



UNIVERSITY of LIMERICK
OILLSCOIL LUIMNIGH

Faculty of
Science + Engineering

PhD Graduations 2013



Faculty of Science + Engineering

Autumn Conferings

Pages 3 - 10



Winter Conferings

Pages 11 - 18



UNIVERSITY of LIMERICK
OLLSCOIL LUIMNIGH



Autumn Conferings

Barrett Emily Maud Elizabeth

Thesis:	Veterinary Pre-Purchase Examination Results as an Indicator of Subsequent Athletic Performance in National Hunt Thoroughbred Horses
Internal Supervisor:	Prof. Seán Arkins
Internal Examiner:	Dr Bridget Younge
External Examiner:	Prof. Paddy Dixon, Edinburgh University, Scotland
Chair:	Dr Eibhlís M. O'Connor

Brighenti Flavio

Thesis:	On the Experimental Receptivity in a Pre-Transitional Laminar Boundary Layer
Internal Supervisor:	Dr Edmond Walsh
Internal Examiner:	Dr Jeff Punch
External Examiner:	Prof. Gian Luca Morini, University of Bologna, Italy
Chair:	Dr Patrick Frawley

Burke Cillian

Thesis:	On the Influence of Ag Content on the Creep Behaviour of Sn-Ag-Cu Solder Alloys
Internal Supervisor:	Dr Jeff Punch
Internal Examiner:	Dr Maurice Collins
External Examiner:	Prof. Olli Salmela, University of Oulu, Finland
Chair:	Prof. Tim McGloughlin

Butler Colin

Thesis:	Aircraft Crown Compartment Thermal Management: The Influence of Internal Heat Dissipating Elements
Internal Supervisor:	Dr David Newport
Internal Examiner:	Dr Vanessa Egan
External Examiner:	Prof. Hector Iacovides, University of Manchester, UK
Chair:	Prof. Tim McGloughlin

Carey Clifford

Thesis:	Numerical Modelling of Crystallisation Processes: Kinetics to Optimization
Internal Supervisor:	Dr Patrick Frawley
Internal Examiner:	Prof. Ake Rasmuson
External Examiner:	Prof. Jim Litster, Purdue University, Indiana, USA
Chair:	Prof. Tim McGloughlin

Dwane Susan

Thesis:	The Regulation of Focal Adhesion Kinase by the Scaffolding Protein RACK1
Internal Supervisor:	Dr Patrick Kiely
Internal Examiner:	Dr Jakki Cooney
External Examiner:	Dr Aideen Long, Trinity College Dublin
Chair:	Dr Audrey O'Grady



Denny William John

Thesis:

Modelling Diffusion from Drug Eluting Stents in Compressed Arterial TissueInternal Supervisor:
Internal Examiner:
External Examiner:
Chair:Dr Michael Walsh
Dr Patrick Frawley
Prof. Rosaire Mongrain, McGill University, Montreal, Canada
Prof. Tim McGloughlin**Fabian Matthias**

Thesis:

Optical Fibre Sensor for Fuel Cell and Other Fluid Concentration MeasurementInternal Supervisors:
Internal Examiner:
External Examiner:
Chair:Dr Tom Newe / Prof. Elfed Lewis
Dr Colin Fitzpatrick
Prof. Gerald Farrell, Dublin Institute of Technology
Dr Daniel Toal**Flynn Robert Joseph**

Thesis:

Property Prediction and Residual Stresses in Aluminium Alloy 7010Internal Supervisor:
Internal Examiner:
External Examiner:
Chair:Dr Jeremy Robinson
Prof. Michael Pomeroy
Prof. Murat Tiryakoglu, University of North Florida, USA
Prof. Con Hussey**Gabbay Igal**

Thesis:

Recognising Specific Named Entities in a New Restricted Domain Using Conditional Random FieldsInternal Supervisor:
Internal Examiner:
External Examiner:
Chair:Dr Richard Sutcliffe
Dr Liam Murray
Dr Eric Atwell, University of Leeds, UK
Dr Michael English**Galvin John**

Thesis:

Spatial Montage: Mediating a Non-Linear Experience of TimeInternal Supervisors:
Internal Examiner:
External Examiner:
Chair:Dr Kerry Hagan / Mr Jurgen Simpson
Dr Dara Waldron
Prof. Paul Moore, University of Ulster, Magee Campus
Dr Norah Power**Gordon Andrew**

Thesis:

Hydrophobicity, Hydrophilicity and Two-Phase Flow in the Gas Diffusion Layer of a Polymer Electrolyte Fuel CellInternal Supervisors:
Internal Examiner:
External Examiner:
Chair:Dr Michael Vynnycky / Prof. Stephen O'Brien
Dr Henry Winstanley
Dr Michael Chapwanya, University of Pretoria, South Africa
Dr Sarah Mitchell

Hickey Ger Richard

Thesis:	Development and Fabrication of Room Temperature Mixed Metal Oxide Based Ozone Sensing Elements for Health and Safety Applications
Internal Supervisor:	Prof. Khalil Arshak
Internal Examiner:	Dr Colin Fitzpatrick
External Examiner:	Prof. George Kiriakidis, University of Crete, Greece
Chair:	Dr Donal Heffernan

Höfer Nicole

Thesis:	Crystallization and Structure Determination of Gramicidin D and the Cytosolic Domain of CzcB
Internal Supervisors:	Dr Tewfik Soulimane / Prof. Martin Caffrey
Internal Examiner:	Dr Peter Davern
External Examiner:	Dr Christian Kambach, University of Bayreuth, Germany
Chair:	Dr Teresa Curtin

Jurcut Anca Delia

Thesis:	Attack Detection Logic for Automated Verification of Security Protocols
Internal Supervisors:	Dr Reiner Dojen / Prof. Tom Coffey
Internal Examiner:	Dr Richard Conway
External Examiner:	Prof. Liam Maguire, University of Ulster Magee Campus
Chair:	Dr Sean McGrath



Lane Michael Thomas

Thesis:	The Lean Distributed Scrum (LDScrum) Model: Investigating the Relationship between Lean and Agile Software Development in a Distributed Development Context
Internal Supervisors:	Prof. Brian Fitzgerald / Prof. Par Agerfalk
Internal Examiner:	Dr Patrick Buckley
External Examiner:	Prof. Bjorn Lundell, University of Skovde, Sweden
Chair:	Dr Gabriela Avram

Lynch Adrian Gerard

Thesis:	Towards the Development of Guidelines for the Surgical Treatment of Carotid Artery Disease: A Cranial Perfusion Approach
Internal Supervisor:	Dr Michael Walsh
Internal Examiner:	Dr David Newport
External Examiner:	Dr Frank Gijzen, Erasmus Medical Centre, The Netherlands
Chair:	Dr Patrick Frawley

Mogili Naga Vishnu Vardhan

Thesis:	Quantitative Analysis of Lattice Strains and Crystal Polarity in Semiconductor Nanomaterials Using Convergent Beam Electron Diffraction
Internal Supervisors:	Dr David Tanner / Prof. Shohei Nakahara
Internal Examiner:	Prof. Michael Pomeroy
External Examiner:	Prof. David Cherns, University of Bristol, UK
Chair:	Dr Peter Tiernan

Mohamad Sharif Aisyah Binti

Thesis:	Self-Assembly of Molecular Wires on Au and Cu for Molecular Electronics
Internal Supervisors:	Dr Christophe Silien / Prof. Noel Buckley
Internal Examiner:	Dr Fernando Rhen
External Examiner:	Prof. Manfred Buck, University of St Andrews, Scotland
Chair:	Dr Ian Clancy

Mullane Emma

Thesis:	Nanowires, Nanorods and Azial Heterostructures of Silicon and Germanium Synthesised in a Solvent Vapour System
Internal Supervisor:	Dr Kevin M. Ryan
Internal Examiner:	Dr JJ Leahy
External Examiner:	Prof. Justin Holmes, University College Cork
Chair:	Prof. Edmond Magner

Mulvihill John Joseph

Thesis:	Towards the Development of Guidelines for the Surgical Treatment of Carotid Artery Disease: A Tissue Characterisation Approach
Internal Supervisor:	Dr Michael Walsh
Internal Examiner:	Dr Conor McCarthy
External Examiner:	Prof. Gerhard Holzapf, Graz University of Technology, Austria
Chair:	Prof. Michael McCarthy



Norris Roseanne

Thesis:	Proteolytic Release of Angiotensin Converting Enzyme Inhibitory Peptides from Food Proteins
Internal Supervisor:	Prof. Dick FitzGerald
Internal Examiner:	Prof. Martin Wilkinson
External Examiner:	Prof. Jeanette Otte, University of Copenhagen, Denmark
Chair:	Dr Johann Scollard

O'Mahony Marcus

Thesis:	A Solution-Mediated Polymorphic Transformation of the Pharmaceutical Compound Carbamazepine
Internal Supervisors:	Prof. Kieran Hodnett / Prof. Ake Rasmuson
External Supervisor:	Dr Denise Croker
Internal Examiner:	Dr Jakki Cooney
External Examiner:	Dr Linda Seton, Liverpool John Moores University, UK
Chair:	Dr Catherine Adley

Pinatti De Carvalho Aparecido Fabiano

Thesis:	Technologically-mediated Nomadicity in Academic Settings: Tm-N as a Dynamic and Emergent Process
Internal Supervisors:	Dr Luigina Ciolfi / Dr Breda Gray
Internal Examiner:	Dr Cristiano Storni
External Examiner:	Prof. Gloria Mark, University of California, Irvine, USA
Chair:	Dr Patrick Healy

Power Orla Brid

Thesis:	An In Vitro and In Vivo Study of the Bioactive Properties of Milk Peptides: Antioxidant and Dipeptidyl Peptidase IV Inhibitory Peptides
Internal Supervisors:	Prof. Dick FitzGerald / Prof. Phil Jakeman
Internal Examiner:	Prof. Martin Wilkinson
External Examiner:	Prof. Finbarr O'Harte, University of Ulster, Coleraine Campus
Chair:	Dr Eibhlís M. O'Connor

Santorum Crespo Veronica

Thesis:	Environmental Correlates of Wild Bee Assemblages in Pastoral Landscapes in Ireland (Hymenoptera Apidae)
Internal Supervisors:	Prof. John Breen / Dr Tom Harrington
Internal Examiner:	Dr Ken Byrne
External Examiner:	Dr Jane Stout, Trinity College Dublin
Chair:	Dr Audrey O'Grady

Torre Giuseppe

Thesis:	The Design of a New Musical Glove: A Live Performance Approach
Internal Supervisors:	Dr Kerry Hagan / Dr Mikael Fernstrom
External Examiners:	Dr Dominic Murcott, Old Royal Naval College, UK
	Dr Paul Stapleton, Queens University Belfast
Chair:	Dr Chris Exton

Wasala Ruwan Asanka

Thesis:	Lossless Exchange of Data: Limitations of Localisation Data Exchange Standards and Their Effect on Interoperability
Internal Supervisors:	Mr Reinhard Schaler / Dr Chris Exton
Internal Examiner:	Dr Nikola Nikolov
External Examiner:	Prof. James Hogan, Queensland University of Technology, Australia
Chair:	Dr Cristiano Storni

Woods Robert Joseph

Thesis:	Analysis of Solderability Test Methods: Prediction Model Generation for Through-Hole Components
Internal Supervisor:	Dr Christy Gillick
Internal Examiner:	Dr David Tanner
External Examiner:	Dr James Prendergast, Institute of Technology Tralee
Chair:	Dr Peter Tiernan



Winter Conferrings



Cahill Lisa

Thesis:	Single and Multiple Crack Growth in Orthotropic Composite Laminae: A Numerical and Experimental Investigation
Internal Supervisor:	Dr Conor McCarthy
External Supervisor:	Prof. Stephane Bordas
Internal Examiner:	Prof. Noel O'Dowd
External Examiner:	Prof. Jon Trevelyan, Durham University, UK
Chair:	Dr Michael Walsh

Cawley Oisin Iosa

Thesis:	The Application of a Lean Software Development Methodology within the Regulated Domain of Medical Device Software
Internal Supervisors:	Dr Ita Richardson / Dr Xiaofeng Wang
Internal Examiner:	Dr Norah Power
External Examiner:	Prof. Richard Vidgen, University of Hull, UK
Chair:	Dr Michael English

Connolly Alan John Lawson

Thesis:	<i>Generation and Characterisation of Novel Health Enhancing Ingredients from Brewers' Spent Grain</i>
Internal Supervisor:	Prof. Dick Fitzgerald
Internal Examiner:	Prof. Martin Wilkinson
External Examiner:	Dr Anne Pihlanto, MTT Agrifood Research, Finland
Chair:	Dr Eibhlís M. O'Connor

Dunne Jonathan Brendan William

Thesis:	An Exploration of Inquiry Based Science Education in Irish Primary Schools
Internal Supervisors:	Dr Hussain Mahdi / Dr John O'Reilly
Internal Examiner:	Dr Emmanuel O'Grady
External Examiner:	Prof. Colette Murphy, Trinity College Dublin
Chair:	Dr Michael English

Fogarty Padraig

Thesis:	Utilizing Multicore Architectures to Enhance Software Verification in Real-time Embedded Systems
Internal Supervisor:	Dr Donal Heffernan
Internal Examiner:	Dr Tom Newe
External Examiner:	Dr Emanuel Mihai Popovici, University College Cork
Chair:	Dr Hussain Mahdi

Gao Lei

Thesis:	Activity Recognition Using Dynamic Multi-Sensor Fusion
Internal Supervisors:	Dr John Nelson / Mr Alan Bourke
Internal Examiner:	Dr Colin Flanagan
External Examiner:	Dr Liming Chen, University of Ulster, Jordanstown
Chair:	Dr Sean McGrath



Heavey Colm Francis

Thesis:	A New Approach to Customer Value Improvement through Co-Leadership, Trust and Methodology for Increased Organisational Return on Investment
Internal Supervisors:	Dr Ann Ledwith / Prof. Eamonn Murphy
Internal Examiner:	Dr Christy Gillick
External Examiner:	Dr Alex Douglas, Liverpool John Moores University, UK
Chair:	Dr Seamus Gordon

Hogan Damien

Thesis:	Genetic Programming Based Predictions and Estimations for the Endurance and Retention of NAND Flash Memory Devices
Internal Supervisors:	Prof. Conor Ryan / Mr Tom Arbuckle
Internal Examiner:	Dr Mikael Fernstrom
External Examiner:	Prof. Peter Desnovers, Northeastern University, Boston, USA
Chair:	Dr Patrick Healy

Howard James

Thesis:	On the Heat Transfer Characteristics of Liquid-Gas Taylor Flows in Minichannels
Internal Supervisor:	Dr Pat Walsh
Internal Examiner:	Dr Jeff Punch
External Examiner:	Prof. Michael Kreutzer, Delft University of Technology, Netherlands
Chair:	Prof. Con Hussey

Jia Lijun

Thesis:	A Study of the Production of Hydrogen by the Decomposition of Formic Acid over Pd-based and Pt-based Catalysts
Internal Supervisors:	Prof. Julian Ross / Dr Dmitri Bulushev
Internal Examiner:	Dr Erzeng Xue
External Examiner:	Prof. Graham Hutchings, Cardiff University, Wales
Chair:	Dr JJ Leahy

Joyce Jennifer Theresa

Thesis:	Layer-by-Layer Self-Assembly of Porphyrin Heterogeneous Metal-Organic Thin Films on Titanium Oxide for Photocurrent Generation
Internal Supervisors:	Dr Christophe Silien / Prof. Noel Buckley
Internal Examiner:	Dr Fernando Rhen
External Examiner:	Dr Rafael Madueno, Universidad de Cordoba, Spain
Chair:	Dr Ian Clancy

Lynch Deirdre

Thesis:	Fluidised Bed Combustion of Poultry Litter with Investigation into Its Ash Chemistry
Internal Supervisors:	Dr JJ Leahy / Dr Witold Kwapinski
Internal Examiner:	Dr Tom O'Dwyer
External Examiner:	Prof. Shane Ward, University College Dublin
Chair:	Dr Eoin McCann

Maher Anthony Joseph

Thesis:	Crystal Transformations and Crystallisation Methodologies: Polymorphic Transformations of Piracetam
Internal Supervisors:	Prof. Kieran Hodnett / Dr Denise Croker / Prof. Ake Rasmuson
Internal Examiner:	Dr Tewfik Soulimane
External Examiner:	Dr Stephane Veesler, Centre Interdisciplinaire de Nanoscience de Marseille, France
Chair:	Dr Emmet O'Reilly

McElligott Susan Pauline Mary

Thesis:	The Design, Development and Application of a Dual-beam Spectral-domain Optical Coherence Tomography System for the Non-invasive Assessment of Vascular Dynamics by Statistical Means
Internal Supervisors:	Prof. Martin J. Leahy / Dr Christophe Silien
Internal Examiner:	Dr David Corcoran
External Examiner:	Prof. Melissa Skala, Vanderbilt University, Nashville, Tennessee, USA
Chair:	Dr Ian Clancy

McNamara Karrina Christina

Thesis:	Tantalum Oxide Films on NiTi Plates
Internal Supervisor:	Dr Syed Tofail
Internal Examiner:	Dr Fernando Rhen
External Examiner:	Prof. Andrej Plecanik, Comenius University, Bratislava, Slovakia
Chair:	Prof. Noel O'Dowd

McNamara Paul Michael

Thesis:	Development of Non-Invasive Methods of Imaging the Human Microcirculation
Internal Supervisors:	Prof. Martin J. Leahy / Dr Christophe Silien
Internal Examiner:	Dr Syed Tofail
External Examiner:	Prof. Alex Vitkin, University of Toronto, Canada
Chair:	Dr Peter Murphy

Meaney Claire Laurie Anne

Thesis:	The Characterisation of Extracellular Matrix Materials for Vascular Tissue Engineering: An In Vitro Evaluation of Cell Behaviour and Genetic Response
Internal Supervisors:	Prof. Tim McGloughlin / Dr Grainne Carroll
Internal Examiner:	Dr Tara Dalton
External Examiner:	Prof. George Truskey, Duke University, Durham, USA
Chair:	Prof. Michael McCarthy

Mjeda Anila

Thesis:	Standard-Compliant Testing for Safety-Related Automotive Software
Internal Supervisor:	Prof. Michael Hinchey
Internal Examiner:	Dr Norah Power
External Examiner:	Prof. Jonathan Bowen, Birmingham City University, UK
Chair:	Prof. Brian Fitzgerald

Murphy Jayne Julia

Thesis:	A Study of Beta-Galactosidases from Thermoacidophiles
Internal Supervisor:	Prof. Gary Walsh
Internal Examiner:	Dr Jakki Cooney
External Examiner:	Prof. Sean Doyle, National University of Ireland, Maynooth
Chair:	Dr Tom O'Dwyer

O'Connell Eoin Erskine

Thesis:	An In-Situ Optical Fibre Sensor for the Monitoring of Water Quality Using Wireless Motes
Internal Supervisors:	Dr Tom Newe / Dr Sinead O'Keefe / Prof. Elfed Lewis
External Examiners:	Prof. Steffen Lochman, Hochschule Wismar University of Applied Sciences, Germany / Dr Alex Mason, Liverpool John Moores University, UK
Chair:	Dr Daniel Toal

O'Driscoll Ciara

Thesis:	The Evaluation of Strain at an Internal Point: Investigating the Accuracy and Precision of Different Patterns of Three-Dimensional Strain Transducers
Internal Supervisors:	Prof. Ted Little / Dr Walter Stanley
Internal Examiner:	Dr Ronan O'Higgins
External Examiner:	Dr Jack Hale, Newcastle University, UK
Chair:	Dr Jeremy Robinson



O'Dwyer Donal John

Thesis:	Investigation of Microscale Damage Processes near Adhesive-Composite Interfaces
Internal Supervisors:	Dr Conor McCarthy / Prof. Noel O'Dowd
Internal Examiner:	Dr Ronan O'Higgins
External Examiner:	Prof. Alojz Ivankovic, University College Dublin
Chair:	Dr Michael Walsh

Rathi Neelima

Thesis:	Electrochemical and Spectroscopic Characterization of Dye-Sensitized Solar Cell
Internal Supervisor:	Prof. Edmond Magner
Internal Examiner:	Dr Teresa Curtin
External Examiner:	Dr Denis Dowling, University College Dublin
Chair:	Dr Noreen Hanly

Shokry Hesham Shokry Ali

Thesis:	Synthesis of Software Design Models
Internal Supervisor:	Prof. Michael Hinchey
Internal Examiner:	Dr Jim Buckley
External Examiner:	Prof. Simon Dobson, University of Saint Andrews, UK
Chair:	Dr Norah Power

Sullivan Joseph

Thesis:	Extending the Life of NOR Flash Memory Using a Genetic Algorithm
Internal Supervisor:	Prof. Conor Ryan
Internal Examiner:	Dr. Hussain Mahdi
External Examiner:	Prof. Robert Howlett, Bournemouth University, UK
Chair:	Mr J.J. Collins

Tecza Malgorzata

Thesis:	Biochemical Analysis of ScpA-C5a Interactions: A Model System for Studies of Substrate Specificity in Cell Envelope Proteases from Gram Positive Bacteria
Internal Supervisor:	Dr Jakki Cooney
External Supervisor:	Dr Todd Kagawa
Internal Examiner:	Prof. Edmond Magner
External Examiner:	Dr Inga Maria Frick, Lund University, Sweden
Chair:	Dr Eibhlís M. O'Connor

Wilson Cathal Francis

Thesis:	Dominant Operational Performance Measures for SME Owner Managers
Internal Supervisors:	Dr Con Sheahan / Dr Ann Ledwith
Internal Examiner:	Dr Alan Ryan
External Examiner:	Prof. Mike Bourne, Cranfield University School of Management, UK
Chair:	Dr David Tanner

O'Keeffe Niall William

Thesis:

Internal Supervisors:
Internal Examiner:
External Examiner:
Chair:**On Slip Flow and Interfacial Phenomena within Superhydrophobic Microchannels**Dr Tara Dalton / Dr Cormac Eason
Dr Patrick Frawley
Prof. Anthony Robinson, Trinity College Dublin
Prof. Tim McGloughlin**O'Shea Laura**

Thesis:

Internal Supervisor:
Internal Examiner:
External Examiner:
Chair:**Investigation of Silica Scaling of Heat Exchanger Surfaces at Aughinish Alumina**Prof. Kieran Hodnett
Dr Seamus McMonagle
Prof. Maria Kennedy, Institute for Water Education, UNESCO-IHE
Dr Catherine Adley**O'Sullivan Kieran James**

Thesis:

Internal Supervisor:
External Supervisor:
External Examiners:

Chair:

Examining the Role of Sitting Behaviour in Non-Specific Chronic Low Back PainDr Leonard O'Sullivan
Prof. Wim Dankaerts
Prof. Raymond Lee, University of Roehampton, London
Dr Valerie Sparks, Cardiff University, Wales
Dr David Tanner**Pisano Cecilia**

Thesis:

Internal Supervisor:
External Supervisor:
Internal Examiner:
External Examiner:
Chair:**Multiscale Modelling of Processing and Properties of Intercalated Polymer-Clay Nanocomposites**Dr Lukasz Figiel
Prof. Francesco Aymerich
Prof. Noel O'Dowd
Prof. Siegfried Schmauder, University of Stuttgart, Germany
Prof. Tim McGloughlin**Riordan Daniel**

Thesis:

Internal Supervisor:
External Supervisors:
Internal Examiner:
External Examiner:
Chair:**The Design and Implementation of Animal Auto Identification Systems for Application within the Agricultural Sector**Dr Ian Grout
Dr Edmond Harty / Dr Joseph Walsh
Prof. Elfed Lewis
Prof. Shane Ward, University College Dublin
Dr Colin Fitzpatrick**Ryan Peter Anthony**

Thesis:

Internal Supervisor:
Internal Examiner:
External Examiner:
Chair:**Design Analysis and Optimisation of the Self-Rectifying Impulse Turbine for Ocean Wave Energy Conversion Using Computational Fluid Dynamics and Experimental Analysis**Dr Ajit Thakker
Dr John Jarvis
Dr T.S. Dhanasekaran, ANSYS INC, USA
Prof. Tim McGloughlin

