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**IET 13th Colloquium on Antennas and Wireless Electromagnetics (CAWE’25) - 11 June 2025**

**Hosted by the Department of Electrical Engineering & Electronics, University of Liverpool**

**Programme**

09:00-10:00 Registration and Networking with light refreshments (posters set up)

**Session 1**

10:00-10:10 Welcome – Housekeeping, Aims of Colloquium

Dr Anil Shukla, CAWE Chair and Chair of IET Antennas & Propagation TN

10:10-10:30 Invited Speaker

***Advances in liquid and dispersive antennas***

Professor Yi Huang, Chair in Wireless Engineering & Head of the High Frequency Engineering Research Group, University of Liverpool

10:30-10:45 Presentation 1

***A Comparative Study on 3D printed reflectarray antennas based on two 3D printing technologies***

Irsat Gulen, University of Birmingham

10:45-11:00 Presentation 2

***Material characterisation, modelling and design of transparent antennas using carbon nanotubes.***

Johan Skatt, Cambridge Consultants

11:00-11:30 Mid-morning break with light refreshments – Poster Session – Lab Tour

**Session 2**

11:30-11:45 Presentation 3

***UAV Spoofing Attacks Detection on Secure Wireless Infrastructure***

Evangelos Xenos, University of Bristol

11.45-12:00 Presentation 4

***Radio Frequency Fingerprinting Identification Protocols Using Antenna Mutual Coupling and Power Amplifier Nonlinear Memory Effects***

Yuepei Li, University of Edinburgh

12:00-13:30 Lunch – Networking – Poster Session - Lab Tour

**Session 3**

13:30-13:50 Invited Speaker

**Integrated Sensing and Communications**

Dr Murat Temiz, Research Fellow, University College London

13:50-14:05 Presentation 5

***Simulating In-Vivo Implantable Telemetry using Gel Phantoms combined with Human Subjects***

Nikolas Bruce, University of Glasgow

14:05-14:20 Presentation 6

***Dielectric resonator antenna gain enhancement via Deep Reinforcement Learning-controlled surface deformation***

Kirill Kurskiy, University of Liverpool

14:20-15:00 Mid-afternoon break with light refreshments – Poster Session - Lab Tour

**Session 4**

15:00-15:15 Presentation 7

***Contactless Breathing Detection and Classification via Convolutional Neural Network***

Yuanying Qu, University of Liverpool

15:15-15:30 Presentation 8

***Mechanically modulated metamaterial inspired scatters for bee locating and behaviour classification***

Rachel Ball, University of Sheffield

15:30-15:45 Presentation 9

***2x1 Analog Frontends for In-Band Full-Duplex Communication***

Uros Jankovic, University of Westminster

15:45-16:00 Invited Speaker

***Exploiting your research***

Dr Anil Shukla, Senior Fellow, QinetiQ

16:00-16:05 Closing remarks and thanks – Dr Anil Shukla

16:05-16:30 Networking

**See below for details of the Poster Session**

**Poster Session**

1. ***Ultrawideband phased array by means of beamforming in software***

Alex Barnes, Queens University Belfast

1. ***Holographic TE-mode metasurface antenna design based on a variable ground plane***

Bilge Acikgoz, University of Birmingham

1. ***Study of Reconfigurable Photoconductive Silicon Based RF Antennas***

Fatma Elhouni, University of Liverpool

1. ***Impact of via Placement on Reflection Coefficient in Reflective Metasurface***

Hang Yu, University of Sheffield

1. ***FR1(C) and FR3 bands Indoor Hallway Channel Measurements and Modelling for 6G Wireless Networks***

Jiahao Hu, University of Durham

1. ***Aperture- and spectrum-sharing reflectarray and 2D leaky-wave array with wide-range sensing and high-throughput communication***

Lei Wang, University of Lancaster

1. ***A Self-biased Circulator with Dual-band Operation***

Lingqi Kong, University of Liverpool

1. ***The Design and Analysis of a PIFA in an Integrated Transmit System***

Lord Ali, University of Liverpool

1. ***A mmWave Leaky-Wave Antenna for Efficiency Enhanced Near-Field Wireless Power Transfer and Communication***

Shan Han, Heriot Watt University

1. ***Non-Contact Vital Signs Monitoring Using FMCW Millimeter-Wave Radar Signal Processing Techniques***

Wenfei Yang, University of Liverpool

1. ***Sustainable, fully recyclable and biodegradable antenna and circuit fabrication***

Xiaochuan Fang, University of Glasgow

1. ***Fully printed zero-static power switch coded reconfigurable graphene metasurface for RF/microwave electromagnetic wave manipulation and control***

Xiaoyu Xiao, University of Manchester

1. ***Memristive Dual Beam-steering Phased Arrays***

Yifan Zhang, University of Manchester

1. ***Millimetre Measurements of Human Blockage in Office Environment***

Yubei He, University of Durham