



THE ANNUAL AEROSOL SCIENCE CONFERENCE

PROGRAMME

MONDAY 6TH APRIL 2009

10.00- 10.30 **Registration and Coffee**

Session 1: Atmospheric Aerosol Studies

10.30 – 11.20 **Measurements of Atmospheric Aerosols at Mace Head**
Prof. S. Gerard Jennings
School of Physics / Environmental Change Institute
National University of Ireland, Galway; University Road, Galway, Ireland

11.20 – 11.40 **Balloon-Carried Charge Measurements On Layer Cloud Boundaries**
K.A. Nicoll and R.G. Harrison
Department of Meteorology, University of Reading, UK

11.40 – 12.00 **Comparison Of Ceilometer Derived Multi-Layer Cloud Base Height In A Coastal Environment At Mace Head.**
G. Martucci¹, T. Milroy¹, E. Moran², T. O'Leary² & C.D. O'Dowd¹
¹Centre for Climate and Air Pollution Studies, School of Physics, National University of Ireland, Galway, Ireland
²MET ÉIREANN the Irish National Meteorological Service, Ireland

12.00 – 12.20 **Studies Of The Influence Of High Molecular Weight Tri-Block Copolymers On The Properties Of Aqueous Aerosol Droplets**
G. Hargreaves, Dr. N. Kwamena, Dr. J. Wills, S. Rushworth, & Dr J. P. Reid.
University of Bristol School of Chemistry, Aerosol Dynamics Research Group.

12.20 – 12.40 **Nuclear Explosion Effects On Atmospheric Electricity**
R.G. Harrison
Department of Meteorology, University of Reading, Berks, UK

- 12.40 – 13.50 Lunch**
- 13.50 – 14.10 The Effect Of Weather On The Atmospheric Potential Gradient Near High Voltage Power Lines**
J C Matthews and D L Henshaw
H H Wills Physics Laboratory, University of Bristol, UK
- 14.10 – 14.30 Atmospheric Infra-Red Absorption Associated With Cosmic Ray Ionisation**
K L Aplin, J G Firth, C A Eley
Space Science and Technology Department, Rutherford Appleton Laboratory, UK
- 14.30 – 14.50 Validation Of Aerosol Chemical Components Predicted By ECMWF IFS Model**
D. Ceburnis¹, R. Dupuy¹, J.-J. Morcrette² and C.D. O'Dowd¹
1 School of Physics and Centre for Climate and Air Pollution Studies, Environmental Change Institute, National University of Ireland, Galway, Ireland
2ECMWF, UK
- 14.50 – 15.50 Posters and Coffee**
- 15.50 – 16.10 On The Thermodynamic Expansion Of The Nucleation Free Energy Barrier**
J C Barrett
Nuclear Department, DA-CMT, HMS SULTAN, Gosport, UK
- 16.10 – 16.30 Using Jarzynski's relation to calculate cluster free energies**
Ian Ford and Hoi Yu Tang
Department of Physics and Astronomy, and London Centre for Nanotechnology, University College London, UK
- 16.30 – 16.50 Laboratory Investigation Of The Effect Of Water And Sulphuric Acid Vapour On The Formation And Growth Of Iodine Oxide Nanoparticles In The Atmosphere**
Ravi Kumar, Russell W. Saunders, Anoop S. Mahajan, Benjamin J. Murray, John M.C. Plane
School of Chemistry, University of Leeds, UK
- 16.50 – 17.50 The Aerosol Society AGM (inc drinks & canapés)**

TUESDAY 7TH APRIL

- 8.30 – 9.00** **Registration and Coffee**
- Session 2** **Aerosol Impacts on Health & Urban PM**
- 9.00 – 9.50** **Health and particles - Indoor and Out**
Prof Luke Clancy, Director General
Research Institute for a Tobacco Free Society, Dublin
- 9.50 – 10.10** **The Relative Uptake And Exposure Of Fine Particulate Matter, Between Urban Commuters, Using Different Transport Modes In Dublin.**
A. McNabola, B.M. Broderick and L.W Gill.
Dept. of Civil, Structural & Environmental Engineering, Trinity College Dublin, Ireland.
- 10.10 – 10.30** **Coal Bans In Ireland And The Effects On Air Quality**
P Goodman and L Clancy
Dublin Institute of Technology and RIFTFS
- 10.30 – 11.05** **Posters & Coffee**
- 11.05 – 11.25** **Modelling Exposure to Pharmaceutical Aerosols**
Patricia E. Mc Donnell^{1,2}, John W. Cherrie³, Andrew T. Gillies⁴, Anne Sleuwenhoek³, Marie A. Coggins¹, Stephen R. Bailey²
¹School of Physics, National University of Ireland, Galway, Ireland; ²GlaxoSmithKline, UK; ³Institute of Occupational Medicine, UK; ⁴Gillies Associates, UK
- 11.25 – 11.45** **Evaluation Of The Vivometrics Lifeshirt[®] System As A Tool To Measure Inhalation Behaviour During Inhalation Dosimetry Studies**
Conor McGrath
British American Tobacco, Group R&D, UK
- 11.45 -12.05** **The Monitoring And Analysis Of Ultra-Fine Particles (Ufp) Emitted From Motor Vehicles In The Urban Environment**
N.Z. Yahaya^a, J.E. Tate^b, M.R. Tight^b
^a Postgraduate Student, Institute for Transport Studies, University of Leeds, UK
^b Institute for Transport Studies, University of Leeds, UK
- 12.05 – 13.20** **Lunch**

Session 3 Aerosol Instrumentation

- 13.20 – 13.45 **From bacteria to cloud ice crystals; characterising atmospheric particles.**
Warren Stanley, Richard Greenaway, Paul Kaye, Edwin Hirst, Zbigniew Ulanowski & Evelyn Hesse.
Centre for Atmospheric and Instrumentation Research, University of Hertfordshire.
- 13.45 – 14.05 **Construction of a Biofluorescence Optical Particle Counter**
Russell Greaney¹, Oliver Ryan¹, S. Gerard Jennings,¹ Colin D. O'Dowd,¹
¹ School of Physics & Centre for Climate and Air Pollution Studies,
Environmental Change Institute, National University of Ireland, Galway,
Ireland
- 14.05 – 14.25 **Use of Single Particle Fluorescence Spectrometry to Investigate Primary Biological Aerosol Dynamics in a SE Asian Tropical Rain Forest**
Gabey, A.,¹ Gallagher, M.W. ¹, Whitehead, J.D. ¹, Dorsey, J.D. ¹, Burgess, R. ¹, McFiggans, G.M. ¹, Kaye, P. H.², Stanley, W.², Ulanowski, J. ², Bower K.N. ¹, Robinson, N.¹, Nemitz, E. ³
1. University of Manchester, Centre for Atmospheric Sciences, UK.
2. Centre for Atmospheric and Instrumentation Research (CAIR), STRI, University of Hertfordshire, U.K.
3. Centre for Ecology & Hydrology, UK.
- 14.25 – 14.40 Posters and Coffee**
- 14.40 – 15.00 **McClelland and Mobility Measurements**
T.C. O'Connor
School of Physics, NUI, Galway, Ireland
- 15.00 – 15.20 **Characterization and Application of a High Flow Differential Mobility Analyzer (DMA)**
J Spielvogel, M Richter, L Keck, H Grimm
Grimm Aerosol Technik GmbH, Germany
- 15.20 – 15.40 **A Technical Presentation on the Definition, Development, and Validation of an Ultrafine Particle Monitor for use in long term urban air quality applications**
Ian Bennett
Field Market Development Manager, TSI
- 15.40 – 16.00 **Introducing Depolarisation into a Low Cost Simple Cloud Sensor for Standoff Aerosol Detection**
Rebecca J Hopkins*, Joseph W Jones, Stephen J Barrington, Virginia Foot, Karen L Baxter
Dstl, Porton Down, Salisbury, Wiltshire SP4 0JQ.