# Workshop on Key Enabling Technologies – INSPIRE Module 2016

## 5th December – 9th December 2016, Room B.0.17, Tyndall National Institute

### Workshop Programme – DRAFT

### *Monday 5 December:*

13.00 – 14:00 *Arrival & registration, buffet lunch*

14:00 – 14:10 Workshop Opening  
*Speaker TBC*

14.10 – 14:20 Welcome   
*Speaker TBC*

14:20 – 14:35 Flexilearn – A Platform for Flexible Learning  
*Jim Greer (Tyndall)*

14:35 – 14:45 Makerspaces in Ireland

*Will Knott (Tyndall)*

14.45 – 15:15 Key Enabling Technologies for Europe   
*David Williams (CIT)*

15.10 – 15:50 2 minute ‘Elevator Pitch’ introductions from students

15.50 – 16:40 Group exercise

### *Tuesday 6 December:*

***Nanotechnology***

*Chair: TBC*

09:00 – 09:15 Introduction to Nanotechnologies KET

09:15 – 10:00 E-Beam Lithography *Speaker TBC*

10:00 – 10:45 Fabrication of Nanoelectronic Devices and their Applications *Ray Duffy (Tyndall)*

10:45 – 11:15 *Coffee break*

11:15 – 12:00 Growth of Photonic Materials

*Emanuele Pelucchi (Tyndall)*

***Micro- and Nano-electronics***

*Chair: Jim Greer*

12:00 – 12:15 Introduction to Micro- and Nano-electronics KET

12:15 – 13:00 Nanowire transistors to push ahead with scaling *Jim Greer (Tyndall)*

13:00 – 14:00 *Lunch*

14:00 – 14:45 Internet of Things *Donnacha O’Riordan*

14:45 – 15:30 Wireless Sensors  *John Barton (Tyndall)*

15:30 – 17:30 Group activity exercise

*KETs capabilities in Ireland*

### *Wednesday 7 December:*

***Advanced Materials***

*Chair: TBC*

09:00 – 09:15 Introduction to Advanced Materials KET

09:15 – 10:00 Advanced Characterisation of Materials  *Michael Pomeroy (UL)*

10:00 – 10:45 Atomic-scale Modelling of Materials  *Michael Nolan*

10:45 – 11:15 *Coffee break*

11:15 – 12:00 Nanofabrication

*Speaker TBC*

***Photonics***

*Chair: TBC*

12:00 – 12:15 Introduction to Photonics KET

12:15 – 13:00 Semiconductor Lasers *Bryan Kelleher (UCC)*

13:00 – 14:00 *Lunch*

14:00 – 14:45 Photonic Systems for Telecommunications *Giuseppe Talli (Tyndall)*

14:45 – 15:30 Photonics Processing *Speaker TBC*

15:30 – 17:30 Group activity exercise TBC

### *Thursday 8 December:*

***Advanced Manufacturing Systems:***

*Chair: TBC*

09:00 – 09:15 Introduction to Advanced Energy Systems KET

09:15 – 10:00 Energy efficient buildings/ Factories of the future *Beth Massey (Tyndall)*

10:00 – 10:45 Energy Harvesting

*Speaker TBC*

10:45 – 11:15 *Coffee break*

11:15 – 12:00 Advanced Manufacturing by Laser  *Ger O’Connor (NUIG)*

***Industrial Biotechnology***

*Chair TBC*

12:00 – 12:15 Introduction to Industrial Biotechnology KET

12:15 – 13:00 Biosensors and Biocatalysts *Urszula Salaj-Kosla (UL)*

13:00 – 14:00 *Lunch*

14:00 – 14:45 Nanotoxicity

*Daniela Iacopino (Tyndall)*

14:45 – 16:45 Group activity exercise

### *Friday 9 December:*

***Commercialisation & Impact (TBC)***

*Chair TBC*

09:20 – 09:50 Value Chain Analysis & Innovation Potential

*Ger O’Connor*

09:50 – 10:10

10:10 – 10:30

10:30 – 10:50

10:45 – 11:15 *Coffee break*

11:15 – 11:35

11:35 – 11:55

11:55 – 12:15