

## Energy Systems Integration Course – UCD – 16th to 20th May 2016

The importance of ESI is being recognised globally. Most significantly ESI is a central theme running through the [EU SET Plan Integrated roadmap](#), it is also a central theme of the [Clean Energy Ministerial](#), is a major research theme with the US DOE [research laboratory](#) complex, and there is a new ESI [Joint Programme](#) within European Energy Research Alliance.

[iiESI](#) in association with Marie Curie Innovative Training Networks and the [Energy Institute](#) UCD will host a course in Energy Systems Integration (ESI) in University College Dublin from Monday 16th to Friday 20th May 2016. This course follows up on previous successful [ESI courses](#) hosted by iiESI. The course is designed for graduate students and practitioners working in the field to give a perspective on the state of the art in ESI.

The introductory course is designed along five themes that are particularly relevant to the development of integrated energy systems

Date	Day	Theme	Facilitator
16th	Monday	Renewables & Storage	Prof Mark O'Malley
17th	Tuesday	Data and Data Mining	Dr James O'Donnell
18th	Wednesday	Smart Cities and Smart Mini-City	Prof Robert Shorten
19th	Thursday	Cross Sector Disruptive Technologies	Dr Eoin Syron
20th	Friday	Energy Economics and Consumer Behaviour	Dr Lisa Ryan

The structure of each day will comprise a presentation by an international expert, an interactive session with industry stakeholders as well as participatory workshops for all attendees. See overleaf for a detailed agenda of the course with confirmed speakers.

### Registration:

Registration is now open. To register please follow the link below:

[https://sisweb.ucd.ie/usis/W\\_HU\\_MENU.P\\_PUBLISH?p\\_tag=CONFENERGY](https://sisweb.ucd.ie/usis/W_HU_MENU.P_PUBLISH?p_tag=CONFENERGY)

Registration Fee: All participants of the course must be registered to attend.

5 Day Student Rate	16-20 May	€150
Daily Rate: Renewables & Storage	16 May	€50
Daily Rate: Data & Data Mining	17 May	€50
Daily Rate: Smart Cities & Smart Mini-City	18 May	€50
Daily Rate: Cross Sector Disruptive Technologies	19 May	€50
Daily Rate: Energy Economics & Consumer Behaviour	20 May	€50

Any queries please contact [energy@ucd.ie](mailto:energy@ucd.ie)

Date	Time	Session	Speaker
Monday 16 <sup>th</sup> May	9:30-09:45	Introduction	Mark O'Malley (UCD)
	09:45-13:00	Integration of Renewables: IEA Task 25	Jody Dillon (UCD) & John McCann (SEAI)
	14:00-14:45	Energy Storage in Electricity Grids	Ciara O'Dwyer (UCD)
	15:15-16:00	EirGrid Control Centre Visit	Jon O'Sullivan (EirGrid) TBC
Tuesday 17 <sup>th</sup> May	9:30-09:45	Introduction	James O'Donnell (UCD)
	09:45-10:30	Global Context- Keynote Address	Henrik Madsen (DTU)
	10:30-11:15	Big Data & Water Networks	Edward Curry (UCD)
	11:30-12:15	IBM Perspective	Mathieu Sinn (IBM)
	12:15-13:00	EirGrid's data processing & management infrastructure	TBC
	14:00-16:00	Workshop on machine learning	
Wednesday 18 <sup>th</sup> May	9:30-09:45	Introduction	Robert Shorten (IBM Research)
	09:45-11:15	<b>Part I: Collaborative Consumption (Sharing)</b> Context ; Case studies from parking and car sharing for EV's; Dimensioning techniques	Fabian Wirth (University of Passau)
	11:30-13:00	<b>Part II: Large Scale Distributed Control &amp; Optimization</b> Context ; Case studies from pollution regulation and eco driving; Coupling effects; Test and validation; The importance of ergodicity (time permitting)	Robert Shorten (IBM Research)
	14:00-15:30	<b>Part III: Load Balancing in the City</b> Context ; Case study : Parking, EV charging, Bike share	Emanuele Crisostomi (University of Pisa) / Robert Shorten (IBM Research)
	15:45-16:30	<b>Part IV: Cognitive Computing and the Smart City</b>	Lea Deleris (IBM Research)

Thursday 19 <sup>th</sup> May	09:00-09:15	Introduction	Eoin Syron (UCD)
	09:15-10:15	Disruptive technology the GOOD, the BAD & the UGLY	William D'haeseleer (Ku Leuven)
	10:15-11:15	Panel Session	Conor Hanley (ResMed) Muiris Flynn (Glen Dimplex) TBC
	11:30-12:30	History of disruptive technologies in the Energy Sector over the past 100 years	Ronan Doherty (Electroroute)
	13:00-15:00	Workshop on Disruptive innovation in Energy Systems Integration	All
	15:15-16:15	Commercialisation of disruption, Why bother and what are the risks?	Eoin Syron (UCD)
	16:15-16:45	Presentation of results of workshop	
Friday 20 <sup>th</sup> May	09:30-10:00	Introduction	Lisa Ryan (UCD) & Geertje Schuitema (UCD)
	10:00-10:45	Global Context	Klaus Skytte (DTU)
	11:00-12:30	Panel Session: Industry, Prices & Markets	Marian Troy (SSE) Valentin Bertsch (ESRI) Laura Brien (CER) John FitzGerald (TCD) Jim Arigho (AIB)
	13:20-16:30	Workshop: Energy conservation as a prisoner's and social dilemma	Lisa Ryan (UCD) & Geertje Schuitema (UCD)