

ERC/ SEES 2013 Research Symposium

Mark O'Malley

Director, Electricity Research Centre, University College Dublin, Ireland

Thursday 9th May 2013

www.erc.ucd.ie



What we learnt from last year



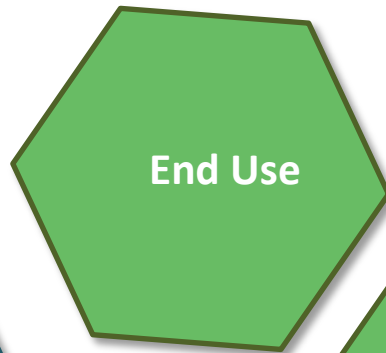
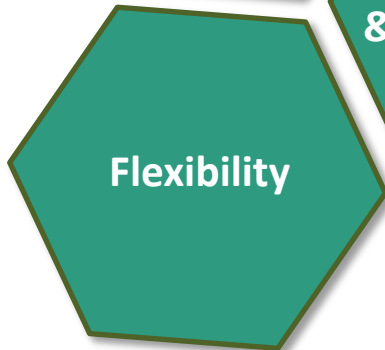
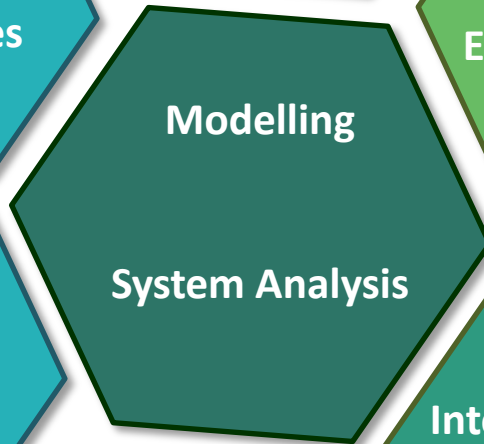
Research Strands



Dr Eleanor Denny, TCD



Dr Lynda Lyne, UCD
Dr Damian Flynn, UCD



Dr Donal Finn, UCD



Prof James Gleeson, UL



Dr Andrew Keane, UCD



Prof Sean McLoone, NUIM/QUB



Dr Terence O'Donnell, UCD

What are the challenges that remain



Dr Federico Milano
Associate Professor Power Systems Control



Job Description

| | |
|--|---|
| College/Management Unit | UCD College of Engineering and Architecture |
| School/Unit | UCD School of Electrical, Electronic and Communications Engineering |
| Post Title & Subject Area (if relevant) | Professor in Intelligent Energy Systems |
| Post Duration | Permanent |
| Grade | Professor C |
| Reports to | Head of School or nominee |
| HR Reference No. | 005842 |
| HR Administrator | Jane Mahony |

Position Summary

University College Dublin's (UCD) **School of Electrical, Electronic & Communications Engineering (SEECE)** has a long and distinguished international track record of achievement across major fields of research including electrical power systems, physical layer communications and circuits, and biomedical engineering (<http://www.ucd.ie/ea/college/eecce/>). The School is committed to the highest standards of undergraduate teaching, learning and student development in a research-informed environment. The Electricity Research Centre (erc.ucd.ie), hosted within the School, is a leading national and international centre for collaborative energy research with close links to major industries both around the world and in Ireland.

ERC/SEES 2013 Research Symposium: Thursday 9th May, 2013

09:00: Welcome

Fergus O'Dowd, TD (Minister of State, Department of Communications, Energy & Natural Resources)

09:15: Symposium and Research Session Overview: Prof. Mark O'Malley (UCD)

09:30: Modelling

Prof. James Gleeson (UL)

Joseph Collins (Bord Gáis)

10:05: System Analysis

Dr. Andrew Keane (UCD)

Moderated By: Jerry O'Sullivan (ESB Networks)

John Byrne (ESB Networks)

10:40: Markets & Regulation; Policy & Social Studies

Dr. Eleanor Denny (TCD)

Gary O'Callaghan (Siemens)

11:10 – 11:40: Coffee & Posters

11:40: Interconnection & Demonstration

Dr. Terence O'Donnell (UCD)

Mark Norton (EirGrid)

12:15: Flexibility

Moderated By: Paul Dowling (ElectroRoute)

Dr. Damian Flynn (UCD)

Jane McArdle (SSE Renewables)

Eoin Murphy (Gaelectric)

12:50 – 13:50: Lunch & Posters

13:50: Intelligent Energy Systems

Prof. Seán McLoone (NUIM)

Dr. Ronan Doherty (ElectroRoute)

Moderated By: Fintan Siye (EirGrid)

14:20: End Use

Dr. Donal Finn (UCD)

Sean Giblin (Cylon)

14:55: Education and Commercialisation Session: Sean Giblin (Cylon)

15:00: Commercialisation of Research

Dr. Peter Richardson (UCD)

15:15: Energy Needs Ireland

Moderated By: Fintan Siye (EirGrid)

Aonghus Shortt (UCD)

Muireann Lynch (UCD)

15:25 – 15:55: Coffee & Posters

15:55: International Collaboration Session: Prof. Mark O'Malley (UCD)

16:05: Technical University of Denmark (DTU)

Prof. Henrik Madsen

16:20: National Renewable Energy Laboratory (NREL)

Dr. Dana Christensen

Moderated By: Prof. Mark O'Malley (UCD)

16:40: Durham University

Prof. Janusz Bialek

16:55: Close: Paddy Teahon (UCD)

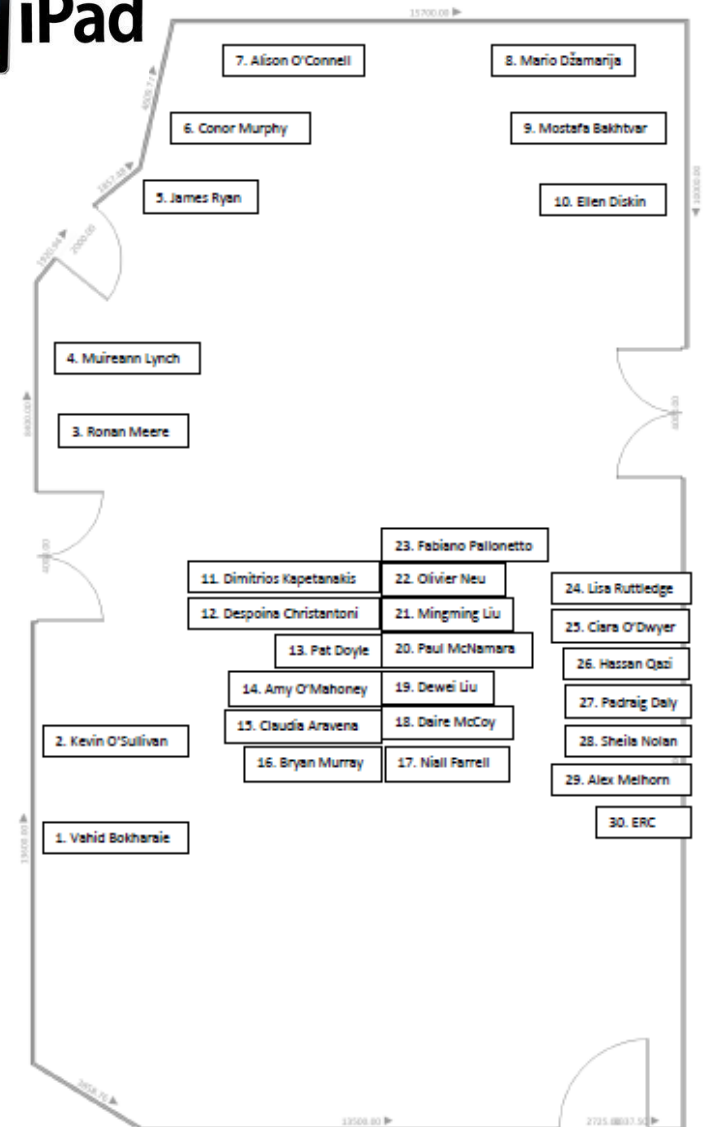
Please join us after the event for some refreshments



| No. | Poster | Presenter |
|-----|--|-----------------------|
| 1. | Optimising the Floor Price and Balancing Payment in Renewable Energy Feed-in Tariff (REFIT) Scheme | Dr. Vahid Bokharaie |
| 2. | Mathematical Models of Cascade Dynamics | Kevin O'Sullivan |
| 3. | Wind Turbine Architecture and Interconnection for Offshore Wind Farms | Dr. Ronan Meere |
| 4. | Risk-return incentives in liberalised electricity markets | Muireann Lynch |
| 5. | Flexibility, Reserves and Generator Returns | James Ryan |
| 6. | Optimisation of Wind Farm Reactive Power for Congestion Management | Conor Murphy |
| 7. | Rolling Multi-Period Optimisation to Control Electric Vehicle Charging on Distribution Networks | Alison O'Connell |
| 8. | Operational Characteristics of Non-firm Wind Generation in Distribution Networks | Mario Džamarija |
| 9. | Optimal Allocation of Wind Generation Subject to Voltage Stability Constraints | Mostafa Bakhtvar |
| 10. | Distribution system planning, operations & technological applications, integrating high wind penetration | Elen Diskin |
| 11. | Development of Scalable Whole-Building Energy Models under Zero Commissioning, Zero Maintenance Constraints | Dimitrios Kapetanakis |
| 12. | Automated Demand Response Algorithms in the Commercial Buildings Sector as a Mechanism to Address Electricity Supply Demand Synchronisation in a Distributed Flexible Grid | Despoina Christantoni |
| 13. | Electricity Market Price Convergence: an econometric analysis of the BritNed interconnector | Pat Doyle |
| 14. | The Drivers of Power System Emissions: An Econometric Analysis | Amy O'Mahoney |
| 15. | Attitudes and Preferences towards Electric Vehicles. What characteristics and policies do people value most? | Dr. Claudia Aravena |
| 16. | Measuring the Disamenity Value of Wind Farm Development in Ireland | Bryan Murray |
| 17. | Specifying an Efficient Renewable Energy Feed in Tariff | Niall Farrell |
| 18. | Investigating the Potential for Clustering of Electric Vehicles | Daire McCoy |
| 19. | On-line Risk Assessment on a Power System with High Wind Power Penetration | Dewei Liu |
| 20. | Intelligent Control for Efficient Demand Response in Smart Grids | Dr. Paul McNamara |
| 21. | AIMD for Fair Residential Charging of EVs | Mingming Liu |
| 22. | Demand Modulation of Residential Building Electrical Loads: Irish case study | Olivier Neu |
| 23. | Demand Response Algorithms for Home Area Networks (HAN) | Fabiano Pallonetto |
| 24. | Wind Generation Flexibility | Lisa Rutledge |
| 25. | Grid Scale Storage at High Wind Penetrations | Ciara O'Dwyer |
| 26. | Demand as a Source of Contingency Reserve | Hassan Wajahat Qazi |
| 27. | Stochastic, Security-Constrained Power System Operation | Padraig Daly |
| 28. | Evaluating Demand Response | Sheila Nolan |
| 29. | Management Strategies for Flexible Demand Resources | Alex Melhorn |
| 30. | Electricity Research Centre | ERC |



iPad



The opportunity

