



IEEE Global Communications Conference  
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Gateway to a Connected World



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## WS-03: WEHCN - WIRELESS ENERGY HARVESTING COMMUNICATION NETWORKS

(/workshop/ws-03-wehcn-wireless-energy-harvesting-communication-networks)

### PROGRAM

#### 9:00-10:30 Session 1

(keynote 1 + 3 paper presentations)

9:00-9:45

**Keynote 1: Towards Realization of Long-Range Wireless-Powered Sensor Networks**

**PROF. DONG IN KIM (SUNGKYUNKWAN UNIVERSITY)**

9:45-10:30

**ORAL PRESENTATION 1 (3 PAPERS)**

**PERFORMANCE ANALYSIS OF WIRELESS POWERED UAV RELAYING OVER K-M FADING CHANNELS**

Shuaifei Chen, Jiayi Zhang and Wen Zeng (Beijing Jiaotong University, P.R. China); Kostas Peppas (University of Peloponnese, Greece); Bo Ai (Beijing Jiaotong University & State Key Lab of Rail Traffic Control and Safety, P.R. China)

**Energy-Efficient Transmission for uplink NOMA in wireless powered D2D communications**

Qingjie Zhou and Jing Zhang (Huazhong University of Science and Technology, P.R. China); Yan Sun (Friedrich-Alexander University of Erlangen-Nuremberg, Germany)

**On Wireless Energy Harvesting based Relaying for Interference-limited User: A DMT perspective**

Yepuri Sudhakara rao, A S Madhukumar and Sirigina Rajendra Prasad (Nanyang Technological University, Singapore)

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10:30-11:00 Coffee Break

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11:00-12:30 Session 2

Oral presentation 2 (6 papers)

**Wireless Powered User Cooperative Computation in Mobile Edge Computing Systems**

Dixiao Wu, Feng Wang, Xiaowen Cao and Jie Xu (Guangdong University of Technology, P.R. China)

**Sum-Rate Maximization under QoS Constraints for WPCN with User Cooperation**

Dongyeong Song (SNU, Korea); Wonjae Shin (Pusan National University, Korea); Jungwoo Lee (Seoul National University, Korea)

**Wirelessly Powered Over-the-Air Computation for High-Mobility Sensing**

Xiaoyang Li (The University of Hongkong & Southern University of Science and Technology, Hong Kong); Guangxu Zhu (The University of Hong Kong, P.R. China); Yi Gong (South University of Science and Technology of China, Shenzhen, P.R. China); Kaibin Huang (The University of Hong Kong, Hong Kong)

**Robust Beamforming for AN Aided MISO SWIPT System with Unknown Eavesdroppers and Non-linear EH Model**

Miao Zhang and Kanapathippillai Cumanan (University of York, United Kingdom (Great Britain)); Lei Ni (Graduate School, Air Force Engineering University, P.R. China); Hang Hu (Air Force Engineering University, P.R. China); Alister G. Burr (University of York, United Kingdom (Great Britain)); Zhiguo Ding (University of

### WORKSHOP HOME

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### COMMITTEES

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### CALL FOR PAPERS

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### SUBMISSIONS

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Manchester, United Kingdom (Great Britain)

**User-Centric Energy Efficiency of Distributed Antenna Systems with Wireless Power Transfer**

Yuwen Huang and Yuan Liu (South China University of Technology, P.R. China)

**Joint Optimization of Wireless Power Transfer and Collaborative Beamforming for Relay Communications**

Yuze Zou and Wei Liu (Huazhong University of Science and Technology, P.R. China); Shimin Gong (Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, P.R. China); Kun Zhu (Nanjing University of Aeronautics and Astronautics, P.R. China); Dusit Niyato (Nanyang Technological University, Singapore)

12:30-14:00 Lunch

**14:00- 15:30 Session 3**

(Keynote 2 & Keynote 3)

14:00-14:45

Keynote 2: Intelligent Reflecting Surface Enhanced Wireless Information and Power Transfer

**Prof. Rui Zhang (National University of Singapore)**

14:45-15:30

Keynote 3: Optimize, Learn and Prototype Wireless Communications and Power Transfer

**Prof. Bruno Clerckx (Imperial College London)**

**15:30-16:15 Session 4**

(3 paper presentations)

**Energy Efficient Beamforming and Polarization Reception for Massive MIMO Enabled SWIPT Systems**

Shulun Zhao, Zhimin Zeng, Fangfang Liu and Chunyan Feng (Beijing University of Posts and Telecommunications, P.R. China); Geoffrey Li (Georgia Tech, USA)

**Smart Energy Policies for Sustainable Mobile Networks via Forecasting and Adaptive Control**

Shulun Zhao, Zhimin Zeng, Fangfang Liu and Chunyan Feng (Beijing University of Posts and Telecommunications, P.R. China); Geoffrey Li (Georgia Tech, USA)

**A Broadcast Approach to the Single-user Energy Harvesting Channel**

Maha M.Z. Fadel and Ali Tajer (Rensselaer Polytechnic Institute, USA)

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