



UNIVERSITY of LIMERICK
OLLSCOIL LUIMNIGH

Faculty of
Science + Engineering

PhD Graduations 2016



Faculty of Science + Engineering

Autumn Conferings

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Winter Conferings

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A photograph of a misty autumn landscape. In the foreground, there are dark, bare trees and bushes. A body of water, possibly a lake or a wide river, reflects the light. In the background, there are rolling hills or mountains under a sky with soft, white clouds. The overall mood is serene and quiet.

Autumn Conferings

Abdallah Noreldeen Hassan

Thesis:	<i>Immobilisation of Catalysts for Applications in Organic Reactions</i>
Internal Supervisor:	Prof. Edmond Magner
Internal Examiner:	Dr Sarah Hudson
External Examiner:	Dr Mathieu Etienne, CNRS University of Lorraine, Nancy, France
Chair:	Dr Noreen Hanly

Alahmadi Alaa

Thesis:	<i>Automatic Text Classification Using Bag of Words and Bag of Concepts Based Representations</i>
Internal Supervisor:	Dr Hussain Mahdi
Internal Examiner:	Dr Jacqueline Walker
External Examiner:	Prof. Robert Gyorodi, University of Oradea, Romania
Chair:	Dr Donal Heffernan

Byrne Susan

Thesis:	<i>Development of a Sustainability Metric and Model for Measuring Community Greenhouse Gas Emissions for Creditation to the EU ZECOS Scheme-application in EU Communities</i>
Internal Supervisor:	Dr Bernadette O'Regan
Internal Examiner:	Prof. Richard Moles
External Examiner:	Prof. Branko Glamuzina, University of Dubrovnik, Croatia
Chair:	Dr Erzeng Xue

Cermeno Maria

Thesis:	<i>Contribution of Transglutaminase Cross-Linking to the Physicochemical, Bioactive Properties and Bioavailability of Sodium Caseinate Hydrolysates</i>
Internal Supervisor:	Prof. Dick FitzGerald
External Supervisor:	Prof. Nora O'Brien
Internal Examiner:	Dr Ioannis Zabetakis
External Examiner:	Prof. Jianping Wu, University of Alberta, Canada
Chair:	Dr Ronan Courtney

Chen Jinyong

Thesis:	<i>Extending a Security Protocol Verification Logic to Model Lightweight Cryptographic Operations</i>
Internal Supervisors:	Dr Reiner Dojen / Prof. Tom Coffey
Internal Examiner:	Dr Kevin Murphy
External Examiner:	Prof. Vasile-Teodor Dadarlat, Technical University of Cluj-Napoca, Romania
Chair:	Dr Martin Hayes

Collins Matthew

Thesis:	<i>A Computational and Experimental Study of Irish Orientated Strand Board in Bending Active Gridshells</i>
Internal Supervisor:	Prof. Tom Cosgrove
Internal Examiner:	Dr Martin Redington
External Examiner:	Prof. Richard Harris, University of Bath, UK
Chair:	Prof. Con Hussey



Culliton Aoife

Thesis:	<i>Development of a Novel Dual Paste Injectable Calcium Phosphate Cement for Bone Void Filling</i>
Internal Supervisors:	Dr Eamonn De Barra / Dr Hilda Mulvihill
Internal Examiner:	Prof. JJ Leahy
External Examiner:	Prof. Robert Hill, Queen Mary University of London, UK
Chair:	Dr David Newport

Doherty Orla Maria

Thesis:	<i>An Investigation into the Oro-nasal Pressures Used in the Control of the Ridden Horse</i>
Internal Supervisors:	Prof. Seán Arkins / Dr Vincent Casey
Internal Examiner:	Dr Seán Fair
External Examiner:	Prof. Jan Ladewig, University of Copenhagen, Denmark
Chair:	Dr Tom Harrington

Faggion Lorenzo

Thesis:	<i>Development of a Human Presence Detection System Using a Novel Electrostatically-Enhanced Displacement Current Sensing Technique</i>
Internal Supervisor:	Dr Hussain Mahdi
Internal Examiner:	Dr Ciaran MacNamee
External Examiner:	Prof. Desmond Mapps, University of Plymouth, UK
Chair:	Dr Ian Grout

Flannelly Thomas Matthew

Thesis:	<i>Reaction Pathway Analysis for the Acid Catalysed Transformation of Hexose Carbohydrates to Advantaged Biofuel Components</i>
Internal Supervisors:	Prof. JJ Leahy / Dr Stephen Dooley
Internal Examiner:	Prof. Michael H. Hayes
External Examiner:	Prof. Juha Ahola, University of Oulu, Finland
Chair:	Dr Eamonn De Barra

Flynn Grace

Thesis:	<i>Solution Synthesis of Silicon and Germanium Nanowires, Nanorods and Axial Hetrostructures Using Low Solubility Catalysts</i>
Internal Supervisor:	Dr Kevin M. Ryan
Internal Examiner:	Dr Urszula Salaj-Kosla
External Examiner:	Dr Hannah Joyce, University of Cambridge, UK
Chair:	Prof. JJ Leahy

Hardiman Mark Francis

Thesis:	<i>Nanoindentation Characterisation of Carbon Fibre Reinforced Plastic Microstructures</i>
Internal Supervisor:	Dr Conor McCarthy

Hinchy Eoin Patrick

Thesis:	<i>Metallurgical and Mechanical Analysis of Diffusion Braze Repaired Nickel-Based Superalloys</i>
Internal Supervisors:	Dr David Tanner / Prof. Michael Pomeroy
Internal Examiner:	Dr Peter Tiernan
External Examiner:	Prof. George Furlais, Swansea University, Wales
Chair:	Dr Leonard O'Sullivan

Houlihan Ian

Thesis:	<i>Development and Characterisation of Novel Hard Tissue Adhesive Materials</i>
Internal Supervisor:	Dr Eamonn De Barra
Internal Examiner:	Dr Walter Stanley
External Examiner:	Prof. David John Wood, University of Leeds, UK
Chair:	Dr Michael Walsh

Lynch Bronadh Grace

Thesis:	<i>Reconstruction of Patient Specific Abdominal Aortic Aneurysm Models for 3D Printing for Use on a Physiological Test Bed in the Assessment of AAA and Endovascular Aneurysm Repair</i>
Internal Supervisors:	Dr John Nelson / Prof. Tim McGloughlin
Internal Examiner:	Dr Tara Dalton
External Examiner:	Prof. James Moore, Imperial College London, UK
Chair:	Dr Colin Fitzpatrick

Meehan Aidan Brian

Thesis:	<i>Slow-light and Detected Electrode Voltage-based Microwave Phase Shifting in Bulk and Quantum-Dash Semiconductor Optical Amplifiers</i>
Internal Supervisor:	Dr Michael Connelly
Internal Examiner:	Dr Karl Rinne
External Examiner:	Prof. Ester Udvary, Budapest University of Technology and Economics, Hungary
Chair:	Dr Thomas Conway

Meehan Patrick John

Thesis:	<i>An Investigation into the Effects of Power Supply Ripple on Mixed Signal Devices and Counter Measures Thereof</i>
Internal Supervisor:	Dr Thomas Conway
Internal Examiner:	Dr Karl Rinne
External Examiner:	Dr Kevin McCarthy, University College Cork
Chair:	Dr Richard Conway

Mooney Rory O'Connor

Thesis:

Towards the Development of an Automated Platform for the Decellularisation of Xenogeneic Soft Biological Tissues

Internal Supervisors:

Dr Michael Walsh / Prof. Tim McGloughlin

Internal Examiner:

Dr Patrick Kiely

External Examiner:

Prof. Thomas Gilbert, ACell Inc., Columbia, USA

Chair:

Dr Jeremy Robinson

Mortell Daniel James

Thesis:

Multiscale Characterisation of Damage in Laminated Composite Materials under Bending Loads

Internal Supervisors:

Dr Conor McCarthy / Dr David Tanner

Internal Examiner:

Prof. Noel O'Dowd

External Examiner:

Prof. Nick Warrior, University of Nottingham, UK

Chair:

Dr Jeremy Robinson

Nash Niamh

Thesis:

Improving the Performance of Out-of-Autoclave Composite Laminates Using an Interlaminar Toughening Technique

Internal Supervisors:

Dr Walter Stanley / Dr Trevor Young

Internal Examiner:

Dr Anthony Comer

External Examiner:

Prof. Geoff Gibson, Newcastle University International, Singapore

Chair:

Dr Jeremy Robinson

Ronan Malachy

Thesis:

On the Perceptual Constituents of Listener Judgments of Hypercompressed Music

Internal Supervisors:

Dr Nicholas Ward / Dr Robert Sazdov

Internal Examiner:

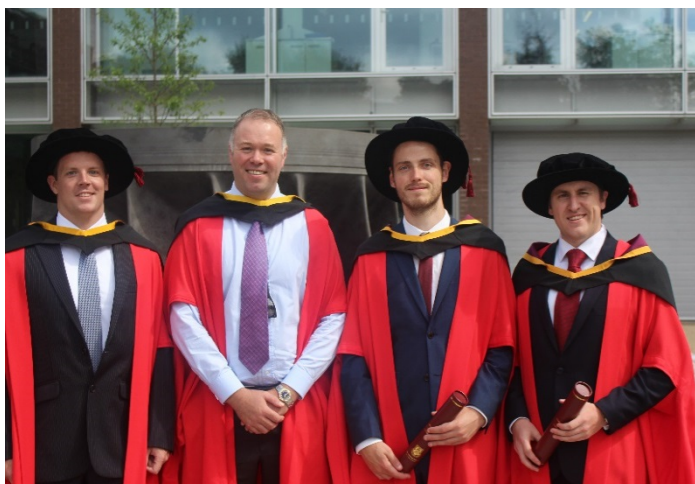
Dr Kerry Hagan

External Examiner:

Dr Hyunkook Lee, University of Huddersfield, UK

Chair:

Dr Chris Exton





Salazar Alvarez Marcela

Thesis:	<i>Targeted Protein Adsorption on the Surface of Biomaterials</i>
Internal Supervisors:	Prof. Edmond Magner / Dr Syed Tofail
Internal Examiner:	Prof. Tewfik Soulimane
External Examiner:	Dr Anna Roig, Institut de Ciencia de Materials de Barcelona, Spain
Chair:	Dr Jakki Cooney

Sharos Philip Anthony

Thesis:	<i>Efficient Load Distribution Analysis and Strength Prediction of Bolted Composite Joints at Various Loading Rates</i>
Internal Supervisor:	Dr Conor McCarthy
Internal Examiner:	Prof. Michael McCarthy
External Examiner:	Prof. Carlos Santiuste, Universidad Carlos III de Madrid, Spain
Chair:	Dr Jeremy Robinson

Slattery Oliver

Thesis:	<i>Development of Single-Photon Sources, Detectors, Spectrometers and Interfaces for Quantum Communication Systems</i>
Internal Supervisors:	Prof. Noel Buckley / Dr Robert Lynch
External Supervisor:	Dr Xiao Tang
Internal Examiner:	Dr Christophe Silien
External Examiner:	Prof. Li Yan, University of Maryland, USA
Chair:	Dr David Corcoran

Walshe Grainne Marie

Thesis:	<i>Integrating Mathematics into Science: Design, Development and Evaluation of a Curricular Model for Lower Second-Level Education</i>
Internal Supervisors:	Dr George McClelland / Dr Jennifer Johnston
External Examiners:	Prof. Ian Abrahams, University of Lincoln, UK
	Dr Cliona Murphy, St Patrick's College, Drumcondra, Dublin
Chair:	Dr Robert Lynch

Winter Conferings



Conroy Brian

Thesis:	<i>Investigation of the Dimensional Distortion of ASTM F75 Femoral Knee Implants</i>
Internal Supervisor:	Dr David Tanner
Internal Examiner:	Dr Jeremy Robinson
External Examiner:	Prof. Chris Truman, University of Bristol, UK
Chair:	Dr Eamonn de Barra

Dormer Alan

Thesis:	<i>In Search of Place: The Reappropriation of Everyday Space Through Sonic Interventionism</i>
Internal Supervisors:	Dr Mikael Fernstrom / Jürgen Simpson
External Examiners:	Dr Linda O’Keeffe, Lancaster University, UK Dr Robert MacKay, University of Hull, UK
Chair:	Dr Jim Buckley

Dowling Aideen Mary

Thesis:	<i>Antimicrobial Susceptibility in Animals: Primary Contributing Factors, Veterinary Perception and Resistance Trends</i>
Internal Supervisor:	Dr Catherine Adley
Internal Examiner:	Dr Sarah Hudson
External Examiner:	Dr Brid Quilty, Dublin City University
Chair:	Dr Michael P Ryan

Dowling Catriona

Thesis:	<i>Targeting Protein Kinase C in Colorectal Cancer</i>
Internal Supervisor:	Dr Patrick Kiely
Internal Examiner:	Dr Tara Dalton
External Examiner:	Prof. Emanuela Corsini, University of Milan, Italy
Chair:	Dr Audrey O’Grady

Faqeeh Ali

Thesis:	<i>Percolation and Its Relation to Other Processes in Networks</i>
Internal Supervisor:	Prof. James Gleeson
Internal Examiner:	Dr Kevin Burke
External Examiner:	Prof. Alex Arenas, Universidad Rovira i Virgili, Spain
Chair:	Dr Helen Purtill

Golden Brian

Thesis:	<i>Micromechanical Modelling and Testing of a 9Cr Tempered Martensitic Steel</i>
Internal Supervisors:	Prof. Noel O’Dowd / Dr Peter Tiernan
Internal Examiner:	Dr David Tanner
External Examiner:	Dr Ligu Zhao, Loughborough University, UK
Chair:	Dr Conor McCarthy



Horvat Alen

Thesis:	<i>A Study of the Uncertainty Associated with Tar Measurement and an Investigation of Tar Evolution and Composition during the Air-Blown Fluidised Bed Gasification of Torrefied and non-Torrefied Grassy Biomass</i>
Internal Supervisors:	Dr JJ Leahy / Dr Marzena Kwapinska / Dr Witold Kwapinski
Internal Examiner:	Dr Gordon Armstrong
External Examiner:	Dr Maria Sanchez Hervas, University of Milan, Italy
Chair:	Dr Tom Newe

Howard Róisín

Thesis:	<i>The Application of Data Analysis Methods for Surface Electromyography in Shot Putting and Sprinting</i>
Internal Supervisors:	Dr Richard Conway / Dr Drew Harrison
Internal Examiner:	Dr Pepijn Van de Ven
External Examiner:	Prof. Hermann Schwameder, University of Salzburg, Austria
Chair:	Dr Tom Newe

Kumbham Mahendar

Thesis:	<i>Far-field Mid-infrared Microscopy with Solid Immersion Lens: Polarisation, Spatial Pattern Diversities and Subsequent Image Processing</i>
Internal Supervisors:	Dr Christophe Silien / Dr Syed Tofail
Internal Examiner:	Dr Ursel Bangert
External Examiner:	Dr Joanna Bauer, Wroclaw University of Technology, Poland
Chair:	Dr Peter Murphy

Lane Richard Jude

Thesis:	<i>Soil Carbon Dynamics in Afforested Organo-mineral Soils</i>
Internal Supervisor:	Dr Ken Byrne
Internal Examiner:	Dr Ronan Courtney
External Examiner:	Dr Robert Jandl, Centre for Forests, Natural Hazards and Landscape, Vienna, Austria
Chair:	Dr Sean Fair

Maye Laura Ann

Thesis:	<i>Investigating the Practices of Cultural Heritage Professionals Integrating Digital Technologies in a Small Museum</i>
Internal Supervisor:	Dr Gabriela Avram
External Supervisor:	Dr Luigina Ciolfi
Internal Examiner:	Dr Chris Exton
External Examiner:	Dr Areti Galani, University of Newcastle, UK
Chair:	Dr Norah Power

McNamara Liam

Thesis:	<i>Characterisation of the Fundamental Function(s) of Bovine Serum Albumin in the Culture of NSO Cells</i>
Internal Supervisors:	Dr Tara Dalton / Dr Patrick Kiely
Internal Examiner:	Dr Michael Walsh
External Examiner:	Dr Daniel Bracewell, University College London, UK
Chair:	Dr Jeremy Robinson

Moroney Kevin Martin

Thesis:	<i>Heat and Mass Transfer in Dispersed Two-phase Flows</i>
Internal Supervisors:	Prof. Stephen O'Brien / Dr William Lee
Internal Examiner:	Prof. Eugene Benilov
External Examiner:	Prof. Jon Chapman, University of Oxford, UK
Chair:	Dr Mark Burke

O'Connor Adrian

Thesis:	<i>Supporting Discourse Using Technology-Mediated Communication: A Model for Enhancing Practice in Second Level Education</i>
Internal Supervisors:	Dr Niall Seery / Dr Donal Canty
Internal Examiner:	Dr Ray Lynch
External Examiner:	Prof. Martha Cleveland-Innes, Athabasca University, Alberta, Canada
Chair:	Dr Seamus Gordon

O'Driscoll Áine Eileen

Thesis:	<i>The Catalytic Hydrogenation of Furfural to Furfuryl Alcohol</i>
Internal Supervisors:	Prof. JJ Leahy / Dr Teresa Curtin
Internal Examiner:	Dr Erzeng Xue
External Examiner:	Dr Antonio Lopez-Sanchez, University of Liverpool, UK
Chair:	Ms Louise Kiernan

O'Mahony Shane

Thesis:	<i>Understanding the Immobilisation of Proteins on Surfaces Using Molecular Dynamics Computer Simulations</i>
Internal Supervisor:	Dr Damien Thompson
Internal Examiner:	Dr Syed Tofail
External Examiner:	Prof. Caitriona O'Driscoll, University College Cork
Chair:	Dr David Corcoran

Pandey Daya Shankar

Thesis:	<i>Experimental and Mathematical Modelling of Bio-waste Gasification in a Bubbling Fluidised Bed Reactor</i>
Internal Supervisors:	Dr Witold Kwapinski / Prof. JJ Leahy
Internal Examiner:	Dr Philip Griffin
External Examiner:	Prof. Jefferson Tester, Cornell University, USA
Chair:	Dr Sarah Hudson

Rao Muhammad Muzaffar Ali

Thesis:	<i>Bump in The Wire (BITW) Solution Using an FPGA for IP Security</i>
Internal Supervisors:	Dr Tom Newe / Dr Ian Grout
Internal Examiner:	Dr Richard Conway
External Examiner:	Dr Joseph Walsh, Institute of Technology, Tralee
Chair:	Prof. Elfed Lewis



Rigney Caitlin Bernadette

Thesis:	<i>Greenhouse Gas Emissions from Rewetted Peatland Forests</i>
Internal Supervisor:	Dr Ken Byrne
Internal Examiner:	Dr Ronan Courtney
External Examiner:	Dr Matthew Saunders, Trinity College Dublin
Chair:	Dr Audrey O'Grady

Schramm Martin Michael

Thesis:	<i>True Random Number Generator Assessment and Implementation of an Adaptable Cryptographic Core for Field Programmable Logic</i>
Internal Supervisor:	Dr Reiner Dojen
Internal Examiner:	Dr Richard Conway
External Examiner:	Prof. Gordon Thomas Rohrmair, University of Applied Sciences, Augsburg, Germany
Chair:	Dr Ciaran MacNamee

Severini Francesco

Thesis:	<i>Development of Heterogeneous Catalysts for Butyl Butyrate Production</i>
Internal Supervisors:	Dr Witold Kwapinski / Prof. JJ Leahy
Internal Examiner:	Dr Erzeng Xue
External Examiner:	Dr Mhammad Ahmad, American University of Beirut, Lebanon
Chair:	Dr Noreen Hanly

Slattery Pdraic Gerard

Thesis:	<i>Development and Assessment of a Novel Resin Injection Repair Procedure for Impact Damaged Composites</i>
Internal Supervisors:	Dr Ronan O'Higgins / Dr Conor McCarthy
Internal Examiner:	Dr Anthony Comer
External Examiner:	Prof. Geoff Gibson, University of Newcastle, UK
Chair:	Dr Jeremy Robinson

Stevenson Jonathan Piers James

Thesis:	<i>On the Receptivity of Separated and Attached Shear Layers to Free-Stream Turbulence</i>
Internal Supervisors:	Dr Edmond Walsh / Prof. Mark Davies / Dr Kevin Nolan
Internal Examiner:	Dr Ronan Grimes
External Examiner:	Dr Olaf Marxen, University of Surrey, UK
Chair:	Dr Jeremy Robinson

Tai Guangfu

Thesis:	<i>Operational Performance Analysis of Services at Various Levels in a Healthcare System Using Practical Product-Line Modelling</i>
Internal Supervisor:	Dr Peter Williams
Internal Examiner:	Prof. Cathal Heavey
External Examiner:	Prof. PJ Byrne, Dublin City University
Chair:	Dr Seamus Gordon

Taupe Natalie

Thesis:	<i>Thermal Treatment Technologies for Low Moisture and Dehydrated Manure Feedstock</i>
Internal Supervisors:	Prof. JJ Leahy / Dr Witold Kwapinski
Internal Examiner:	Dr Ken Byrne
External Examiner:	Prof. Sven Sommer, University of Southern Denmark, Denmark
Chair:	Prof. Tony Pembroke

Tierney Teresa Brigid

Thesis:	<i>Preparation and Isolation of Drug Particles with Improved Therapeutic Response</i>
Internal Supervisors:	Dr Sarah Hudson / Prof. Ake Rasmuson
Internal Examiner:	Dr Teresa Curtin
External Examiner:	Dr Bernard Van Eerdenbrugh, Novartis Campus, Basel, Switzerland
Chair:	Dr Tadhg Kennedy

Torres Gemma

Thesis:	<i>Physical and Biochemical Characterisation of Soil Organic Carbon in Topsoil and Subsoil of Irish Grasslands</i>
Internal Supervisor:	Dr Ken Byrne
External Supervisors:	Dr Gary Lanigan / Prof. Rachel Creamer
Internal Examiner:	Prof. JJ Leahy
External Examiner:	Dr Naoise Nunan, CNRS Institute of Ecology and Environmental Sciences, Paris, France
Chair:	Dr Achim Schmalenberger

Tsvyatkova Damyanka

Thesis:	<i>Designing Interactive Technology (IT) for/with Children with TIDM: Exploring Methods, Techniques and Tools Facilitating Participatory Approach</i>
Internal Supervisors:	Dr Cristiano Storni / Dr Chris Exton
Internal Examiner:	Dr Gabriela Avram
External Examiner:	Prof. Anne Marie Kanstrup, Aalborg University, Denmark
Chair:	Dr Liam Murray

Zhang Shiyuan Yuan

Thesis:	<i>Chiral Metal-Organic Materials and Zeolite-like Lanthanide Metal-Organic Framework: Design, Synthesis and Application</i>
Internal Supervisor:	Prof. Michael Zaworotko
Internal Examiner:	Dr Kevin M Ryan
External Examiner:	Prof. Shengqian Ma, University of South Florida, USA
Chair:	Dr Emmet O'Reilly