

IEEE International Conference on Communications 21-25 May 2017 // Paris // France

[IEEE Workshop on Emerging Energy Harvesting Solutions for 5G Networks \(5G-NRG\)](#)

Program

The workshop will take place on Sunday the 21st of May 2017.

In **room 242B**.

Sunday, May 21, 09:00 - 10:30

WS02.1: Session #1

Chair: Marco Maso (Mathematical and Algorithmic Sciences Lab, Huawei France Research Center, France)

Session starts with a 45 min keynote by Prof. Vincent Lau (HKUST)

Title: Mission-Critical Control with Energy Harvesting Sensors

09:45 Wireless-Powered Cooperative Multi-Relay Networks with Relay Selection

[Qiang Li](#) and [Shangjie Feng](#) (Huazhong University of Science and Technology, P.R. China); [Ashish Pandharipande](#) (Philips Research Laboratories, The Netherlands); [Qiang Ni](#) (Lancaster University, United Kingdom); [Jing Zhang](#) (Huazhong University of Science and Technology, P.R. China)

10:00 Decode-and-Forward Two-Path Successive Relaying with Wireless Energy Harvesting

[Chao Zhai](#) and [Lina Zheng](#) (Shandong University, P.R. China); [Peng Lan](#) (Shandong Agricultural University, P.R. China); [He Chen](#) (University of Sydney, Australia); [Hongji Xu](#) (Shandong University, P.R. China)

10:15 Utility Maximization Models for Two-Hop Energy Relaying in Practical RF Harvesting Networks

[Deepak Mishra](#) and [Swades De](#) (Indian Institute of Technology Delhi, India)

Sunday, May 21, 11:00 - 12:30

WS02.2: Session #2

Chair: Marco Maso (Mathematical and Algorithmic Sciences Lab, Huawei France Research Center, France)

Session starts with a 45 min keynote by Prof. Sennur Ulukus (University of Maryland)

Title: Energy Harvesting in IoT Networks: Recent Results and Future Directions

11:45 Energy Harvesting in Delay-Aware Cognitive Shared Access Networks

[Zheng Chen](#) and [Nikolaos Pappas](#) (Linköping University, Sweden); [Marios Kountouris](#) (Huawei Technologies, France)

12:00 Optimization of Base Stations Density for Hybrid Energy Based 3-D Wireless Networks

[Aymen Omri](#) and [Mazen Omar Hasna](#) (Qatar University, Qatar)

12:15 Simultaneous Information and Power Transfer under a Non-Linear RF Energy Harvesting Model

[Xiaowei Xu](#), [Ayca Ozcelikkale](#), [Tomas McKelvey](#) and [Mats Viberg](#) (Chalmers University of Technology, Sweden)

Sunday, May 21, 14:00 - 15:30

WS02.3: Session #3

Chair: Axel Müller (Huawei Technologies, France)

Session concludes with a 45 min demonstration (RF Energy Powered Charging Station for Smartphones), by Prof. Dong In Kim (Sungkyunkwan University).

14:00 Wireless Information and Energy Transfer under Temperature Constraints

[Omur Ozel](#) (Carnegie Mellon University, USA); [Sennur Ulukus](#) (University of Maryland, USA); [Pulkit Grover](#) (Carnegie Mellon University, USA)

14:15 Towards self-control of service rate for battery management in energy harvesting devices

[Elvina Gindullina](#) (University of Padova, Italy); [Leonardo Badia](#) (Università degli Studi di Padova, Italy)

14:30 Simultaneously Charging Multiple Sensor Nodes in Multi-Antenna Wireless-Powered Sensor Networks

[Kae Won Choi](#) (Sungkyunkwan University, Korea); [Phisca Rosyady](#), [Lorenz Ginting](#) and [Arif Aziz](#) (Seoul National University of Science and Technology, Korea); [Dong In Kim](#) (Sungkyunkwan University (SKKU), Korea)

Sunday, May 21, 16:00 - 17:30

WS02.4: Session #4

Chair: Axel Müller (Huawei Technologies, France)

Session starts with a 45 min keynote by Prof. Arumugam Nallanathan (King's College London):

Title: Energy Harvesting in Wireless Networks: Challenges, Opportunities and Research Trends

16:45 Joint Optimization of Cognitive RF Energy Harvesting and Channel Access using Markovian Multi-Armed Bandit Problem

[Fahira Sangare](#) and [Zhu Han](#) (University of Houston, USA)

17:00 Optimal Deployment for Roadside Wireless Charger with Bounded Detouring Cost

[Xunpeng Rao](#) (PLA University of Science and Technology, P.R. China); [Panlong Yang](#) (Institute of Communication Engineering, PLAUST, P.R. China); [Yubo Yan](#), [Gang Liu](#), [Maotian Zhang](#) and [Wanru Xu](#) (PLA University of Science and Technology, P.R. China)

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