

HOST: Dr Mohammed Jahangir, m.jahangir@bham.ac.uk

Wednesday 29th May 2024 - Day 1

Start	Finish	Title	Speaker	Organisation
10:00	10:30	<i>Arrival, Coffee and Registration</i>		
10:30	10:35	<i>Welcome address</i>	Host: Mohammed Jahangir	University of Birmingham
10:35	10:40	Focus Group 1: ASPIRE Introduction	Session Chair: Carmine Clemente	University of Strathclyde
10:40	11:00	Signal Processing Strategies for Maritime Situational Awareness	Anum Pirkani	University of Birmingham
11:00	11:20	Simulation of multi-function radars	Robert Hill	Igence Radar
11:20	11:40	Near-Real-Time Wireless Signal Classification via Deep Learning	Gregory Parkes	L3Harris
11:40	12:00	Adaptive EW Against Cognitive Radar and Radios	Bashar Ahmad	BAE Systems
12:00	13:00	<i>Lunch break, posters</i>		
13:00	13:20	Phase synchronization techniques for synchronized bistatic staring radar	Darren Griffiths	University of Birmingham
13:20	13:40	Deep learning background estimation to support analytical SAR detection algorithms	Darren Coe	QinetiQ
13:40	14:20	<i>Advanced Networked Radar (ADRAN) / Alkaline Research Laboratory tour, posters</i>		
14:20	15:00	<i>Coffee break, posters</i>		
15:00	15:10	Focus Group 2: MODEST Introduction	Session Chair: Duncan Robertson	University of St Andrews
15:10	15:30	Design and Implementation of SDRadar Bespoke Platform for Healthcare Applications	Mostafa Elsayed	University of Glasgow
15:30	15:50	Multi-aspect on-vehicle sensing using solid-state 270 sensors	Kashif Siddiq	Oxford RF Solutions Ltd
15:50	16:10	Preparing the next generation of engineers with simulation	Dimitris Tzagkas	ANSYS
16:10	16:30	Joint Communication and Sensing: 12 Years of Innovation in Cape Town!	Amit K Mishra	Aberystwyth University
16:30	16:45	Discussion & thanks	MODEST & ASPIRE	EMSIG
16:45	16:45	<i>End of Day 1</i>		
16:45	17:15	<i>Microwave Integrated Systems Laboratory (MISL) tour</i>		

Thursday 30th May 2024 - Day 2

Start	Finish	Title	Speaker	Organisation
09:00	09:30	<i>Arrival, Coffee and Registration</i>		
09:30	09:40	Focus Group 2 (Continued): MODEST Recap	Session Chair: Dimitris Tzagkas	Ansys
09:40	10:00	Radar in assisted living	Julien Le Kernec	University of Glasgow
10:00	10:20	Close range triple frequency volumetric scattering radar instrumentation	David Macfarlane	University of St Andrews
10:20	10:40	Low SWaP mm-wave radar sensing	James Henderson	Plextek
10:40	11:00	Future technology: the Geonium Chip Penning trap as a microwave quantum radar.	Ryan Willetts	University of Sussex
11:00	11:45	<i>Coffee break, posters</i>		
11:45	11:55	Focus Group 3: RfS Introductions	Session Chair: Marina Gashinova	University of Birmingham
11:55	12:15	Quantum-enabled radar - Merit and future trends	Mohammed Jahangir	University of Birmingham
12:15	12:35	Earth Imaging from Geosynchronous Orbit	Stephen Hobbs	Cranfield University
12:35	12:55	Micro-motion Extraction from Spaceborne SAR	Carmine Clemente	University of Strathclyde
12:55	13:15	An end-to-end signal processing chain for Low Earth Orbit ISAR space object imaging	Tim Jennings-Bramly	DSTL
13:15	14:15	<i>Lunch break, posters</i>		

Thursday 30th May 2024 - Day 2 (Continued)

Start	Finish	Title	Speaker	Organisation
14:15	14:35	The radar cross section of CubeSats.	Duncan Robertson	University of St Andrews
14:35	14:55	Space Jeopardy and Response (SJAR)	Oliver Kirkpatrick	University of Birmingham/ RMIT University
14:55	15:15	Scene-adaptive Spaceborne Synthetic Aperture Radar Raw Data Compression	Mehrdad Yaghoobi	University of Edinburgh
15:15	15:35	Radar for Space Situational Awareness	Marco Martorella	University of Birmingham
15:35	16:00	Panel discussion on Radar for Space	RfS	EMSIG
16:00	16:00	End of Day 2		
16:00	16:30	ADRAN / MISL tour (optional)		

POSTERS (Session runs both days)				
Focus Group	Title	Speak	Organisation	
ASPIRE	Progress Towards Building a Quantum-Enabled Radar	Gwynfor Donlan	University of Birmingham	
ASPIRE	Robust detector for Drone HERM lines using a matched filter	Xiaofei Ren	University of Birmingham	
ASPIRE	Coherent track-before-detect with flexible pulse shape	Murat Uney	University of Liverpool	
ASPIRE	Micro-Doppler extraction from SAR	Finlay Rollo	University of Strathclyde	
ASPIRE	A Comparison of PDW Extraction Techniques on Weak LPI Radar Pulses	Ryan White	UCL	
ASPIRE	Research into Sea Clutter with Mechanically Scanning Maritime Radar	Leon Kocjancic	Hensoldt UK	
ASPIRE	Radar Threat Analysis, the 'Data Problem', and 'an AI overlay for EW Databases and knowledge graphs'	Richard Rudd-Orthner	Elbit Systems UK	
MODEST	Short Range Interferometric Synthetic Aperture Radar for Environmental Monitoring	Mark Bell	University of St Andrews	
MODEST	Improving the Signal to Clutter Ratio in Maritime Radar with the Radon Transform	Samuel Harris	University of Birmingham	
MODEST	Maritime Doppler Beam Sharpening, simulation and measurements.	Dillon Kumar	University of Birmingham	
MODEST	Quantifying Performance Benefit of Adaptive Active-Passive Mode-Switching Using Experimental Data	Jacob Fromage	UCL	
MODEST	Measuring surface currents and winds from airborne SAR	David McCann	National Oceanography Centre	
MODEST	Remote Sensing Intertidal Mapping of Coastal Environments and GNSS Remote Sensing of tide levels	Paul Bell	National Oceanography Centre	
RfS	Sensor assurance frame work for Autonomous Vehicles and Vessels	Fengping Li	National Physical Laboratory	
RfS	Space-based Space Domain Awareness: Sub-THz ISAR simulation and monitoring platform assessment	Gruffudd Jones	University of Birmingham	
RfS	Space-based Space Domain Awareness: Sub-THz ISAR image segmentation and classification	Morgan Coe	University of Birmingham	
RfS	Hybrid RNN and matched filter algorithm for forward scattering signal motion extraction	Sebastian Diaz Riofrio	University of Strathclyde	
RfS	Multistatic Imaging SAR	Greta Zefi	University of Strathclyde	
RfS	Spectral profiles extraction from SAR SLC images	Laura Parra	University of Strathclyde	
RfS	Software-Defined Radar (SDRadar) Models for HALE and Small Satellites	Merve Durmus	Cranfield University	

Talks are for 20 min duration that include 5 minutes for questions/discussion . Please bring your presentation on a USB stick (PowerPoint or PDF). Please upload them to the display laptop ahead of the focus group session in which you are speaking.

Posters should be A1 Portrait format. Please display your posters on the poster boards provided as soon as you arrive. Authors will be requested to be present at their posters during the session breaks corresponding to their allocated themes as indicated in the agenda.

Venue: The event will be held in Gisbert-Kapp building at Edgbaston Campus at Birmingham University. For directions and more information about the venue see attached PDF for gisbert-kapp.

Parking: Visitor parking is available at Pritchatts Road North East Multi Storey Car Park which is adjacent to the event venue. For more information and parking charges see [link](#)