



Winter Symposium
January 15th and 16th
2019

**Health Sciences Centre
University College Dublin**



ANDOR
an Oxford Instruments company



Monday 14th January 2019: Health Sciences Centre

14:00 – 17:00: *DIY microscopy workshop*

Tuesday 15th January: C005, Health Sciences Centre:

Themed session: physical probe microscopy:

10.00 – 10.15 Welcome and opening

10.15 – 10.30 *Investigation and Optimisation of AFM Tip-Assisted Milling Techniques in Ferroelectric Thin Films.* **Fengyuan Zhang, University College Dublin**

10.30 – 10.45 *Microscopy: Uncovering the Secrets of Crystalline Piezoelectric Systems.* **Sarah Guerin, University of Limerick**

10.45 – 11.30 *Small, but not far away: using physical probe microscopy to advance minituarised data storage technologies.* **Lynette Keeney, Tyndall National Institute, UCC**

11.30 – 12.00 Coffee break / posters

12.00 – 12.45 *Electromechanics, electrostatics, and electrochemistry at the nanoscale.* **Brian Rodriguez, University College Dublin**

12.45 – 14.00 Lunch / posters

General session

14.00 – 14.30 *Latest advances in live cell imaging.* **Chris Power, Carl Zeiss Microscopy**

14.30 – 14.45 *New technology for cervical cancer screening and HPV testing based on Raman spectroscopy.* **Damien Traynor, Technological University Dublin**

14.45 – 15.00 *Sperm sexing: How does it affect bovine sperm-oviduct interactions?* **Miguel Camara Pirez, University College Dublin**

15.00 – 15.15 *Control and Regulation of Stem Cell Differentiation Triggering using nanoparticles.* **Francesca Ravera, Technological University Dublin**

15.15 – 15.45 Coffee break / posters

15.45 – 17.00 Microscopy Society of Ireland AGM

Wednesday 16th January: C005, Health Sciences Centre

Themed session: open-source approaches in microscopy:

- 10.00 – 10.15 *Open-source analysis of high-resolution electron microscopy data*
Eoghan O'Connell, University of Limerick
- 10.15 – 10.30 *The Flexiscope: a low cost, flexible, convertible, and modular microscope with automated scanning and micromanipulation.* **Amy Courtney, University College Dublin**
- 10.30 – 11.30 *From open science to open source electron microscopy.* **Magnus Nord, University of Antwerp**
- 11.30 – 12.00 **Coffee break / posters**
- 12.00 – 13.00 *Democratising high-quality live-cell super-resolution microscopy enabled by open-source analytics in ImageJ.* **Ricardo Henriques, University College London**
- 12.45 – 14.00 **Lunch / posters**

General session

- 14.00 – 14.15 *Label free microscopy with sub-diffraction resolution and nano-sensitivity.* **Sergey Alexandrov, Technological University Dublin**
- 14.15 – 14.30 *How do ovarian cysts affect the microarchitecture of the oviduct?*
Deirdre Scully, University College Dublin
- 14.30 – 14.45 *Centrosome amplification increases metastatic potential in breast cancer.* **Anu Prakesh, NUI Galway**
- 14.45 – 15.00 *Early detection of potentially malignant oral lesions using minimally-invasive oral exfoliated cells through Raman microscopy: assessment of confounding factors.* **Isha Behl, Technological University Dublin**
- 15.00 – 15.30 **Coffee break / posters**
- 15.30 – 15.45 *How does sperm sexing in the bovine affect functional morphology of early embryos?* **Heather Steele, University College Dublin**
- 15.45 – 16.00 *Development of methodologies for Raman spectral analysis of human saliva for detection of oral cancer.* **Genecy Calado, Technological University Dublin**
- 16.00 – 16.30 *Polarization assisted nanosensitive optical coherence tomography: detection of precancer related tissue anisotropy.* **Nandan Das, NUI Galway**
- 16.15 – 16.30 *Exploring the sub-cellular location of 2D MoS₂ nanoplatelets in human macrophage like cells and identifying the effect of cellular micro-environments on the integrity of the MoS₂ nanomaterial*
Caroline Moore, Technological University Dublin
- 16.30 – 16.45 *Around the World in ≤ 200 keV.* **Cian McKeown, University of Limerick**
- 16.45 – 17.00 **Prizes and close**

