

# *31<sup>st</sup> Annual Cork Mechanical, Manufacturing & Biomedical Engineering Exhibition*

*200 Stands in Total in 2017 Event*

*Thursday April 27<sup>th</sup> 2017*

*Nexus Hall, Student Centre,  
Cork Institute of Technology*



*Engineers Ireland “Best in Class” Education Excellence Award Winner  
Ireland and Europe’s Largest Educational Engineering Event*

*2017 Exhibition Theme*

## *Space Engineering and Science*

### *Cork Institute of Technology*

### *International Space University 2017*

## *CIT Engineering Innovation and Entrepreneurship*

*Thursday April 27<sup>th</sup> 1.30 p.m. to 7.30 p.m. Admission Free*

*Venue: Nexus Hall, Student Centre, Cork Institute of  
Technology*

*For more details, please contact:*

*Professor Sean F. O’Leary, School of Mechanical, Process & Electrical Engineering  
Tel: (021) 4335425 Email: seanf.oleary@cit.ie*



Centre Piece Stand A	<b><i>Space Engineering and Science</i></b>	<b><i>Cork Institute of Technology International Space University 2017</i></b>
Centre Piece Stand B	<b><i>CIT Blackrock Castle Observatory</i></b>	<b><i>Ireland's Only Space Themed Engineering and Science Centre 110,000 Visitors in Past Year</i></b>
Centre Piece Stand C	<b><i>International Space University's Space Studies Program 30th Edition</i></b>	<b><i>Hosted by CIT 26 June - 25 August 2017</i></b>
Centre Piece Stand D	<b><i>National Space Centre Elfordstown Earthstation</i></b>	<b><i>Europes Most Westerly Teleport</i></b>
Centre Piece Stand E	<b><i>Ireland and Europe's Largest Educational Engineering Event CIT Engineering Innovation and Entrepreneurship</i></b>	<b><i>Engineers Ireland Excellence Awards Intercontinental Hotel, Dublin Engineering Education Excellence "Best in Class" Award</i></b>
Centre Piece Stand F	<b><i>Cork Institute of Technology 'Engineering an Innovation Eco-System' Irish National Award Winner</i></b>	<b><i>European Commission Award "Promoting the Entrepreneurial Spirit" European Enterprise Promotion Awards Luxembourg</i></b>
Centre Piece Stand G	<b><i>GASGON™ Medical Device Design, Development and Testing</i></b>	<p>(1) <b><i>Enterprise Ireland Student Entrepreneur of the Year 2016 First Place €10,000 National Award</i></b></p> <p>(2) <b><i>Accenture Leaders of Tomorrow Award 2016 First Place National Winner</i></b></p> <p>(3) <b><i>CIT Prize for Innovation 2016 Student Entrepreneur of the Year First Place €4,000 Award</i></b></p>
Centre Piece Stand H	<b><i>HydroFLOcean H-FLO™ Platform Safety System Design CIT Multi-Discipline Start-Up Innovation Team</i></b>	<p>(1) <b><i>James Dyson Design Award 2016 First Place National Award \$3,500 Award</i></b></p> <p>(2) <b><i>Enterprise Ireland Student Entrepreneur Finals 2016 Cruickshank Intellectual Property Attorneys €5,000 National Award</i></b></p> <p>(3) <b><i>CIT Prize for Innovation 2016 Most Technically Innovative Product €2,000 Award</i></b></p>
Centre Piece Stand I	<b><i>Advanced Hydro Systems™ Automatic Flood Barrier Design and Development</i></b>	<p>(1) <b><i>National Disability Authority Centre for Excellence in Universal Design Grand Challenge Enterprise Ireland Commercialisation €15,000 National Award</i></b></p> <p>(2) <b><i>National Disability Authority Centre for Excellence in Universal Design Grand Challenge Judges' Choice Technology Trophy National Award 2016</i></b></p>

Centre Piece Stand J	<b><i>Equaliser™ - Extreme Weather Conditions Novel Tie-down System for Ship to Shore Cranes</i></b>	<i>University Startup World Cup Finals Copenhagen Denmark 2 Top Three Worldwide Product and Technology Category</i>
Stand 1	<b><i>Steady Life™ Medical Enablement Device Design CIT Multi-Discipline Start-Up Innovation Team</i></b>	(1) <i>Enterprise Ireland Student Entrepreneur Finals 2016 Intel ICT €5,000 National Award</i> (2) <i>CIT Prize for Innovation 2016 Nimbus Centre Developmental €5,000 Award</i>
Stand 2	<b><i>Recovery Solutions Leader RSL™ Sport Application Medical Device Design CIT Multi-Discipline Start-Up Innovation Team</i></b>	<i>Enterprise Ireland Student Entrepreneur Finals 2016 Grant Thornton €5,000 National Award</i>
Stand 3	<b><i>Irawaddy™ Hand-held Water Purification Device Design Student Inc Supported Project Cork Institute of Technology</i></b>	(1) <i>Enactus CIT Social Innovation Award 2016 €1,000 Institute National Award</i> (2) <i>Accenture Leaders of Tomorrow Best Start Up Video Pitch Competition National €500 Award 2016</i>
Stand 4	<b><i>Sample Displayed Student Inc Projects Novel Cycle Pedal System for Prosthetic Foot Irish Sign Language e-Learning Interactive Website / App Breath Monitoring Medical Product Products making Everyday Farm Jobs Safer and Less Time-Consuming</i></b>	<b><i>Student Inc</i></b> <i>Ireland's First Student Accelerator Programme Rubicon, LEO and Enterprise Ireland Supported Programme</i> <i>Seed funding, mentoring, office space, training &amp; working alongside 50+ other entrepreneurs in a vibrant start-up community</i>
5.	<b><i>Dialast™ Medical Application Device Design</i></b>	<b><i>Multi-Discipline Start-Up Innovation Team</i></b>
6.	<b><i>The Custard Coat™ Innovative Clothing Application Design</i></b>	<b><i>Multi-Discipline Start-Up Innovation Team</i></b>
7.	<b><i>E-Z Spin™ Domestic Application Enablement Device</i></b>	<b><i>Multi-Discipline Start-Up Innovation Team</i></b>
8.	<b><i>Pendulife™ Transport Safety Device Design</i></b>	<b><i>Multi-Discipline Start-Up Innovation Team</i></b>
9.	<b><i>Pano Kato™ Novel Therapy Device Design</i></b>	<b><i>Multi-Discipline Start-Up Innovation Team</i></b>
10.	<b><i>Artery Aid™ Medical Application Device Design</i></b>	<b><i>Multi-Discipline Start-Up Innovation Team</i></b>
11.	<b><i>Smart Cap™ Innovative Container Device Design</i></b>	<b><i>Multi-Discipline Start-Up Innovation Team</i></b>
12.	<b><i>StrydeTech™ Mobility Enablement Device Design</i></b>	<b><i>Multi-Discipline Start-Up Innovation Team</i></b>
13.	<b><i>StrokeSense™ Medical Application Device Design</i></b>	<b><i>Multi-Discipline Start-Up Innovation Team</i></b>
Stand 14	<b><i>Bachelor of Engineering (Honours) in Mechanical Engineering</i></b>	<b><i>Centrepiece Exhibit 3 CIT Engineering Innovation and Entrepreneurship</i></b>
15.	Biopsy Guide Device Investigation, Design and Analysis	Stryker Ireland
16.	Performance of Dental Burrs in Cutting of Dentine and Ceramic Crown Materials	Research and Development
17.	Automatic Agitator Design and Development	Pfizer Ireland Pharmaceutical
18.	Quadrotor Control and Simulation	Research and Development
19.	Automate Flushing Tool Assembly Machine Case Study	Abbott Vascular
20.	Low-Cost Temperature Cycler Design and Development	Research and Development
21.	Enclosed Chamber to Investigate Performance of a Novel Wind Driven Ventilation Component/Buoyancy Driven Ventilation Component Design and Development	MeSSO Research Group
22.	Gyro Stabiliser Device for Childs Bike Design and Development	Research and Development
23.	Unmanned Search and Rescue Vehicle (USARV) Design and Development	The Naval Service
24.	Analysis on Solar Photovoltaic Thermal Hybrid using Heat Pipe System	Research and Development
25.	Investigation of Prevention of Solder Balls on Printed Circuit Boards	Kostal Ireland
26.	Fluid Level Control System for Teaching Laboratories Design and Development	Research and Development
27.	In Situ Machining of Imprinted Pulleys on a Ship to Shore Crane	Liebherr Container Cranes
28.	Experimental Investigation of PV Solar Panel Efficiency Utilising Thermoelectric Cooler Module	Research and Development
29.	Non-contact Measurement System for Automatic Screen Printing Processes Design and Development	ITW Graphics

30.	Control of Aeration Basin to Optimise Energy Efficiency	Research and Development
31.	Efficiency Optimization of a Cooling Tower	GlaxoSmithKline Cork
32.	Automatic Fighting Dummy Design and Development	Research and Development
33.	Water System Pumps Investigation, Analysis, Design and Testing	Novartis
34.	Investigation of Building's Capabilities of Collecting Rainwater to be Reused or Utilised for Energy Purposes	Research and Development
35.	Mechanical Design of Wind Breaker Device	Graepel
36.	Mechanical System for Loading Portaloos onto a Flatbed Trailer Design and Development	Hayes Cabin Services
37.	Performance of Pump as Turbine using Variable Speed Technology as Power and Flow Control System	MEGA - Micro Electricity Generation Association of Ireland
38.	Stainless Steel Tubing Damage Mechanism Investigation	Research and Development
39.	Analysis of Blocked Frits (Filter Discs) and Design of a Testing Unit to Test Porosity of Frits	Novartis
40.	Catheter Kinking Limit Investigation	Stryker Ireland
41.	Refrigeration Plant Coefficient of Performance Improvement Investigation	GlaxoSmithKline Cork
42.	Aerodynamic Performance Analysis of Diverse Airfoil Shapes for a Vertical Axis Wind Turbine	MeSSO Research Group
43.	Investigation of Thermal Effects during Cutting of Bone	Stryker Ireland
44.	Structural Analysis of a Vertical Axis Wind Turbine Blade	MeSSO Research Group
45.	Newly Designed Cup HA (Hydroxyapatite) Coating Fixture Design and Development	Stryker Ireland
46.	Endoscopy Process Investigation, Analysis and Improvement	Stryker Ireland
47.	<i>Medical Engineering Design and Innovation Centre (MEDIC) Cork Institute of Technology Enterprise Ireland Applied Research Enhancement Centre</i>	<b>Centrepiece Exhibit 4</b>
<b>Stand</b>	<b><i>Bachelor of Engineering (Honours) in Biomedical Engineering</i></b>	<b>Centrepiece Exhibit 5</b>
48.	Sterile Barrier Systems Seal Curve Analysis	DePuy Synthes
49.	Neonatal and Early Infants Pain Assessment Tool Design and Development	Research and Development
50.	Analysis & Development of Strategies to Improve Reliability of the Material used in Micro-Catheter Manufacture	Stryker Ireland
51.	Modified Inhaler Design and Development	Research and Development
52.	Vision Inspection of Precoat Guidewire Welds	NDA
53.	Alternative Non-Invasive Blood Pressure Monitor Feasibility Investigation	Research and Development
54.	Development of Mattress for Babies with the Condition Spina Bifida	Research and Development
55.	Cattle Leg Holder Moulded Platform Design and Development	Inspect4
56.	Automated Pig Milking Device Design and Development	Research and Development
57.	Analysis and Design of a Tensile Test bar and Wax Injection Tool for Industrial Validation	DePuy Synthes
58.	Personalised Orthotic Insole Manufacture Low Cost Solution Design and Development	Research and Development
59.	Cross Threading Analysis	GE Healthcare
60.	Hurley Helmet Drop Testing	Research and Development
61.	Monomer Filtration Pressures Analysis	NDA
62.	Cancer Aid Research Analysis Programme Design	Research and Development
63.	Automated Visual Inspection of Braids	Stryker Ireland
64.	Micro-Needle Hydraulic Resistance Characterisation System	Research and Development
65.	Ergonomics in Workplace Design and Management	Abbott Vascular
66.	Maxillofacial Strengthening Device Design and Development	Research and Development
67.	Solvent Recovery System Design and Development	Pfizer Ireland Pharmaceutical
68.	Smart Bridle Design and Development	Research and Development
69.	Diagnostic Guidewires Laser Welding Investigation	NDA
70.	Rotating Test Bench for External Boundary Layer Flow Studies Design and and Development	Research and Development
71.	Grind Characterisation of Femoral Components	DePuy Synthes
72.	Gait Analysis of the Link between Subject's Biomechanics and Injury	Research and Development

73.	Surface Modification of Ti-6Al-4V Alloy	DePuy Synthes
74.	Eye Drop Device Design and Development	Research and Development
75.	Complex Geometry Analysis and Reverse Engineering	Research and Development
76.	Baby Soothing Device for Neonates that have been Predisposed to Drug Abuse Design and Development	Research and Development
<b>Stand 77</b>	<b><i>Bachelor of Engineering (Honours) in Chemical and Biopharmaceutical Engineering</i></b>	<b>Centrepiece Exhibit 6</b>
78.	Optimisation of Recovery Yields	Pfizer Ireland Pharmaceutical
79.	Chromatography Modelling for Monoclonal Antibody Purification	Research and Development
80.	Process Control System Alarm Rationalisation	Biomarin
81.	Investigation of Pressure-Retarded Osmosis (PRO) as a means of Harvesting Sustainable Energy	Research and Development
82.	Evaluation of Distillation Options for the Small Volume Continuous (SVC) Facility	Eli Lilly
83.	Small Scale Mash/Lauter Tun & Fermenter Design	Research and Development
84.	Optimization of Bowen Dryer for PH101	FMC
85.	Investigation and Analysis of Mixing Principles with respect to the Optimisation of Film Coating	Research and Development
86.	Investigation into the Effect of False Air in Clinker Production and Kiln Operation	Irish Cement
87.	Distillation Case Studies using Aspen Dynamics Software	Research and Development
88.	Examination of the Variation of Raw Material CMC Viscosity and Evaluation of the Impact on the Colloidal Process Viscosity	FMC
89.	Design and Construction of a Chemical Reactor	Research and Development
90.	Optimisation of a Multicomponent Distillation Column	Irving Oil
91.	Demonstration of Crystallisation Principles	Research and Development
92.	ISA S88 Batch Modules for Siemens S7 PLC	Douglas C&A
93.	Monitoring and Control of Fermentation Processes to Identify and Control Critical Process Parameters	Research and Development
94.	Optimisation on the Processing of a Calcium Based Formulation; Focusing on PSA, Viscosity and Setting Time	Research and Development
<b>Stand 95.</b>	<b><i>Centre for Advanced Manufacturing and Management Systems (CAMMS)</i></b>	<b>Centrepiece Exhibit 7</b>
<b>Stand 96.</b>	<b><i>Bachelor of Engineering in Mechanical Engineering Level 7</i></b>	<b>Centrepiece Exhibit 8</b>
97.	Automatic Parlour Feeder Design and Development	Research and Development
98.	Grass Compacting Collector Design and Development	Research and Development
99.	Mobile Cattle Crush Design and Development	Research and Development
100.	Portable Sprayer Design and Development	Research and Development
101.	Quad Craft Design and Development	Research and Development
102.	VW Trike Design and Development	Research and Development
103.	Chuck Lifting Device Design and Development	Research and Development
104.	Section Rollers Design and Development	Research and Development
105.	Solid Waste Separation System Design and Development	Research and Development
106.	Aerofoil Demonstration Rig Design and Development	Research and Development
107.	Automated Beer Pouring Station Design and Development	Research and Development
108.	Beverage Supply Unloader Design and Development	Research and Development
109.	Nano Brewery CIP Design and Development	Research and Development
110.	Vision System Automation Design and Development	Research and Development
111.	Human Machine Interface HMI Programming	Research and Development
112.	Car Boot Lifting Aid Design and Development	Research and Development
113.	Inversion Table Design and Development	Research and Development
<b>Stand 114.</b>	<b><i>Bachelor of Engineering in Biomedical Engineering Level 7</i></b>	<b>Centrepiece Exhibit 9</b>
115.	Surgical Canopy Design and Development	Research and Development
116.	Erbs Palsy Recovery Device Design and Development	Research and Development
117.	Post-Operative Chair Assist Design and Development	Research and Development
118.	Physical Impact Measurement Device Design and Development	Research and Development
119.	Water Purification Device Design and Development	Research and Development

120.	Urinary Flow Measurement Device Design and Development	Research and Development
121.	Golf for the Physically Impaired Device Design and Development	Research and Development
122.	Bathroom Assist Device Design and Development	Research and Development
<b>Stand 123</b>	<b><i>Bachelor of Science in Advanced Manufacturing Technology Honours Level 8</i></b>	<b>Centrepiece Exhibit 10</b>
124.	Analysis of Manufacturing Layout	Graepel
125.	Automatic Cleaning Unit for Farm Cubicals Design and Development	Research and Development
126.	Robotino Design and Development	Research and Development
127.	Separation of Plastic from Silage Bales	Research and Development
128.	Pencil Sharpening Robot Station Design and Development	Research and Development
129.	Movable Stadium Pitch Development	Research and Development
130.	Mechatronics Rig Development	Research and Development
131.	Clothes Line for Elderly Design and Development	Research and Development
132.	Heat Treatment Rig Design and Development	Research and Development
133.	Cinema Floor Sweeper Design and Development	Research and Development
134.	Franc Robot Station Design and Development	Research and Development
135.	Suitcase Product Development	Research and Development
136.	Mechatronics Rig Development	Research and Development
137.	Metrology Fixture Design and Development	Research and Development
140.	Robot Station: Cut & Inspection	Research and Development
<b>Stand 138</b>	<b><i>Bachelor of Science in Process Plant Technology Honours Level 8</i></b>	<b>Centrepiece Exhibit 11</b>
139.	Ship Exhaust Heat Recovery Investigation	Research and Development
141.	Energy Use Analysis and Renewable Opportunities Investigation	Graepel
<b>Stand 142</b>	<b><i>Bachelor of Engineering in Sustainable Energy Honours Level 8</i></b>	<b>Centrepiece Exhibit 13</b>
143.	A Study of the Installation and Profitability of Photovoltaic Panels in Diageo Baileys Global Supply	Diageo
144.	Cost Optimal Approach to Retrofitting Irish Social Housing	Research and Development
145.	Achieving Optimum Efficiency from Steam Traps	GlaxoSmithKline Cork
146.	Investigation of the Viability of Alternative Energy Sources for Public Transport in Ireland	Research and Development
147.	Ireland's Biogas Potential using TPH to meet EU 2020 RES-T Targets	Jones Celtic Bioenergy
148.	Investigation of Feasibility of Rooftop PV Auto Generation	Research and Development
149.	Low Energy Modular Dwellings for Ireland's Current Housing Crisis	Research and Development
150.	Performing an Energy Audit to Benchmark Targets set by ISO50001	Research and Development
151.	Sound Intensity in HVAC Systems Investigation	Research and Development
152.	Optimising Energy Efficient Lighting	Research and Development
153.	Feasibility of PV Farms in Ireland Investigation	Research and Development
<b>Stand 154.</b>	<b><i>PhD and Masters Degree Research Projects</i></b>	<b>Centrepiece Exhibit 14</b>
155.	Overheating in Nearly Zero Energy and Passive House Dwellings in Ireland	PhD Candidate, Risam Scholarship
156.	Aerodynamic and Structural Optimisation of a Deep Offshore Floating Vertical Axis Wind Turbine	PhD Candidate, Risam Scholarship
157.	A Field Study on Thermal Comfort Performance of a Ventilative Cooling System in a Retrofitted Low Energy Building	PhD Candidate, Risam Scholarship
158.	Energy and Cost Optimisation in the Milk Production Process	PhD Candidate, Walsh Fellowship in conjunction with Teagasc
159.	Electrical Power and Water Consumption on Irish Dairy Farms: An Exploratory Analysis	Masters Degree Candidate, IOTI Funded in conjunction with Teagasc



Stand 160.	<i>Engineers Ireland</i>	Centrepiece Exhibit 15
Stand 161.	<i>Enterprise Ireland</i>	Centrepiece Exhibit 16
Stand 162.	<i>PMD Solutions</i> <i>Winner of CIT Prize for Innovation 2011</i> <i>CEO Mechanical Engineering Graduate Myles Murray</i>	Centrepiece Exhibit 17 November 2015 - €4.2 Million Funding 11 further jobs at PMD Solutions
Stand 163.	<i>Orthoxel</i> <i>Chief Technical Officer and Co-Founder Charles Daly</i> <i>CIT Mechanical Engineering Graduate 2003</i> <i>Siemens Engineers Ireland Innovative Student 2003</i> <i>SME International Conference Best Paper 2003</i>	Centrepiece Exhibit 18 <i>Chief Technical Officer and Co-Founder Orthoxel Charles Daly</i> <i>Enterprise Ireland Graduate of Outstanding Innovation Achievement Award 2017</i>
Stand 164.	<i>Vintage and Classic Vehicles of Yesteryear Display</i> <i>CIT Mizen to Malin Fund Raiser Drive</i> <i>for Suicide Aware</i>	Centrepiece Exhibit 19 <i>The CIT Staff and Student Mizen to Malin Vintage Car Rally for Suicide Aware supported by Munster Rugby, raised over €17,000</i>
Stand 165.	<i>Institution of Mechanical Engineers</i>	Centrepiece Exhibit 20
Stand 166-200	<i>International / National Awards in Engineering Innovation, Design &amp; Entrepreneurship</i>	Centrepiece Exhibit 21

INTERNATIONAL SPACE UNIVERSITY  
**ISU**  
30th  
**SPACE STUDIES PROGRAM**  
26 JUNE - 25 AUGUST  
**2017**

**CIT** CORK INSTITUTE OF TECHNOLOGY  
INSTITIÚID TEICNEOLAÍOCHTA CHORCAÍ  
**CORK • IRELAND**

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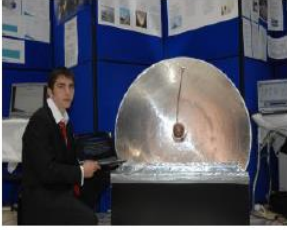
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# Engineers Ireland "Best in Class" Education Excellence Award Winner

Cork Mechanical, Manufacturing and Biomedical Engineering Exhibition  
Ireland and Europe's Largest Educational Engineering Event



**CIT CORK INSTITUTE OF TECHNOLOGY**  
INSTITIÚID TEICNEOLAÍOCHTA CHORCAÍ

**31st Cork Mechanical, Manufacturing & Biomedical Engineering Exhibition**  
Thursday 27th April 2017 1.30pm - 7.30pm  
200 Stands  
Ireland and Europe's Largest Educational Engineering Event

**Exhibition Theme 2017: Space Engineering and Science**  
Cork Institute of Technology  
International Space University 2017

**Engineers on the move**

**Admission Free**

For further information and group bookings, contact:  
Sean F. O'Leary, Senior Lecturer, CIT.  
Tel. 00 353 21 4335425 seanf.oleary@cit.ie

Design, Innovation & Ethical Engineering





# *Enterprise Ireland Student Entrepreneur Awards*

## *Limerick 8<sup>th</sup> - 9<sup>th</sup> June 2016*



### *CIT Innovative Product Development Multidisciplinary Teams*

### *Win All Five Major Awards at National Finals*

## *Enterprise Ireland Student Entrepreneur Awards 2016*

- (1) Enterprise Ireland Overall Winner and Student Entrepreneur of the Year 2016*
- (2) Cruickshank Intellectual Property Attorneys National Award 2016*
- (3) Grant Thornton National Award 2016*
- (4) Intel ICT National Award 2016*
- (5) Enterprise Ireland Academic Innovation National Award 2016*

*The achievement by CIT Engineering students and staff of all five major awards at the Enterprise Ireland Student Entrepreneur Awards Finals 2016 - the Enterprise Ireland Overall Winner and Student Entrepreneur of the Year 2016, the Cruickshank Intellectual Property Attorneys Exceptional Business Idea Award 2016, the Grant Thornton Exceptional Business Idea Award 2016, the Intel ICT Award 2016 and the Enterprise Ireland Academic Innovation Lifetime Achievement Award 2016 - is unprecedented.*

*With over 500 entries nationally to this prestigious entrepreneurship and innovation multi-discipline competition, the achievement of all five major national awards by engineering projects, students and staff from one college is quite remarkable.*

See <http://studententrepreneurawards.com/> and <http://studententrepreneurawards.com/category/previous-winners/2016/>



## ***International / National Awards in Engineering Innovation, Design & Entrepreneurship***

### **National Prize-Winners in**

#### **Engineering Innovation, Design & Entrepreneurship Innovative Product Development Laboratories include:**

*Three Enterprise Ireland / Invest Northern Ireland Young Entrepreneur of the Year First Place National Awards ( 2016, 2013, 2007 )*  
*Three Enterprise Ireland / Invest Northern Ireland Academic Innovation National Awards ( 2016, 2012, 2009 )*  
*One Accenture Leaders of Tomorrow First Place National Award Accenture HQ Grand Canal Square Dublin ( 2016 )*  
*Five Enterprise Ireland Cruickshank Most Technologically Innovative Project First Place National Awards(2016, 2013, 2009, 2008, 2007)*  
*Nine MEETA Asset Management and Maintenance National Awards ( 2016(x2), 2015(x2), 2014, 2013(x2), 2011, 2006 )*  
*One James Dyson Design National Award Ireland ( 2016 )*  
*One Enterprise Ireland Intel ICT First Place National Awards ( 2016 )*  
*One Enterprise Ireland Grant Thornton First Place National Awards ( 2016 )*  
*One National Disability Authority Centre for Excellence in Universal Design Grand Challenge Enterprise Ireland Commercialisation National Award (2016)*  
*One National Disability Authority Centre for Excellence in Universal Design Grand Challenge Judges' Choice Award Technology Trophy National Award (2016)*  
*One Early Career Awards Special Recognition National Award (2016)*  
*Two Engineers Ireland Excellence Awards - " Best in Class " Engineering Education Award (2015, 2011))*  
*Eight Enterprise Ireland / Invest Northern Ireland National Awards of Merit ( 2015, 2013, 2012, 2010, 2009, 2008, 2007 )*  
*Eleven Engineers Ireland Innovative Student Engineer of the Year Awards sponsored by Siemens (2014 L8, 2013 L8, 2012 L8, 2011 L7, 2009 L7, 2008 L8, 2007 L7, 2006 L8, 2005 L8, 2004 L8, 2003 L8)*  
*One Chartered Institution of Water and Environmental Management - AECOM Student Environmental Award Winner-Sligo (2015)*  
*Five Enterprise Ireland I.Mech.E Speak Out for Engineering Awards ( 2014, 2013, 2007, 2006, 2004 )*  
*One CADFEM Ireland and Ansys Users Conference EI HQ Dublin Best Presentation Paper ( 2014 )*  
*One GradIreland Graduate Employee of the Year First Place Award Mansion House Dublin ( 2012 )*  
*One NCBI Inclusive Technology Showcase Grand Prize Wood Quay Dublin ( 2012 )*  
*Three Abbott Ireland Intern of the Year Awards ( 2012, 2011, 2009 )*  
*One Engineers Ireland Excellence Awards - ESB Award for Outstanding Contribution to Engineering (2011)*  
*One Engineers Ireland Excellence Awards - Chartered Engineer of the Year (2011)*  
*One Inaugural Enterprise Ireland / Invest Northern Ireland Young Entrepreneur of the Year Solving Problems for Industry €7,500 Award ( 2009 )*  
*Two HP Invent Awards for Best Science/Engineering/IT project in Ireland*  
*Three William Eccles Institution of Production Engineers National Awards*

### **International Prize-Winners in**

#### **Engineering Innovation, Design & Entrepreneurship Innovative Product Development Laboratories include:**

*Nine First Places and Seven Runner Up Finalists in the Institution of Mechanical Engineers Best Medical Engineering and Design and Development of a Biomedical Device Competitions, London ( 2015, 2014, 2011, 2010, 2008, 2007, 2006, 2005 )*  
*Two European Laureate of Innovation First Place Award - European Student Innovator of the Year 2014 and 2012 - European Student Innovation Finals - Innovact Reims France ( 2014, 2012 )*  
*One University Startup World Cup Finals Sole Irish Finalist Category Finalist Award Winner Copenhagen Denmark (2015)*  
*European Science Engineering and Technology Best European Mechanical Engineering Student One First Place and One Runner Up Babcock Award - SET Finals London UK ( 2013, 2011 )*  
*Two Enterprise Ireland / Invest Northern Ireland Think Outside the Box Academic Innovation Awards ( 2012, 2009 )*  
*One European Laureate of Innovation Third Place Award – European Student Innovation Finals - Innovact Reims ( 2010 )*  
*Two Gold Medals Undergraduate Awards of Ireland and Northern Ireland Engineering/Mechanical Sciences ( 2011, 2010 )*  
*Seven First Places and Six Runner Up Finalists in the Institution of Mechanical Engineers Best Medical Engineering and Design and Development of a Biomedical Device Competitions, London ( 2011, 2010, 2008, 2007, 2006, 2005 )*  
*One Global Student Entrepreneur Finalist Award sponsored by the Entrepreneurs' Organisation in conjunction with Mercedes-Benz Financial at the GSEA Finals in Kansas City, Missouri, USA ( 2009 )*  
*One SOFE Paris Second Place Award - Institution of Mechanical Engineers ( 2009 )*  
*One First and One Second Place in the ISEA International Sports Engineering Competition, London*  
*Two Queen's Silver Jubilee awards for Best Mechanical Engineering Degree Project in Ireland and Britain*  
*One Genius 2000 Award for Best New Invention at the Nuremburg Inventors' Fair*  
*Two Society of Manufacturing Engineering Outstanding Young Engineer Worldwide Awards*  
*Three First Places for Best Published and Presented Paper at the International Manufacturing Conference.*

## ***Engineering an Innovation Eco-System***

