



Agenda – Autonomous Systems and Signal Processing

Summary of the event

This UDRC Theme meeting will address the challenges that the deployment of autonomous systems can bring to signal processing. As autonomous systems become more widely used, they require more on-board decision-making and multi-vehicle coordination and collaboration. Core to this is the ability to extract and transmit relevant information from raw signals as well as adapt the sensing (modality and position) to the specific needs of the operators and operational context. However, the two communities have largely worked in isolation and we believe there is a need to better understand each other capabilities and needs to progress further.

This meeting will explore some recent advanced in autonomous decision making based on live data processing and will be an opportunity for the UDRC to present their work to the autonomous systems community. It will also be an opportunity to identify synergies and understand DSTL challenges in this area.

Timings

Wednesday 12th November 2014
9am till 5pm

Location

Seminar and Reading Rooms, Centre for Science at Extreme Conditions (CSEC), University of Edinburgh
Erskine Williamson Building, The King's Buildings
Mayfield Road, Edinburgh, EH9 3JZ.

The best way to get into CSEC is through the [James Clerk Maxwell Building](#) (JCMB) - the entrance is just behind The Magnet cafeteria on level three of JCMB. There will be signs pointing towards the UDRC Meeting from the entrance to the James Maxwell Building to help you.

A map of the campus can be found [here](#).



Wednesday, November 12, 2014

9:00 am to 9:15 am	Coffee and Registration
	Introduction
9:15 am to 9:20 am	<i>Prof. Yvan Petillot, Deputy Director, Edinburgh Consortium</i>
9:20 am to 9:35 am	The ASUR program, signal processing challenges <i>Prof. Bill Bardo, ASUR technical director</i>
9:35 am to 10:10 am	Distributed Signal Processing <i>Bernie Mulgrew, Edinburgh Consortium</i>
10:10 am to 10.45 am	Signal processing for improving situational awareness of UAVs? <i>Prof. Wen-Hua Chen, LSSC Consortium</i>
10:45 am to 11.15 am	Coffee
11:15 am to 11:50 pm	Sensing the Environment from Mobile Platform <i>Prof Andrew Wallace, Edinburgh Consortium</i>
11:55 am to 12.30 pm	Trends in automatic systems for land vehicles <i>Thales</i>
12:30 pm to 1:50 pm	Lunch
1:50 pm to 2:25 pm	UAV technologies for sense & avoid, weather detection and precision landing <i>James Revell, BAe Systems</i>
2:25 pm to 3:00 pm	Robotics and Autonomous Systems Research at Edinburgh <i>Prof David Lane, Robotarium Director, Edinburgh</i>
3:00 pm to 3:30 pm	Dstl present 2 current challenges <i>Phil Brown, DSTL ASUR Technical Lead – Paul Thomas, Exploitation Lead - University Defence Research Centre</i>
3:30 pm to 4:30 pm	Refreshments available and split into groups to discuss solutions to one of the two challenges
4:30 pm to 5:00 pm	Each group presents findings with open discussion. Close