

Workshop and Showcase

Monday 11th February 2013, 11am-3.15pm
Imperial College, London

In 2009, the EPSRC funded the three-year project: 'Next-Generation Energy Harvesting Electronics: Holistic Approach', joining together different research areas within ICT, including MEMS and devices, energy harvesting, power electronics, energy-efficiency computation, and design automation.

The consortium is holding an end-of-project workshop to showcase its demonstrators and research findings. Attendees will find out about the project's objectives and achievements, followed by an interactive showcase of the demonstrators and research outputs. The event has a particular emphasis on giving attendees the opportunity to interact with the researchers, academics, industry and the media. In the afternoon, the academics leading the project will give a series of technical seminars discussing various aspects of the research in more depth.

The agenda has been designed to give attendees the flexibility to either drop-in for the project overview and demonstrations (morning session only), or to come for the full day and get the full holistic experience!



EPSRC
Engineering and Physical Sciences
Research Council

<http://www.holistic.ecs.soton.ac.uk>

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Southampton

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University

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Agenda

Holistic Energy Harvesting Electronics: Workshop and Showcase

Location: Gabor Room (611), Electrical & Electronic Engineering, Imperial College
South Kensington Campus, London, SW7 2AZ

Date/Time: 11 February 2013, 11:00 – 15:15

11:00 – 13:00 Morning Session

11:00 – 11:15 Welcome and Project Overview

Prof Bashir Al-Hashimi (Project Director, Uni. Southampton)

11:15 – 12:00 Summary of Project Outputs

Prof Eric Yeatman (Theme A Leader, Imperial College)

Prof Alex Yakovlev (Theme B Leader, Newcastle University)

Dr Tom Kazmierski (Theme C Leader, University of Southampton)

12:00 – 13:00 Demonstrations

Attendees will be able to see demonstrations of the technology developed through the project (*some of which are listed below*), view posters and publications published as a result of the project, and talk with researchers.

MEMS Variable Reluctance Device

Frequency Tuning with Reduced Energy Use

Improved Power Extraction from Piezoelectric Harvesters

Efficient and Adaptive Power Conversion for EH Systems

Self-Timed SRAM for Energy Harvesting Systems

Reference free Voltage Sensing

Fast Design Space Explorer for EH-Powered Sensor Nodes

Case Study: Vibration-Powered Engine Monitoring

13:00 – 13:30 Lunch

13:30 – 15:15 Afternoon Session

13:30 – 13:50 Technical Seminar 1: Building a Holistic System Demonstrator

Dr Alex Weddell (University of Southampton)

13:50 – 14:10 Technical Seminar 2: Adaptive Electronics for EH Systems

Dr Bernard Stark (University of Bristol)

14:10 – 14:30 Technical Seminar 3: Accelerating EH Simulation & Design Exploration

Dr Tom Kazmierski (University of Southampton)

14:30 – 14:50 Technical Seminar 4: Energy Modulated Computing

Prof Alex Yakovlev (Newcastle University)

14:50 – 15:10 Technical Seminar 5: Adaptive and Tunable Microgenerators

Dr Paul Mitcheson (Imperial College)

15:10 – 15:15 Close

Registration is free, but places are limited

To reserve a place, please email [Geoff Merrett \(gvm@ecs.soton.ac.uk\)](mailto:gvm@ecs.soton.ac.uk)