

EPSRC CDT in Intelligent Sensing and Measurement

Annual Conference

2nd November 2018 - The University of Glasgow, Senate Room

The University of Glasgow | University Avenue | Glasgow G12 8QQ

09:00 **Registration and Coffee**

PROGRAMME

Session 1

Prsider: *Laura Boyd, University of Glasgow*

09:30 **Welcome**
Stephen McGeoch, Thales

09:40 **Solid State Time-Correlated Single-Photon Counting Camera for Fast Fluorescence Lifetime Imaging**
Graham Hungerford, Horiba

4th Year CDT-ISM Students

10:10 **One More Reason to Love Maxwell's Equations**
Jennifer Doodoo, University of Edinburgh

10:20 **Electrochemical Sensors for Smart Contact Lenses**
Matthew Donora, University of Glasgow

10:30 **Using the Eye as a Window into your Health**
Ross Drysdale, University of Glasgow

10:40 **Miniaturization of an Optical Interference Block to be Integrated in Capsule Endoscopy for Fluorescence Imaging of the Gastrointestinal Tract**
Gianluca Melino, University of Glasgow

10:50 **Refreshment Break**

Session 2

Prsider: *Markus Ronde, University of Edinburgh*

11:25 **Imaging and Sensing Technology – a Commercialisation and Entrepreneurial Perspective**
Des Gibson, University of West of Scotland

4th Year CDT-ISM Students

12:05 **Oculometric Interrogation using Smart Contact Lenses**
Callum MacArthur, University of Edinburgh

12:15 **MEMS Gravity Gradiometers for Attitude Control of CubeSats**
Giovanna Marocco, University of Glasgow

*Video Presentation

2nd Year CDT-ISM Student Poster Pitches

- 12:25 **Liquid Crystal Lasers: Microscopy, Microfluidics and Sensing**
Jason Norman, University of Edinburgh
- 12:26 **pH and Redox Detection in Microfluidic Cell Culture**
William Skinner, University of Edinburgh
- 12:27 **Structured illumination and SPADs for Time-of-Flight imaging**
Konstantinos Bantounos, University of Edinburgh
- 12:28 **Skin surface sensing for health monitoring**
Fiona Moore, University of Edinburgh
- 12:29 **3D Microscopic Imaging**
Michael Handley, University of Glasgow
- 12:30 **Characterisation of Monolithic Digital CMOS SPAD Sensor for Time-of-Flight Imaging**
Sam Hutchings, University of Edinburgh
- 12:31 **Development of Interdigitated Electrode Devices onto a Topography-Free Sample for Scanning Electrochemical Microscopy Imaging**
David Atkins, University of Glasgow
- 12:32 **Microelectrode Analysis of Pyrochemical Reprocessing**
Nigel Lucas, University of Edinburgh
- 12:33 **Wearable Flexible Sweat Sensors for Early Disease Detection**
Michael Chung, University of Edinburgh
- 12:34 **Lunch**
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Session 3

Presider: Andy Harvey, CDT ISM Director, University of Glasgow

- 13:50 **A research career in industry: riding out the cycles of innovation**
Gillian Marshall, Qinetiq

4th Year CDT-ISM Students

- 14:20 **A Plain Scone and a Single Shot Light-sheet to go, Please**
Chiara Garbellotto, University of Glasgow
- 14:30 **High Q Silicon Nitride Ring Resonators**
Martin Sinclair, University of Edinburgh
- 14:40 **Advanced and Computational Imaging Techniques for Microendoscopy**
Stuart Wilson, University of Glasgow
- 14:50 **Biointegration of Implanted Biosensors**
Paul Sullivan, University of Edinburgh
- 15:00 **Refreshment Break**
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Session 4

President: *Jennifer Dodoo, University of Edinburgh*

15:35 **Magnetic nanoparticles: chemical synthesis, properties and applications**
Prakash Karipoth, Marie-Curie Post-Doctoral Research Fellow, University of Glasgow

3rd Year CDT-ISM Student 3 Minute Thesis/Video

16:05 **Breaking the Limits of Microscopy**
Tomas Aidukas, University of Glasgow

16:08 **Photonic Crystal Fibres for Chemical Sensing**
Sergio Bermudez, University of Edinburgh

16:11 **Characterisation of a Thermal Neutron Detector for Implementation at the European Spallation Source**
Laura Boyd, University of Glasgow

16:14 **Passive Microfluidic System for Whole Blood Assays**
Giulia Deiana, University of Edinburgh

16:17 **Sensing and Measuring of Redox Modifications in Proteins**
Lavrentis Galanopoulos, University of Edinburgh

16:20 **Chirality: From Galaxies to Snails to Life as we Know it**
Cameron Gilroy, University of Glasgow

16:23 **Beyond the Known: Understanding Chronic Diseases Development**
Jose Cortes Guzman, University of Edinburgh

16:26 **Polarimetry with a Simple Glass Cone**
Ryan Hawley, University of Glasgow

16:29 **Measuring Oxygen Metabolism in the Retina**
Julia Noorbakhsh, University of Glasgow

16:32 **Low Cost and Power Membrane Gas Sensors**
Markus Ronde, University of Edinburgh

16:35 **Detecting habitability in other worlds - the need for integrated sensors**
Yuchen Shang, University of Edinburgh

16:38 **Ultra-Thin Flexible ISFET-Based Sensing Microsystems for Biomedical Applications***
Anastasios Vilouras, University of Edinburgh

16:41 **Close**
