ISA IRELAND SECTION CORPORATE SPONSORS 2018 / 20189

ISA Ireland Section
2018 Honours and Awards

University College Cork
Wednesday 12th December 2018

e-mail: info@isa.ie
http://www.isa.ie

About ISA Worldwide

Founded in the United States in 1945, ISA is a leading, global, non-profit organisation that is setting the standard for automation by helping 40,000+ worldwide members and other professionals solve difficult technical problems while also enhancing their leadership and personal career capabilities. Based at Research Triangle Park in North Carolina, ISA develops standards; certifies industry professionals; provides education and training; publishes books and technical articles and hosts a number of symposia for automation professionals throughout the world.

ISA identifies, defines and reflects the needs and objectives of scientists, engineers, managers, technicians and students involved with instrumentation, systems and automation. Many professionals and corporations around the globe depend on ISA conferences, exhibitions, standards, publications and training for the transfer of knowledge, exchange of ideas and professional development.

ISA comprises of 14 Districts - North America (10); South America (2); Europe & Middle East (1), India & Far East (1) with 135 regular sections and 105 student sections chartered throughout the world and with a total membership of circa 40,000. Further detail can be had from the ISA website at: **http://www.isa.org.**

ISA Ireland Section

ISA Ireland Section is a non-profit Society and our members come from industry and academia. The Ireland Section received its charter on 29 June 1978 and has since grown to become a nationally recognised organisation. The aim of the society is to advance the technology, the competence and the careers of practitioners in the field of automation for the benefit of industry and humanity.

The Ireland Section of ISA caters for the technical, scientific and educational needs of its members who have careers in measurement, control, automation, systems design, academia and engineering consultancy within this very multidisciplinary scientific discipline.

The Ireland Section has been very successful in the past in holding and growing its membership. This has led to ours being a model which other ISA sections sought to emulate and further to being highly regarded within the automation industry in Ireland. Indeed Section committee members have consistently been elected to serve at European District and Corporate Board level and we currently have several such members serving.

The Ireland Section has about 235 members and is affiliated to Europe & Middle East (District 12).

Further detail can be had from the Ireland Section website at **http://www.isa.ie.**

Our Vision:

Create a better world through automation

Our Mission

Advance technical competence by connecting the automation community to achieve operational excellence

Innovation Project Award

Criteria: To recognise a project which has made a significant contribution to the advancement of industry in Ireland through the use of Automation Technology.

Recipient: BMS Ireland Cruiserath Biologics IT & Automation Team

Nominated by: Alan Shefflin

Back in November 2014 BMS announced plans to construct a new $1 Billion state-of-the-art, multi-product Biologics manufacturing facility in Cruiserath, Dublin. The primary challenge was to meet the business need and complete the project and start up product qualification batches in Q4 2018.

Key to supporting the start-up of the BMS Cruiserath facility was the delivery of a complex IT and Automation architecture's. Delivery of this architecture involved a number of innovative approaches to technology some of which are outlined below:

A temporary mobile data centre was used to take the IT Infrastructure server and network build and test off the project critical path.

During skid vendor FAT's, which were held all over the world, a cloud based *Process Automation system* was used which allowed devices to be manipulated saving FAT set-up and execution time. MES and Process Automation recipes are generic and make extensive use of formulas and parameters enabling a flexible multi-product facility.

Process Automation software was designed, built and tested at the system integrator with BMS oversight allowing the FAT'd software to be leveraged significantly reducing the CQV time at site. There has been extensive use of data analytic tools to monitor the process such as the HETP tool for ensuring that the chromatography columns are correctly packed and multivariate monitoring tools to monitor bioreactor performance.

The project has been a resounding success, since the start of October 2018 immuno-oncology drug substance is now being produced for patients. The plant was designed, built, commissioned, qualified and put into production in three years which is among the best in the world for a plant of this size.

Finally and most importantly this delivery could not have been achieved without a highly committed, competent and passionate IT and Automation team which at peak grew to almost 200 team members.

Pioneer Award

Criteria:
To be awarded, on the nomination of two or more Society members, in recognition of a lifetime devoted to Instrumentation / Automation in Ireland.

Recipient:
Malachy Hanley - Hanley Controls

Nominated by:

Bob Shine - Retired (CETB)
Eoin O 'Rain - Readout Publications

Malachy Hanley was the 5th President of the ISA Ireland Section (1983/84). Malachy is a proud Monaghan man, having grown up in Monaghan town. From school he joined the Irish Army as an Officer Cadet, was commissioned an Officer in 1965 and went on to serve in the Army Signal Corps.

Malachy left the army and went on to study for the degree of Bachelor of Electrical Engineering in University College Dublin.

His first job as an Engineer was with the American company CE Lummus on the construction of Pfizer Pharmaceuticals in Ringaskiddy. This was his first involvement with Instrumentation and Control and he found it a very exciting assignment. After Lummus he joined the construction company M.F. Kent & Co. from Clonmel where he worked for ten years, mainly in the field of Process Instrumentation.

In 1981, having left M.F. Kent & Co. he set up Hanley Controls as a trading and services company. The first Purchase Order he got was from Pfizer Pharmaceuticals and they remain an important customer to this day.

Hanley Controls was successful over the years and with the benefit of great managers, split and evolved into separate companies with their own discrete fields of metering, measurement, control, automation and calibration, with operating bases throughout Ireland and the United Kingdom.

By year 2015 there were 200 staff in the Companies. There was a great emphasis on training and development within. The Hanley Controls companies are trusted and respected by their customers.

Although Malachy retired briefly in 2015, it didn't suit him (or his wife Anne) and so he was sent back to work. He continues to be involved in business within the field of robotics systems for industry and healthcare.

With a career span of 45 years in the field of Process Instrumentation and Control, ISA are pleased to recognise him as a Pioneer in this category.

ISA Ireland President Mr. Edward Cuffe

I would like to welcome you all here this evening, to our **37th Annual Honours and Awards Ceremony.** We hold this annual ceremony to acknowledge and encourage excellence for those training for careers in Instrumentation, Control and Automation.

This year we have seven awards, four of which have been submitted by Third Level institutions and three industry awards. I would like to welcome the recipients, their families and along with their nominators here tonight.

We are delighted that our sponsors are represented here this evening, this clearly shows the industry's awareness and support for promoting and awarding excellence.

I would like to thank University College Cork for allowing us to use this very elegant and historic Common Room. I hope you all have a very relaxed and enjoyable evening as we celebrate excellence in our industry. I would like to wish you and your families a joyful Christmas and a prosperous New Year.

ISA IRELAND SECTION PRESIDENTS

Year	Name	Year	Name
1977 / 1979	Mr. Fred Gilroy	1998 / 1999	Mr. Declan Lordan
1979 / 1980	Dr. Liam McDonnell	1999 / 2000	Mr. Brian Curtis
1980 / 1981	Mr. Maurice Radford	2000 / 2001	Mr. Eamon Creech
1981 / 1983	Mr. John Power	2001 / 2002	Mr. Tony Mahon
1983 / 1984	Mr. Malachy Hanley	2002 / 2003	Mr. Alan Edwards
1984 / 1985	Mr. Eoin O'Riain	2003 / 2004	Mr. Peadar Walsh
1985 / 1986	Mr. Harvey Makin	2004 / 2005	Mr. Martin Almond
1986 / 1987	Mr. Frank Maher	2005 / 2006	Mr. Kevin Dignam
1987 / 1988	Mr. Brendan Barry	2006 / 2007	Mr. Brian Nolan
1988 / 1989	Dr. Liam McDonnell	2007 / 2008	Mr. Jim Long
1989 / 1990	Mr. Fred Gilroy	2008 / 2009	Mr. Michael Meade
1990 / 1991	Dr. Eamon Cashell	2009 / 2010	Mr. Kevin McCarthy
1991 / 1992	Mr. Ger Dullea.	2010 / 2011	Mr. David O' Brien
1992 / 1994	Mr. John Lotty	2011 / 2012	Mr. John Downey
1994 / 1995	Mr. Robert Shine	2012 / 2013	Mr. Kieran Coughlan
1995 / 1996	Mr. John Farrell	2013 / 2014	Mr. Liam O'Brien
1996 / 1997	Mr. Aidan Howard	2014 / 2016	Mr. Alan Bateman
1997 / 1998	Mr. Billy Walsh	2016 / 2018	Mr. John Murphy
		2018 / 2019	Mr. Edward Cuffe

Honours & Awards 2018 Program of Events

University College Cork, Wednesday 12th December 2018

18:00 **Arrival of Deputy Lord Mayor, *Cllr. Mick Finn***

18:10 ISA Ireland Committee Member John Murphy will commence proceedings.

18:15 **Formal opening by *Lord Mayor, Cllr. Mick Finn***

18:20 Response from the President of ISA Ireland Section Mr. Edward Cuffe.

18:25 Presentation of Awards.

Craftsperson Award	**Paul Meers**	**CETB & IT Carlow**
Degree Award	**Paul Casey**	**GMIT**
Honours Degree Award	**Emma Branigan**	**DCU**
Postgraduate Award	**Ciara O'Hara**	**CIT**
Automation Champion Award	**Dr. Hassan Kaghazchi**	**University of Limerick**
Pioneer Award	**Malachy Hanley**	**Hanley Automation**
Innovation Project Award	**Alan Shefflin**	**BMS Biologics**

19:00 Response from the Winner of Pioneer Award, Mr. Malachy Hanley

19:01 Photographs of Award winners

19:15 Photographs of Sponsors

19:30 Reception.

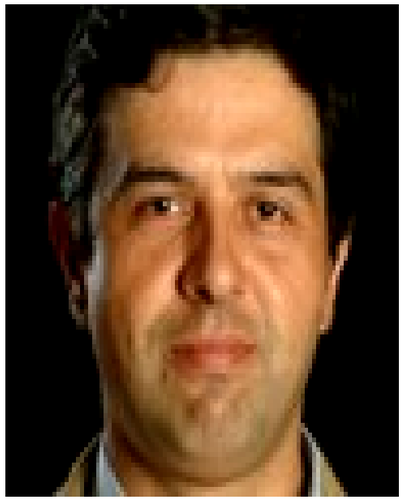
20:30 Close of Honours and Awards Reception.

The **Ireland section of ISA** has conducted an **Annual Honours & Awards** programme since 1980. This programme is intended to acknowledge and encourage excellence amongst those involved in, and those training for careers in Automation, Instrumentation and related areas of Technology..

The ISA Ireland Section would like to thank the education centres for the time and effort of the lecturers and students for submitting nominations every year

Cork Institute of Technology	**Institute of Technology Carlow,**
Dublin City University	**Institute of Technology Tallaght**
Galway Mayo Institute of Technology	**Institute of Technology Tralee**
Trinity College Dublin	**University College Dublin**
University College Galway	**Waterford Institute of Technology**

Automation Champion Award



Criteria:
To be awarded to a person in recognition of their contribution to the advancement of Instrumentation, automation, IT or Industrial systems and / or technology in Ireland

Recipient:
Dr Hassan Kaghazchi
University of Limerick

Nominated by:
Mr. Declan Lordan - Douglas Control & Automation

Dr. Hassan Kaghazchi been involved in industrial automation since 1984, and is a Senior Member of ISA. His achievement and contributions are:

Establishment of Automation Research Centre (ARC) at University of Limerick: The candidate established ARC in 1994 to cater for automation needs of SME in Ireland, and over the past 25 years, ARC has produced automated solutions for a wide variety of industrial applications, with over 30 master students graduated to date.
The candidate has been a University lecturer in Industrial Automation since 1986, and contributed significantly to curriculum development of Automation to Mechanical and Biomedical Engineering at University of Limerick undergraduate level.

Establishment of Regional PROFIBUS Association (RPA) Ireland, to promote and support industry in selection, implementation and maintenance of PROFIBUS & PROFINET networks. RPA Ireland has 10 member companies, who are made up of end users, systems integrators, and vendor companies. RPA Ireland is involved in promotion and support of PROFIBUS, PROFINET, and IO Link technologies. It also runs automation Seminars and workshops in Ireland.

The candidate is one of three ISA Certified Automation Professionals (CAP) in Ireland, and has been an active promoter of ISA certification courses to industry.
Participation in ISA Ireland seminars, Exhibition and conferences to promote automation technologies to industry.
The candidate has mentored a number of participants from Industry in preparation for ISA certified technician and automation programs.
The candidate has been involved in delivering certified training to participants from industry on application of PLC, SCADA systems, and Industrial communications networks over the past 33 years in Ireland and abroad.

He is recognized as a global expert in PROFIBUS and PROFINET technologies, and contributed to research, development, and implementation of these technologies in Ireland and overseas.
Since 2002 the candidate has been involved in callout service industry to resolve industrial communication issues frequently faced by industry in Ireland.
Has set up the PI Competency Centre (PICC) in Ireland in 2002. PICC is a technical resource for industry and provides free email and phone support to industry.

The candidate has co-operated actively with Project Management companies in Ireland in designing Industrial communication systems for Pharma and Biopharma companies in Ireland.

Post Graduate Award

Criteria:
To be awarded, on any nomination, to the best final year Degree student specialising in any area of Automation, Instrumentation or Control.

Recipient:
Ms. Ciara O'Hara
Cork Institute of Technology

Nominated by:
Dr. Stephen Hegarty
Lecturer
Cork Institute of Technology

Ciara graduated with an MSc in Physics from Cork Institute of Technology in June 2018. She was the recipient of an Irish Research Council Employment Based Postgraduate Programme award, an initiative which allows postgraduate students to develop both research and workplace skills and experience, while also fostering knowledge transfer and collaboration between Irish based enterprise and the third level sector. Ciara was hosted jointly by ProPhotonix (Little Island, Cork), and CAPPA (Centre for Advanced Photonics and Process Analysis) at CIT, with her research focusing on the development of UV LED based lamps with modular optical heads.

ProPhotonix designs and manufactures LED illumination solutions and laser modules, for machine vision applications, servicing some of the world's leading industrial, medical and scientific equipment manufacturers.
Ciara's research focused on the development of the Cobra Cure FX series of products, which are high irradiance, high energy density, UVA LED lamps designed for use in UV curing applications. An initial prototype developed by ProPhotonix, the smallest in the series, the FX1, underwent significant redesign throughout the project, and two larger lamps, the FX2 and the FX3 were developed during the course of the project.

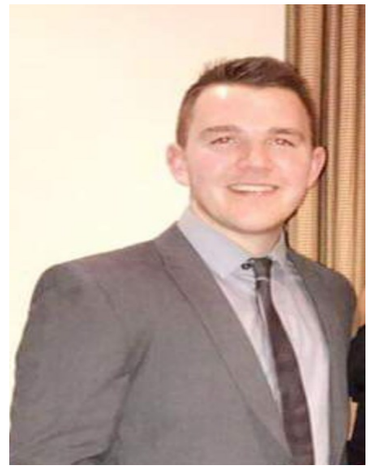
Ciara's research primarily consisted of characterizing, accurately modelling, and thereby refining, the optical reflector design for each of the lamps, but also involved investigating the suitability of microlenses for use with the product, and characterizing a free-form TIR lens for use with LED line-lights.

Part of this work has been published in a peer reviewed journal article (*IEEE Photonics Journal, Vol 10, Issue 6*) The reflector optimisation work led to the development of three major light-head types, the D4, DW and C1, to offer maximum beam control, dose, and irradiance respectively. Some research was also conducted on the development of a real-time feedback system for monitoring the lamp's lifetime degradation status, and for detecting any build-up of material on the outer optical surface of the lamp.

Ciara's work was of vital importance in the development of a new series of products for ProPhotonix, contributing key design parameters and constraints which have been fully integrated into the Cobra FX series. It has also yielded a greater and deeper understanding of some critical elements in the optical design of LED lamps, work which will continue to reap benefits for ProPhotonix, in their future research and development activities.

Craft Person Award

Criteria:
To be awarded, on the nomination of Cork Training Centre and / or Carlow Institute of Technology, to the best final year instrumentation Apprentice for notable academic and practical achievements in instrumentation.



Recipient: Mr. Paul Meers - LotusWorks

Nominated by:
Mr. Patrick McCarthy,
Cork Education Training Board (CETB)
Mr. Jim Doyle,
Carlow Institute of Technology

Paul began his Instrumentation apprenticeship with LotusWorks in Sligo on the 06/10/2014

As can be seen from the attached results for Phases 2 / 4 / 6 in the Cork Training Centre and Carlow Institute of Technology Paul has achieved a very high standard of Credits and Merits in every Module. From the very beginning his attitude and commitment was exceptional, he retained information easily and was always keen to learn and take advice.
His managers Noel Molloy and Paul Butler have nothing but praise for his work. Paul has also worked abroad on large scale plants and has completed several in house courses for Lotus.

It gives us great pleasure in nominating Paul for the Craft Award 2018 and wish him every Success in the future.

His nominators had no hesitation in recommending Paul for this ISA award.

ISA IRELAND SECTION
2018 HONOURS AND AWARDS SPONSORS

VALVE services

janssen PHARMACEUTICAL COMPANIES OF Johnson&Johnson

O'Sheas
Electrical Engineers & Contractors

LSC connecting success

Endress+Hauser
Endress+Hauser (Ireland) Ltd.

Degree Award

Criteria:
To be awarded, on any nomination, to the best final year Degree student specialising in any area of Automation, Instrumentation or Control.

Recipient:
Mr. Paul Casey - GMIT

Nominated by:
Mr. Paul Ryan - Lecturer at GMIT

Paul Casey entered GMIT in September 2015 as a mature student with no relative qualification onto the programme of Electrical Services and Automation (3-year Level 7).

From the beginning Paul's attitude and commitment to his class and project work was exemplary. Paul showed focus and purpose in attaining a high level of results in all modules throughout his time. Paul was always available to his fellow classmates with any help that he could give while also representing his class in the role of student representative.

As part of the programme Paul studied various modules but it was in the area of Automation and Electrical Services that Paul truly excelled. This became apparent in his final year project in which Paul implemented the leaning outcomes of all models taken. His project had the title 'Automated check-weigher Conveyor System with Integrated Reject Mechanism'.

With this project, Paul undertook to design, build and commission an automated check-weigher Conveyor system with integrated reject mechanism that would not look out of place in any automated industrial process.

Paul's level 7 project jointly won the Midas Ireland National award 2018 with a level 8 student from UCC. This recently took place in the Institute of Technology Carlow. The project weights and separates product according to weight, a feature of automation used in industry.

The awarding body Midas Ireland were so impressed with the project and Paul's presentation that they asked him to speak at their Gala Dinner in Cork on the 8th November.

Paul used both off the shelf components as well as his own designed and built control systems to achieved full automation. Using systems such as Arduino, Mitsubishi PLC's using GX Works, Siemens PLC's with Micro-Win software, as well as Human Machine Interface hardware (HMI).

From knowledge and practical skills acquired in the electrical Installation and motor control modules along with the use of the workshop allowed Pau1 to construct all electrical, mechanical and display cabinets used in his project.

A complete project explanation and poster outlining all aspects of the design and build with a full set of AutoCAD drawing was supplied with the working system.
All the lecturers within the Electrical Section of the School of Engineering at GMIT consider Paul to be an exceptional student both as a person and an academic and this was confirmed when Paul achieved the highest overall marks (average 87.1%) in his class in his final year.

Honour's Degree Award

Criteria:
To be awarded, on any nomination, to the best final year Honours Degree student specialising in any area of Automation, Instrumentation or Control. The award comprises a medallion and the Ger Dullea bursary of €1000 which is to be used to assist postgraduate studies.

Recipient:
Ms. Emma Branigan - DCU

Nominated by:
Prof. Enda McGlynn - DCU
School of Physical Sciences

This nomination is based primarily on Emma's outstanding 4th year project work entitled "The development of a high-resolution signal acquisition system applied to optical touch detection", which is an outstanding project involving a significant collaboration with an Irish company, Rapt Touch, to develop FTIR-based optical touch sensing devices, by providing a gold standard optical detection system.

The industrial partner, Rapt Touch (Ireland) Ltd. based in East Point Business Park, Dublin , were delighted with the project work and outcomes. The system developed by Emma has continued to be used in Rapt for the characterization of materials and for investigations into the fundamental principles of FTIR-based optical touch sensing.

This project makes a significant contribution to advances in research and development on this topic by providing a detection system which can probe multiple optical channels with negligible time delay between the multiple signals. Many factors influence the sensitivity of an optical beam to a touch (human or stylus) in an FTIR-based optical touch system. When it comes to assessing the sensitivity of a beam to a human touch, it is clear that no human can apply exactly the same touch to a system twice.

Variations in pressure, fingerprint contamination and exact location of the touch all contribute to a different effect on the probing optical beam. Therefore, any investigation into the sensitivity of a touch on an optical beam has to be conducted in a multichannel system where 2 or more optical beams with differing characteristics can probe the same touch at the same time. Emma worked on the development of such a system during her project with Rapt.

Emma received one of the top project marks of 85% (and joint top place in the project module in the entire cohort of 38 students across all three physics programmes in 2017/2018 in DCU). This is an excellent result, which speaks to the academic quality of Emma's work.

In terms of the key outcomes of this project work, as stated above, Emma significantly contributed to the abilities of Rapt Touch to conduct highly pertinent investigations into material properties as well as optical beam properties of their touch systems.

As a result of Emma's work, Rapt Touch have developed new designs for key optical components in the touch system which has led to improved performance and had a direct impact on touch sensitivity of the optical touch systems. So the value and outcomes of Emma's work have extended far beyond the academic sphere and have made real positive impacts on real-world instrumentation problems.