

PROGRAMME SCHEDULE

2nd June 2010

Wednesday

- 11:00 to 14:30** **Registration**
- Parallel Sessions (S1 and S2)**
Session S1 – Theatre C006 (Chair: Tamara Hochstrasser)
- 14:30** **Land use regulates carbon budgets in eastern Germany: from NEE to NBP**
Anne-Katrin Prescher, Thomas Grünwald and Christian Bernhofer
- 14:50** **The effect of climate and land use change on soil respiratory fluxes**
Erica Cacciotti, Matt Saunders, Brian Tobin and Bruce Osborne
- 15:10** **Use of winter cover-cropping in Irish spring-barley systems as greenhouse gas mitigation action: Preliminary findings on comparative assessment of four crop types**
Dru Marsh and Bruce Osborne
- 15:30 to 16:00** **Coffee & Tea Break**
- 16:00** **Forest carbon stocks and effects of management**
Brian Tobin, Paul Gardiner, Samuel Olajuyigbe, Armand Tene, Mathew Saunders and Maarten Nieuwenhuis
- 16:20** **Complexity in science; afforestation of the Irish landscape as a source of atmospheric greenhouse gas nitrous oxide**
Giuseppe Benanti, Matthew Saunders and Bruce Osborne
- 16:40** **Coarse Woody Debris: a vital store of carbon in Irish plantation forestry?**
Samuel Olajuyigbe, Paul Gardiner, Brian Tobin and Maarten Nieuwenhuis
- 17:00** **Poster Session P1 and Tour of Péac Facility**
- 18:30** **Reception**

Parallel Sessions (S1 and S2)

Session S2 – Theatre C007 (Chair: Tommy Gallagher)

- 14:30** **Biogeography of the Irish Arctic-Alpine Caryophyllaceae: A Case study of *Arenaria norvegica***
Emma Howard-Williams, Xiaodong Dang, Colin Kelleher, Kevin Walker and Conor Meade
- 14:50** **CINMa – a novel biodiversity index to evaluate the ecological impacts of GM crops**
Marcus J. Collier and Ewen Mullins
- 15:10** **Gene transfer into *Solanum tuberosum* via *Rhizobia* spp.**
Toni Wendt, Fiona Doohan and Ewen Mullins
- 15:30 to 16:00** **Coffee & Tea Break**
- 16:00** **Development and use of nuclear microsatellite markers (SSRs) for genetic diversity evaluation in *Miscanthus* (Panicoideae, Poaceae)**
Mariateresa de Cesare, Trevor R. Hodgkinson and Susanne Barth
- 16:20** **The genetic location of the self-incompatibility locus in white clover (*Trifolium repens* L.) as established by linkage mapping**
Nora M. Casey, Dan Milbourne, Susanne Barth, Glyn Jenkins, Michael T. Abberton, Melanie Febrer, Charlotte Jones, Daniel Thorogood
- 16:40** **Towards the Development of a Coexistence Regime for the Production of GM Potato in Ireland**
Sinead Phelan, Stephen Byrne, Conor Meade and Ewen Mullins
- 17:00** **Poster Session P1 and Tour of Péac Facility**
- 18:30** **Reception**

3rd June 2010

Thursday

Parallel Sessions (S3 and S4)

Session S3 – Theatre C005 (Chair: Jennifer McElwain)

- 9:30** **Yield and agronomy of contrasting cultivars of maize harvested at sequential stages of maturity in 2008 and 2009**
Joseph Lynch, Pádraig O’Kiely and Evelyn Doyle

- 9:50** Cold hardiness of the photosynthetic performance of the forage maize varieties of Ireland in early spring
Soni S. Mulakupadom, Saul. Otero, Gary Lanigan and Bruce Osborne
- 10:10** Recovery after drought in a diverse temperate grassland under elevated CO₂
Tamara Hochstrasser, Claudia Kammann and Christoph Müller
- 10:30 to 11:00** Coffee & Tea Break
- 11:00** The impacts of sub-zero temperatures on the photosynthetic performance of a Sitka Spruce forest
Matthew Saunders, Brian Tobin and Bruce Osborne
- 11:20** Tree height influence on total biomass and biomass components in Sitka spruce
Paul Gardiner, Samuel Olajuyigbe, Armand Tene, Brian Tobin, Mathew Saunders and Maarten Nieuwenhuis
- 11:40** Assessing the greenhouse gas budget of eco-tillage and other mitigation options for arable ecosystems: tillage managements and trace gases emissions
Mohamed Helmy, Mohamed Abdalla and Bruce Osborne
- 12:00** New Phytologist Lecture (Theatre C005)
Polyploidy and angiosperm evolution: advances in understanding of its importance
Professor Mark Chase FRS
Keeper of the Jodrell Laboratory
Royal Botanic Gardens, Kew, United Kingdom
- 13:00 to 14:30** Lunch Break
- Parallel Sessions (S3 and S4)**
Session S4 – Theatre C006 (Chair: Paul McCabe)
- 9:30** Crop plant responses to abiotic stress
Dilip Biswas, Gaoming Jiang and Marcel Jansen
- 9:50** Cell wall acidification associated with leaf growth in barley (*Hordeum vulgare* L.)
Tamás Visnovitz and Wieland Fricke
- 10:10** Radial root water uptake in barley – a purely apoplastic transport pathway along cell-walls can be excluded
Thorsten Knipfer and Wieland Fricke

- 10:30 to 11:00** **Coffee & Tea Break**
- 11:00** **Development of an accurate LC-MS/MS method for analysis of bioactive compounds in *Scutellaria* species**
Nurul Islam, Frances Downey, and Carl K.-Y. Ng
- 11:20** **Early response mechanisms of perennial ryegrass (*Lolium perenne*) to phosphorus deficiency**
Stephen L Byrne, Alexandre Foito, Pete E Hedley, Jenny A Morris, Derek Stewart and Susanne Barth
- 11:40** **Prospective and Retrospective Bioindication of UVR using bryophytes**
Saúl Otero, Javier Martínez-Abaigar, Encarnación Núñez-Olivera, Rafael Tomás, María Arróniz-Crespo and Nathalie Beaucourt
- 12:00** **New Phytologist Lecture (Theatre C005)**
Polyploidy and angiosperm evolution: advances in understanding of its importance
Professor Mark Chase FRS
Keeper of the Jodrell Laboratory
Royal Botanic Gardens, Kew, United Kingdom
- 13:00 to 14:30** **Lunch Break**
- Parallel Sessions (S5 and S6)**
Session 5 – Theatre C005 (Chair: Bruce Osborne)
- 14:30** **The effect of ploidy on the agronomic performance of perennial ryegrass (*Lolium perenne* L.)**
Gareth Burns, Trevor Gilliland, David McGilloway, Eva Lewis, Michael O'Donovan and Pdraig O'Kiely
- 14:50** **Iodine, brown macroalgae and atmospheric chemistry – the emission of molecular iodine by *Laminaria digitata***
Udo Nitschke, Sophie Dixneuf and Dagmar B Stengel
- 15:10** **Impacts of UV radiation, desiccation and submersion on two maritime lichen species**
Niall Higgins and Dagmar Stengel
- 15:30** **The spread of invasive freshwater plants in Ireland. The role of long distance dispersal and secondary introductions**
Ruth Kelly, Neil Reid and Chris Maggs

- 15:50** **The evolution of cell wall polymers**
Zoë A. Popper
- 16:10 to 16:40** **Coffee and Tea Break**
- 16::40 to 18:30** **Poster Session P2 and Tour of Péac Facility**
- 19:30** **Conference Dinner**
- Parallel Sessions (S5 and S6)**
Session S6 – Theatre C006 (Chair: Tommy Gallagher)
- 14:30** **Identification of genes expressed from maternal genomes in *Arabidopsis* seed: novel imprinted genes and maternal determinants of reproductive success**
Peter McKeown, Sylvia Laouielle-Duprat, Nga Lao, Marc Schmid, Ueli Grossniklaus and Charles Spillane
- 14:50** **Identification, evolution and functional genetic analysis of lineage-specific genes in Brassicaceae**
Channakeshavaiah Chikkaputtaiah, Mark Donoghue, Wei Li, Sandesh Swamidatta and Charles Spillane
- 15:10** **Genetics and epigenetics of F1 hybrid triploids in *Arabidopsis thaliana***
Dorota Duszynska, Peter McKeown, Bjarni Vilhjalmsson, Aurelie Comte, Anna Pietraszewska, Magnus Nordborg, Thomas E. Juenger, Tim Sharbel and Charles Spillane
- 15:30** **Genome dosage effects on phenotype and transcriptome in an isogenic autopolloid series in *Arabidopsis thaliana***
Marie-Luise Zielinski, Mark Donoghue, Peter McKeown, Olivier Garnier, Rachel Clifton and Charles Spillane
- 15:50** **Assessment of genetic variation within and among accessions of *Lactuca* species based on isozyme markers**
Mohamed El-Esawi, Salwa Badr, Abd El-Zaher Mustafa, Reda Sammour
- 16:10 to 16:40** **Coffee and Tea Break**
- 16:40 to 18:30** **Poster Session P2 and Tour of Péac Facility**
- 19:30** **Conference Dinner**

**4th June 2010
Friday**

Session S7 – Theatre C006 (Chair: Graham Wilson)

- 9:30** **Using modern ‘ancient’ taxa to help unravel leaf economics across the Triassic – Jurassic boundary, 200 million years ago**
Karen Bacon and Jennifer C. McElwain
- 9:50** **Plant evolution and the role of atmospheric oxygen and carbon dioxide**
Matthew Haworth, Caroline Elliott-Kingston, Emma F. Reeves and Jennifer C. McElwain
- 10:10** **Response of terrestrial vegetation in East Greenland to a natural global warming event 200 million years ago**
Luke Mander, Wolfram Kürschner and Jennifer C. McElwain
- 10:30 to 11:00** **Coffee & Tea Break**
- 11:00** **Increased fire risk associated with global warming – a case study from Earth history**
Claire M. Belcher, Luke Mander, Guillermo Rein, Freddy X. Jervis, Matthew Haworth, Stephen P. Hesselbo, Ian J. Glasspool and Jennifer C. McElwain
- 11:20** **Effect of tillage systems and associated managements on the carbon budget of Irish croplands**
Dilek Killi, Matthew Saunders, Saul Otero, Mohammed Abdalla, Mike Jones and Bruce A. Osborne
- 11:40** ***Fusarium oxysporum*-mediated bioethanol production from wheat straw and bran**
Mojibur R. Khan, Shahin S. Ali, Ewen Mullins and Fiona M. Doohan
- 12:00** **Closing remarks and prize presentation**