

Edge computing for Earth observation

Agenda

- 10:15 – 10:20 **Introduction and welcome**
- 10:20 – 10:35 **SAR satellite clusters from design to exploitation**
Victoria Nockles, The Alan Turing Institute
- Theme 1: Machine learning, deep learning and AI for earth observation**
- 10:35 – 10:50 **Big data processing of sentinel-1 InSAR to monitor earthquakes, volcanoes and building subsidence**
Tim Wright, University of Leeds
- 10:50 – 11:05 **Machine learning analysis of geodetic data for earthquake and landslide detection**
Richard Walters, University of Durham
- 11:05 – 11:20 **Application of machine learning to detect ground deformation from volcanoes and urban sources in InSAR data**
Pui Anantrasirichai, University of Bristol
- 11:20 – 11:30 Comfort break
- Theme 2: Novel RF technologies**
- 11:30 – 11:45 **Multistatic ground-based SAR laboratory investigations**
Dan Andre, Cranfield University
- 11:45 – 12:00 **Embedded automatic object recognition for synthetic aperture radar systems**
Michael Woollard, UCL
- 12:00 – 13:00 Comfort break
- Theme 3: Distributed systems**
- 13:00 – 13:15 **Do switches dream of machine learning? Using in-network computing to accelerate real-time processing**
Noa Zilberman, University of Oxford
- 13:15 – 13:30 **Optimized resource allocation and computation for distributed sensors**
Kin Leung, Imperial College London
- 13:30 – 13:40 Comfort break
- Theme 4: Computer architectures/FPGAs**
- 13:40 – 13:55 **A hardware platform for efficient multi-modal sensing**
Phillip Stanley-Marbell, University of Cambridge
- 13:55 – 14:10 **Developing SAR and Machine learning on Intel FPGAs**
Jahanzeb Ahmad, Intel
- 14:10 – 14:25 **Strategies for efficient implementation of neural networks in hardware**
Rob Mullins, University of Cambridge
- 14:25 – 15:00 **Event summary**
Facilitated by Victoria Nockles, The Alan Turing Institute
- 15:00 Event close