Satellite Communications II

# Power Spectrum Analysis of Interference to a Beidou Satellite Receiver from UWB Impulse Radio Systems

Tingting Lu and Hao Zhang (Ocean University of China, P.R. China); Xuerong Cui (China University of Petroleum, P.R. China); T. Aaron Gulliver (University of Victoria, Canada)

# Traffic-Based Dynamic Beam Coverage Adjustment in Satellite Mobile Communication

Cen Qian, Sihai Zhang and Wuyang Zhou (University of Science and Technology of China, P.R. China)

# Design and Performance Analysis of Adaptive Coding and Modulation for Broadband Satellite Networks

Desheng Shi (Beijing Institute of Technology, P.R. China); Hua Wang (Modern Comm. Lab, P.R. China); Nan Wu (Beijing Institute of Technology, P.R. China); Huafeng Liu (Research Center of Beijing Space Information Relay Transmission Technology, P.R. China); Jingming Kuang (Beijing Institute of Technology, P.R. China)

# EH-I: Energy Harvesting Wireless Communications, Part I

Room: B323

# Achieving Energy Diversity with Multiple Energy Harvesting Relays

Yaming Luo, Jun Zhang and Khaled B. Letaief (The Hong Kong University of Science and Technology, Hong Kong)

### Distributed Coalition Formation Algorithms for Cooperative Broadcast Networks with SWIPT

Wei Chen (Beihang University, P.R. China); Mai Xu (BeihangUniversity, P.R. China); Yue Tao (Newcastle University, United Kingdom); Zhiguo Ding (Lancaster University, United Kingdom); Zulin Wang (Beihang University, P.R. China)

### Dynamic Harvest-and-Forward: New Cooperative Diversity with RF Energy Harvesting

Koji Ishibashi (The University of Electro-Communications, Japan)

# Sec-II: Secrecy and Security II

Room: B319

# Secure Beamforming Based on Sparsity in Multiple Amplify-and-Forward MIMO Relay Networks

Mingxiong Zhao, Suili Feng and Yuan Liu (South China University of Technology, P.R. China); Xiangfeng Wang (Nanjing University, P.R. China)

### Security Performance of Multiple Antennas Multiple Relaying Networks with Outdated Relay Selection

Wang Lei (PLA University of Science and Technology, P.R. China); Shiming Xu (College of Communications Engineering, PLA University of Science and Technology, P.R. China); Weiwei Yang, Yang Wendong and Yueming Cai (Institute of Communications Engineering, PLAUST, P.R. China)

# Beamforming Design of Sum Secrecy Rate Optimization for MU-MISO Channel under Sum Power Constraint

Pu Zhao, Meng Zhang and Hui Yu (Shanghai Jiao Tong University, P.R. China); HanWen Luo (Shanghai Jiao Tong University, P.R. China); Wen Chen (Shanghai Jiao Tong University, P.R. China)

### Energy Harvesting for Secure OFDMA Systems

Meng Zhang, Yuan Liu and Suili Feng (South China University of Technology, P.R. China)

# A Cooperative Scheme for Secure Communications with Partner Selection and Incentive Mechanism

Ning Zhang and Nan Cheng (University of Waterloo, Canada); Xiang Zhang (University of Electronic Science and Technology of China, Canada); Ning Lu, Jon Mark and Sherman Shen (University of Waterloo, Canada)

### 16:00 - 17:30

# **CPSys: Cyber Physical Systems**

Room: B303

# Low-latency Energy-balanced Data Collection in Wireless Sensor Networks

Xingmiao You, Pingping Xu and Wenxiang Zhu (Southeast University, P.R. China)

# User Association for Green Heterogeneous Cellular Networks with Hybrid Energy Supplies

Qiao Kong (Huazhong University of Science and Technology (HUST), P.R. China); Bang Wang (Huazhong University of Science and Technology, P.R. China)

# Gaussian Message-based Cooperative Localization on Factor Graph in Wireless Sensor Networks

Bin Li and Nan Wu (Beijing Institute of Technology, P.R. China); Hua Wang (Modern Comm. Lab, P.R. China); Jingming Kuang (Beijing Institute of Technology, P.R. China); Chengwen Xing (Beijing Institute of Technology & University of Hong Kong, P.R. China)

### The Optimal Energy Allocation Scheme for Decision Fusion in Heterogeneous Radar Sensor Networks

Yangyang Huo (University of Electronic Science and Technology & UESTC, P.R. China); Jing Liang (University of Electronic Science and Technology, P.R. China)

# Quadtree Routing for Hybrid Satellite/Terrestrial Networks

Guke Huang, Bing Feng and Zhen Wang (University of Science and Technology of China, P.R. China); Dapeng Wang (Chinese Academy of Sciences, P.R. China)

### LC&Trk: Localization, Positioning, and Tracking

Room: B305

### On the Localizability of Cooperative Positioning: Two User Model

Yaning Liu and Shiwei Tian (Institute of Communication Engineering, PLA University of Science and Technology, P.R. China); Guangxia Li (PLA University of Science and Technology, P.R. China); Wei Heng Dai and Jiang Chang (Institute of Communication Engineering, PLA University of Science and Technology, P.R. China)

### A Multi-hop Localization Algorithm in Underwater Wireless Sensor Networks

Zhiwen Zhu, Wenbing Guan, Linfeng Liu, Sheng Li, Shanshan Kong and Yudao Yan (Nanjing University of Posts and Telecommunications, P.R. China)

### Bluetooth Low Energy Based Motion Sensing System

Menghan Zhang, Weiwei Xia and Lianfeng Shen (National Mobile Communications Research Laboratory, Southeast University, P.R. China)

# Radar Sensor (RS) Deployment for Multi-Target Detection

Ling Yang, Jing Liang and Weiwei Liu (University of Electronic Science and Technology, P.R. China)

# A Hybrid Step Model and New Azimuth Estimation Method for Pedestrian Dead Reckoning

Yaping Zhu and Rui Zhang (Southeast University, P.R. China); Weiwei Xia, Ziyan Jia and Lianfeng Shen (National Mobile Communications Research Laboratory, Southeast University, P.R. China)

# **CR-II: Cognitive Radio II**

Room: B308

# Analysis of Cognitive Radio Spectrum Access Based on Fractional Channel Reservation

Ting Feng (University of Electronic Science and Technology of China, P.R. China); WanBin Tang (University of Electronic Science & Technology of China, P.R. China); Shaoqian Li (University of Electronic Science and Technology of China, P.R. China)

# Cost-Efficient Cooperative Spectrum Sensing via Utility Maximization

Hang Hu (PLA University of Science and Technology, P.R. China); Hang Zhang (PLA University of Science & Technology, P.R. China); Yewen Guan (PLA University of Science and Technology, P.R. China)

# Throughput Analysis of Cognitive Radio Networks Via Stochastic Network Calculus

Jun Zheng, Li Yu and Peng Yang (Huazhong University of Science & Technology, P.R. China)

# Optimal and Low Complexity Algorithm for Energy Efficient Power Allocation with Sensing Errors in Cognitive Radio Networks

Lei Dong and Guangliang Ren (Xidian University, P.R. China)

### Joint User Association and Resource Allocation for Cognitive Radio Networks

Ding Xu and Qun Li (Nanjing University of Posts and Telecommunications, P.R. China)

# EH-II: Energy Harvesting Wireless Communications, Part II

Room: B323

# Green Device-to-Device Communication with Harvesting Energy in Cellular Networks

Howard Yang (Singapore University of Technology and Design, Singapore); Jemin Lee (Singapore University of Technology and Design (SUTD), Singapore); Tony Q. S. Quek (Singapore University of Technology and Design, Singapore)

# Energy Efficiency Optimization in Energy Harvesting Cooperative Relay Systems

Jing Zhao, Ming Zhao and Wuyang Zhou (University of Science and Technology of China, P.R. China)

# Optimal Power Allocation for a Two-Link Interference Channel with SWIPT

Baosheng Xu and Yu Zhu (Fudan University, P.R. China); Rui Zhang (National University of Singapore, Singapore)