

Energy Harvesting and Wireless Power Transfer for RFIDs and Wireless Sensor Networks

8-12 October 2018, Heriot-Watt University, Edinburgh, UK

Course Coordinators:

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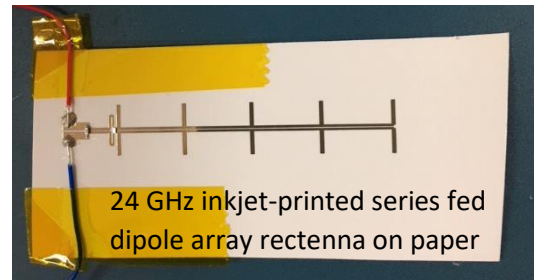
Although energy efficiency and power savings have always been present in the design of wireless communication systems, they have become one of the main drivers for research in Wireless Sensor Networks (WSN) and Heterogeneous network devices.

The school will first provide an overview of energy harvesting and wireless power transfer techniques for autonomous devices, with the aim of providing an understanding of the hardware technologies and RF aspects involved. This first block includes both theoretical and practical exercises (rectenna design project).

The second part of the course deals with communication and information processing techniques that not only address energy efficiency but also capacity and reliability issues and the concept of joint information and power transfer. The course will also provide a theoretical framework to understand the principles of suitable communication strategies and other relevant aspects of the communication system design in the presence of power-limited/energy-harvesting devices.

The fee for participants is €420.

<https://microwaves.hw.ac.uk/news-events/energy-harvesting-and-wireless-power-transfer-for-rfids-and-wireless-sensor-networks.html>



Programme: (Detailed programme can be found through the link above)

Day 1: School overview and student project introduction

(Prof. George Goussetis, Heriot-Watt University, UK; Dr. Dimitris Anagnostou, Heriot-Watt University, UK)

Day 2: Energy harvesting and wireless power transfer technology

(Prof. Nuno B. Carvalho, Institute of Telecom., University of Aveiro, Portugal; Dr. Symon Podilchak, Heriot-Watt University, UK;)

Day 3: Green and low energy communications

(Dr. Monica Navarro, CTTC, Spain; Prof. John Thompson, The University of Edinburgh, UK; Prof. Tim O'Farrell, The University of Sheffield, UK; Dr. Bruno Clerckx, Imperial College London, UK)

Day 4: Wireless Information and Power Transfer

(Prof. Apostolos Georgiadis, Heriot-Watt University, UK; Dr. Yuan Ding, Heriot-Watt University, UK)

Day 5: Student Project Presentations and Assessment

Course Features:

- Distinguished lecturers in wireless energy harvesting and green communications
- Theoretical and practical hand-on exercise throughout the course
- Student design project contest
- Two ECTS credits for the courses and one ECTS credit for the design project

About Heriot-Watt University

Heriot-Watt University is a public university based in Edinburgh, Scotland. It was established in 1821 as the world's first mechanics' institute (Royal Charter granted in 1966) and has campuses in the Scottish Borders, Orkney, United Arab Emirates and Putrajaya in Malaysia. Heriot-Watt has been named International University of the Year by The Times and Sunday Times Good University Guide 2018. In the latest Research Excellence Framework, it was ranked overall in the Top 25% of UK universities and 1st in Scotland for research impact. It has been rated 'silver' in the latest UK Teaching Excellence Framework.

