

CITY THE LEARNING



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"the space for science"



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Siemens Engineers Ireland Innovative Student Engineer of the Year 2009 Award

Final Year BEng in Electronic Engineering student Colm O'Brien of the Naval Service was awarded First Place and winner of the Siemens Engineers Ireland Innovative Student Engineer of the Year 2009 Award. Colm's final year project, inspired by the needs of an elderly relative, concerns the design and development of an Automated Home/Office Environment through Intelligent Tags and was carried out under the supervision of Lecturer Fergus O'Reilly. Colm wishes to express deep gratitude to all at both CIT and the Naval Service, who aided him throughout the advancement of his project and in his preparation for the finals.



Presentation by Alec MacAllister of the Engineers Ireland framed commemorative certificate of Colm O'Brien's Siemens Engineers Ireland Innovative Student Engineer of the Year 2009 Award at the Engineers Ireland stand at the CIT Careers Fair, 6th October to Dr Brendan Murphy.

(L – R) Lecturer Fergus O'Reilly, Supervisor, CIT; Dr Barry O'Connor, Registrar and Vice President for Academic Affairs, CIT; Alec MacAllister, Engineers Ireland; Dr Brendan Murphy, President, CIT; and Matt Cotterell, Head of School of Mechanical and Process Engineering, CIT.

In the Spotlight: Photonics

The scale of output, investment and partnership within the CIT Photonics Research Cluster has continued to grow and expand over the course of 2009. Since the beginning of the year the cluster has secured over €0.5M in funding, of which 10% has come directly from industry. This new investment has driven an increased engagement with industry, primarily led by the Centre for Advanced Photonics & Process Analysis (CAPPA), resulting in collaborations, both new and ongoing, with 15 industrial partners. In parallel there is a significant level of research orientated outputs from the Photonic Device Dynamics (PDD) group leading to 15 scientific publications in the fields of optics, quantum electronics, applied physics and material science as well as a number of presentations at international conferences. Both groups are part of the Department of Applied Physics & Instrumentation and their research centres on the generation, control and detection of light.

CAPPA Lab Opening

Earlier this year the Centre for Advanced Photonics & Process Analysis (CAPPA) completed the refurbishment of their laboratory space as well as commissioning of their capital equipment. Subsequently Dr Brendan Murphy officially opened the CAPPA Optics Laboratory on 29th May 2009. The laboratory houses CAPPA's advanced spectroscopy and imaging platform which is utilised in a wide variety of projects and partnerships with local, regional and international industries.

The laboratory is approximately 60m² and contains two large footprint research grade vibration isolated optical tables, one of which was donated by Alcon Laboratories Ireland, as well as several project based workstations for work not requiring vibration damping. Capital equipment includes a Hitachi S-3700N Ultra-Large Variable Pressure SEM, a PerkinElmer Spotlight 400 FT-IR Imaging System and a PerkinElmer RamanMicro300 Imaging System. The opening had been preceded by a successful open house for the School of Science and collaborators from Tyndall National Institute and UCC. The official opening was followed by an Institute-wide open day with lab tours, demonstrations and refreshments.



CAPPA Staff Dr David Williams (centre) and Dr Liam Lewis (right) demonstrate the Centre's Chemical Imaging Suite to Dr Eamonn Cashell, Head of the School of Science.

Dr Brendan Murphy, President, CIT; cuts the ribbon to officially open the CAPPA Laboratory in May of this year.



Enabling Innovation

Photonics Researchers, both within CAPPA and the Photonic Device Dynamics (PDD) group, are engaged with a number of industrial partners in wide ranging activities from semiconductor device physics to improving manufacturing process control. Its partners range in size from Start-Ups to Multi-National Corporations and come from the Medical Device & Technology, Pharmaceutical and Photonic sectors.

Apart from CAPPA's ongoing collaboration with Alcon Laboratories, the centre has initiated a new collaboration with another leading medical device partner also ranked among the top 20 global companies in this important sector. In November '09, an 18-month research programme was launched in conjunction with Abbott Vascular based in Clonmel, Co. Tipperary. The project, funded jointly by Abbott Vascular and Enterprise Ireland, will partner CAPPA with the National Centre for Laser Applications (NCLA) in NUI Galway to develop novel inline process inspection techniques for Abbott's range of cardiovascular devices manufactured in Clonmel.

In September, CAPPA completed a successful feasibility study for Audit Diagnostics, an indigenous SME which has been developing and manufacturing clinical diagnostic reagents and healthcare products since 1993. Audit is located in a custom built, state of the art manufacturing facility, just outside Cork city in Carrigtwohill. This site incorporates the latest production technologies including a complete clean room environment to the highest GMP standards and through its network of distributors and OEM partners their products are on sale in over 100 countries worldwide. Researchers at CAPPA collaborated with those from the Integrated Photonics Group at the Tyndall National Institute to investigate new enabling technologies to underpin Audit's in-vitro diagnostic products. Initial results are positive and negotiations have begun on developing the technologies further to bring them to market.

Last year CAPPA had engaged in supporting Epi-Light and has continued to work with the company over the course of the last 12 months. Epi-Light is an indigenous photonics start-up which develops advanced LED lighting systems for the Life Science sector.

The company started life in CIT's Rubicon business incubation centre but following private investment has recently moved to larger premises. As part of their business expansion plans, CAPPA and Epi-Light are currently in discussions with Enterprise Ireland to secure part-funding for a research programme to develop their LED based technology platform for imaging applications.

During the summer, CAPPA completed a technology assessment study for Astellas Pharma based in Killorglin, Co. Kerry. Astellas is one of the top 20 pharmaceutical companies in the world, employing 14,000 people globally and operations in Killorglin centre on the company's immunosuppressant drug Prograf. Apart from the technical study carried out as part of the company's continuous process improvement programme, Astellas has also utilised CAPPA's advanced imaging facilities for a number of short term process investigations.

Recently, the Photonics researchers successfully obtained funding under the European ERA-SPOT consortium for a joint project called InPhoQuS with Innolume GmbH, a German company, and Eblana Photonics, a Dublin-based company, to develop a novel, low-cost, single-frequency laser source which combines photonic crystal technology and quantum dot technology. Such laser sources will be invaluable in meeting the increasing demand for faster telecommunications, and enabling new applications such as HDTV, video conferencing and online gaming. ERA-SPOT is an EU-funded consortium which aims to consolidate research funding activities in optical technology throughout Europe. This is achieved through coordinated joint calls by the participating national funding agencies. Thus, in the InPhoQuS (Integrated Photonic Crystal and Quantum Dot Structures) project, CIT is funded by Enterprise Ireland, while Innolume is funded by the equivalent German funding agency.



(L - R) Dr Eamonn O'Neill, CAPPA Centre Manager; Mr Tom O'Brien, Epi-Light; Mr Billy Kelleher, TD, Minister for Trade & Commerce; and Dr Martin Lyes, Divisional Manager, Research & Innovation, Enterprise Ireland; pictured with one of Epi-Light's LED illumination products at the "Innovating for Regional Industry" showcase held at the National Maritime College of Ireland in September.

ETS Walton Fellow to visit PDD

Science Foundation Ireland's prestigious ETS Walton Fellowship has been awarded to Prof. Evgeny Viktorov, allowing him to spend six months working with the Photonics researchers at CIT. The Walton awards enable prominent researchers from outside Ireland to visit an Irish institute and conduct a research project of their own choice. The award is designed to strengthen Ireland's contacts and collaborations with the international research community, consolidate the world-class research of Irish institutes, and enhance the learning experience of undergraduate and postgraduate students. Prof. Viktorov comes from the Institute of Laser Physics in St. Petersburg, Russia, and is also a Professor at the Université Libre de Bruxelles in Belgium. He will spend six months working with the PDD group on the theory of non-linear dynamics in semiconductor lasers, a field in which he is a prominent, well-respected figure. While the group has published joint papers with Prof. Viktorov in the past, this is a unique opportunity for an extended collaboration with a world-leading scientist, and will perfectly complement the group's work on quantum dot lasers.

IRCSET Award for Photonics Postgraduate

Gillian Madden, a postgraduate student in the PDD group, has obtained an IRCSET Postgraduate Scholarship to pursue her PhD studies, one of only a small number of the scholarships to be awarded to the Institutes of Technology this year. Gillian's award is part of the Enterprise Partnership Scheme, meaning that it will be part-funded by the Dublin-based company, Eblana Photonics. Gillian is a graduate of CIT, having completed her BSc in Applied Physics & Instrumentation with a 1H qualification. She then obtained IoT Strand 1 funding to undertake her Masters research in the PDD group, on "Ultrafast Dynamics in InAs/GaAs Quantum Dot Based Devices". Her work on this, which she is in the final stages of completing, has already led to three publications, including two in the high-impact journal, Applied Physics Letters, presentations at the CLEO conference in Munich and a summer school in Tampere in Finland. Her PhD project will build on the expertise and knowledge she gained during her MSc, and will investigate "Ultrafast Dynamics of Tunnel Injection Nanostructures".



Eblana Photonics is a long-time collaborator of the Photonics researchers in CIT. They have been designing and producing discrete mode lasers for the broadband optical communications market since 2001. In addition to Gillian's PhD project, they are also involved in a number of other joint ventures with the PDD group and CAPPA, including the recently funded project InPhoQuS, and several grant proposal submissions.

Gillian Madden who received an IRCSET Postgraduate Scholarship to pursue her PhD studies in photonic devices under the supervision of Dr Guillaume Huyet (Applied Physics & Instrumentation). Gillian's work is supported jointly by IRCSET and Eblana Photonics under the Enterprise Partnership Scheme.

Research:

Short pulses with a long future

CIT's Photonic Device Dynamics (PDD) group pursues several strands of research including novel material growth, device fabrication and optical source design. These strands are intended to have technological applicability in the medium- to short-term in fields such as sensing, medical imaging and communications. One topic that has recently been of much interest to the researchers at CIT is that of mode-locked semiconductor lasers. These lasers spontaneously create ultra-short pulses (1/1,000,000,000,000 of a second!) at very high repetition rates (10,000,000,000 every second).

These pulses can be used for high speed communications through fibre for thousands of kilometres, but perhaps their most important application will be at much shorter transmission distances, between computer cores. For twenty years, the computer chip industry made incredible year-on-year advances in processor speed, but this approach to improved performance has been largely abandoned to be replaced with multi-core processor architectures that share computing tasks. With the multi-core approach, power requirements and heat generation are greatly reduced allowing continually improved processor development. However, a huge amount of data needs to be constantly shuffled between the processor cores and this is rapidly becoming a bottleneck. It is estimated that by 2016, 20% of supercomputer costs will be photonics, and by 2040 this could be as high as 40%. With these self-generated laser pulses, a great deal of this expense can be avoided without performance compromise.

Like all laser emissions, the pulses are perturbed by internal noise sources within the laser which reduces their usefulness. The PDD group has shown that when much weaker, constant, coherent light is injected into the pulsing laser it can overcome the internal noise sources, without impairing the pulses produced. Indeed the optical injection technique can allow multiple lasers to share the same path without influencing one another, even if they are all of the same material. Several aspects of this work have already been reported at international conferences this year, such as the Conference on Lasers and Electro-Optics held in Baltimore and CLEO Europe in Munich, and the results will be published in prestigious journals such as Photonics Technology Letters and Optics Letters.

Further information

www.physics.cit.ie/photonics

www.cappa.ie

www.inspirenano.com

Predictive Functional Control

■ Donal O'Donovan



"And I think to myself, what a wonderful world..." These beautiful lyrics recorded by Louis Armstrong probably best exemplify our thoughts when confronted with the artfulness of a swallow's flight on a summer's evening or the elegance of a horse's movements at full gallop. We can only admire (and sometimes even envy) these abilities, which are indeed a gift of nature. However, we witness equally impressive wonders on a daily basis – the ability of a person to walk, the flight of an aeroplane and the instant access to unlimited information at our fingertips via the internet, to mention but a few. The demands of everyday life are such that we tend to take such wonders for granted and don't often get the opportunity to pause and reflect upon the underlying principles that permit such abilities to exist. This is the goal of control engineering.

Control engineering offers us the tools to better understand the behaviour of the world around us. The insight offered by the understanding of such dynamic systems provides us with the ability to influence their behaviour. These controllers, as the devices are called, are the means by which we command natural processes to behave in an 'unnatural' manner; but in a fashion more suitable to our needs. The principles used

in the development of these controllers may be as easily applied to biological and financial systems as they are to the mechatronics systems, with which we are all more familiar.

Humans have been employing controllers for thousands of years. But, some of the key points in time that influenced the development of control engineering include the preoccupation of the Greeks and Arabs with keeping accurate track of time. About 270 B.C., the Greek Ktesibios invented a float regulator for a water clock.

The European industrial revolution is generally agreed to have started in the third quarter of the eighteenth century; however, its roots can be traced back into the 1600's. The introduction of prime movers, or self-driven machines led to the invention of advanced grain mills, furnaces, boilers, and the steam engine. These devices could not be adequately regulated by hand, and so arose a new requirement for automatic control systems. A variety of mechanical control devices was invented, including float regulators, temperature regulators, pressure regulators, and speed control devices. During the 20th century there were two important occurrences from the point of view of control theory; namely, the advent of mass communications and the World Wars. The introduction of the telephone and faster modes of travel resulted in much tension as countries jostled for position in an ever-shrinking global society. The result was the World Wars during which the development of feedback control systems became a matter of survival.

In 1960 the second generation of computers was introduced which used solid-state technology. By 1965, Digital Equipment Corporation was building the PDP-8, and the minicomputer industry began. Finally, in 1969 W. Hoff invented the microprocessor. The replacement of the old technologies, i.e., valves, pneumatics, etc., by the new electronic controller and advances in control techniques was at the heart of the remarkable proliferation of the proportional, integral and derivative (PID) controller in industry at that time – the workhorse of the control industry.

The PID controller still dominates the pharmaceutical and process industries

today. This controller works by observing the difference between the desired output and the current output of the process, i.e., the error. It then combines various 'flavours' of this error, such as the current error, a memory of past errors and an observation of how the error is changing to determine the appropriate command to be applied to the process. The contribution of each element is weighted by a factor reflecting some behavioural attribute of the process under control. It is these weighting factors alone that connect the PID controller to its process. The breadth and range of applications to which the PID controller has been successfully applied over the past 100 years is a testament to the ingenuity of this controller's design and robustness.

At the end of the 1960s, the digital computer became reliable, easily programmable and cheap. So, a greater responsibility could be given to this new control device. On the other hand, mathematical modelling, simulation and identification techniques of dynamic systems were maturing – partly due to the fact that complex scientific calculations could now be executed in real-time.

The digital computer permitted the execution of complex logical algorithms and the simulation of real-world dynamic systems. The merging of technology and methodology thus gave birth to the concept of a model-based control strategy being implemented in a digital computer. These technologies permitted controllers to calculate a range of potential future command signals and observe their simulated effects before being applied to the actual process. This facility led to the design of a new breed of controller that could be used in situations where the application of PID was either inappropriate or impossible. Also, it allowed a more precise control to be achieved in specialised applications such as oil production. Predictive functional control (PFC) was one the first controllers to take advantage of this approach to controller design. It is PFC's ability to compensate for real-world constraints on the process, track time-varying situations and its ease of commissioning that have led to PFC being successfully employed in thousands of applications world-wide. Applications range from extremely fast processes, such

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as the Ariane 5 rocket attitude control system, to slow-varying systems, such as water-level control on the river Rhône.

Its inventor, Professor Jacques Richalet (jacques.richalet@wanadoo.fr), in conjunction with Donal O'Donovan, have published a monograph entitled "Predictive Functional Control – Principles and Industrial Applications", published by Springer, ISBN 978-1-84882-492-8 on the subject. Jacques, a native of France, studied aeronautical engineering in Paris before moving to Berkeley where he obtained a M.Sc. in electrical engineering. Jacques returned to Paris where he received a Ph.D in applied mathematics in 1965. Jacques's interest in model-based predictive control started as early as 1968. During his academic career Jacques has published more than fifty articles as well as three books on process identification and predictive control. For his achievements he was awarded the status as Chevalier de l'Ordre National du Merite. Jacques received the Nordic Process Control Award in 2007.

Donal O'Donovan (donal.odonovan@cit.ie) received a M.Eng. in image processing from the Department of Electronic Engineering in CIT. Donal has been a lecturer in the Department of Electronic Engineering for the past 12 years and his research interests include mobile robotics and image processing.

The monograph is the first English text dedicated to the topic of PFC and its applications. The book is intended for technical staff in the process industries, familiar with classical control techniques, who need to take up the challenges posed by today's economic environment; engineering graduate students requiring a background in modern control techniques; and industrial managers who require an overview of the PFC technique with a view to assessing its suitability for use in future projects.

The text begins with a discussion of the fundamental principles of the PFC technique. The procedures used by PFC to deal with physical and non-linear constraints are presented. Extensions to the PFC technique that facilitate its use in many industrial applications are described. A practical commissioning procedure is then outlined. Numerous industrial applications are presented and discussed. The text concludes with computer source code for implementing the technique in practice.

Dr Roy Sleator, a lecturer at CIT's Department of Biological Sciences, has recently been appointed to the position of Editor-in-chief of a new peer reviewed scientific journal named Bioengineered Bugs published by Landes Biosciences, Austin, Texas (<http://www.landesbioscience.com/journals/biobugs/>).

Sleator heads-up an International Editorial Board including Dr J Craig Venter (J Craig Venter Institute, Rockville Maryland, USA), a pioneer of genomic sequencing and one of the key scientists involved in sequencing the human genome. Another notable member of the board is Prof Ananda Chakraborty (University of Illinois at Chicago), the first scientist to patent a genetically modified organism, following a landmark case held in the US Supreme Court in 1980.

The purpose of the journal, which will be officially launched in January 2010, is to highlight the most recent and significant advances in the development of genetically modified organisms for food, pharmaceutical, medical, industrial, environmental and bio-defence applications. Bioengineered Bugs will provide a platform for publishing high quality research on any aspect of genetic engineering which involves the generation of recombinant microbes for beneficial applications. Initially, the journal will appear bimonthly, incrementally increasing the frequency to 12 issues per year. Each issue will appear in print and online and will be PubMed/Medline and ISI indexed.



Dr Roy Sleator

Seminar on Performance Health

Dr Gabriela Mayer
Head of Department of Keyboard Studies

The Cork Initiative

As part of an Induction Week for incoming Bachelor of Music students, I have been responsible to talking to new students about preparation, practice strategies and how to approach performance exams and concerts. In this context, I also speak to them about injury prevention, but I felt that this topic needed more attention and found that many fellow teachers had similar interest and concern surrounding injuries, both in terms of prevention and recovery. As a school, we operate a referral system to health practitioners such as physiotherapists, osteopaths and Alexander Technique teachers. Additionally, we organised staff development courses in this area, most recently in respect of instrument specific stretching routines that teachers can recommend to students who are not injured.

The Seminar

The Seminar took place on the 11 October at the CIT Cork School of Music (CSM) and was funded by the Registrar's Office. The CSM organised this Seminar in collaboration with ISSTIP (The International Society for Study of Tension in Performance), a UK originated organisation with active members worldwide. The idea for organising this Seminar started as a desire to promote more awareness and understanding of how and why musicians' injuries occur as the necessary precursors to injury prevention. I was fascinated by ISSTIP's approach to diagnosing injuries, namely recognising that the reason for an injury may not necessarily result from playing alone, and may be in fact related to other factors which only trained professionals may recognise. Our ISSTIP guest speakers included Dr Hara Trouli, Orthopaedic Surgeon, ISSTIP acting chair; and Marina Petrov, piano pedagogue, ISSTIP vice chair and journal editor. Dr Andy Evans, Arts Psychologist and Director of Course of Performance Health at TVU, London, ISSTIP academic adviser was due to attend but had to cancel due to illness, however his session was delivered by Dr Hara Trouli.

The morning was dedicated to four sessions: 'The **Physiology of Tension**' presented by Dr Hara Trouli, '**Occupational injuries in pianists**', by Marina Petrov, followed by a presentation on '**Stage Fright**' prepared by Dr Andy Evans, Arts Psychologist (and delivered by Dr Hara Trouli) and finally a lecture-demonstration on '**Posture Awareness and Relaxation Techniques**' by Rosemary Moone, an Alexander Technique teacher from Cork.

The connections between all aspects leading to potential injury emerged during the presentations and general discussion. The importance of breathing, for example, was supported by each presentation angle and reinforced through understanding of its physiological and psychological functioning. Understanding the physiological roots of tension and seeing practical examples of how these can become occupational injuries in pianists led to a greater understanding of how to approach prevention.

Awareness of the way adrenaline works in the body, together with the power of emotional labelling provided new insight into how to advise students suffering from mental anxiety. The impact of general posture became apparent as the Alexander Technique teacher worked with three volunteers and demonstrated desirable changes on general posture, which can be unbalanced in daily life, even before engaging with an instrument. All participants were involved in a few exercises to understand movements such as those of the neck and head and the importance of the sitting bones, as well as to enhance general posture awareness.

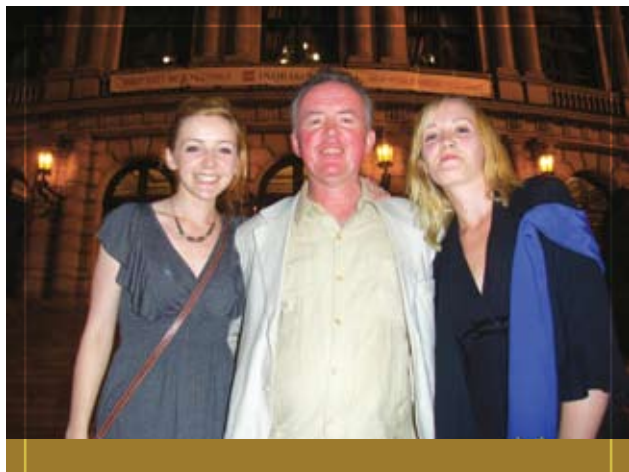
The afternoon continued with short presentations from a panel of CSM teachers. Niall O'Luasa explained the problems posed by trying to apply postural principles which can seem static to an activity which is dynamic in nature. He related the Tai Chi tenet of 'moving from the middle' and the idea of 'grounding' to piano playing. I was also involved in this panel, and followed with an account of the nature of injuries most commonly seen in students from referrals to physiotherapists. The most common areas affected are the forearm and the neck, often caused by repetitive overuse and craning one's neck when reading music. I outlined effective practice strategies, self-awareness and the importance of planning preparation for performance. David Whitla, double bass teacher at the school, spoke about the parallels between athletic training and the training of a musician. Stamina, strength and concentration are goals that can be developed using specific methods, and considerations such as attention to diet and physical well-being apply to musicians as well as athletes. The final session, '**Posture and ergonomics**' by Finn O'Gorman, MPMA, Pilates instructor from Cork, was a practical lesson in body awareness and all participants were treated to a mini-Pilates session to revive their bodies, complete with relaxation at the end.

The Seminar concluded with a Workshop where three students who had been experiencing some difficulties had a chance to play, receive advice and ask questions. The clinic/workshop setting, where feedback can come from several points of view (orthopaedic surgeon, psychologist, health practitioner as well as instrument teacher) was enlightening. Thus, we had the experience of observing a postural problem before the student engaged with the instrument, and now better understanding that a pre-existing problem could contribute to tension in playing. Likewise, mental tension, psychological anxiety, an accident in the past and incorrect sitting at the instrument can all lead to tension and injury if not understood and addressed properly.

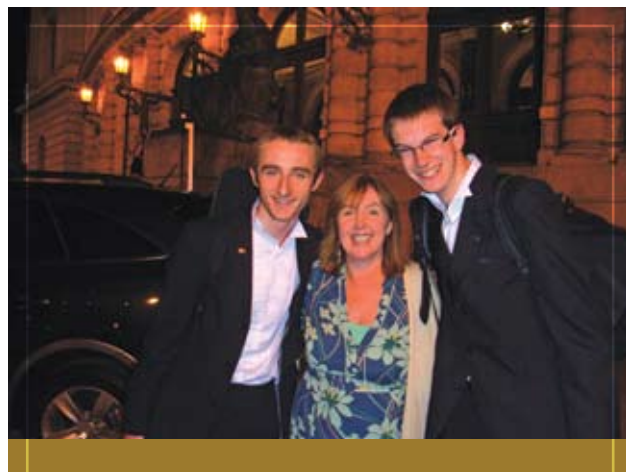
There were approximately 60 participants, mostly instrumental and vocal teachers and students, with some guests from other music schools travelling from Dublin and Limerick to attend. The feedback received was very positive, with many people writing to thank the speakers and organisers of this event.

CSM students toured Europe with the European Youth Orchestra this summer. They performed in the Rudolfinum in Prague - home of the legendary Czech Philharmonic Orchestra. Rudolfinum is a Neo-Renaissance building, now the seat of the Czech Philharmonic Orchestra and one of the best concert sites in Prague. Dr Evelyn Grant and Gerry Kelly attended the concert in Prague.

Pictured outside the Rudolfinum, Prague . . .



Fiona Kelly, (Flute); Gerry Kelly; Ide Ní Chonaill, (Bassoon).



David Kenny, (Viola); Dr Evelyn Grant; and Conor Palliser (Horn).

'The Spirit of Christmas by Candlelight'

Performed by the Locrian Ensemble of London

City Hall, Cork > Wednesday 16th December

Tickets €30, €25, €20 > Booking Pro Musica, Oliver Plunkett St., Cork.

The Locrian Ensemble is made up of many of Ireland's finest string musicians now working in London. They are performing a candlelit concert of Christmas music in Ireland, attired in lavish period costume and performed in an evocative setting. The Ensemble are well known for its attractive programmes and entertaining style of presentation. The concert will be presented by Dr Evelyn Grant, whose daughter Jean Kelly will perform on concert harp. Jean performs regularly with the Locrian Ensemble and was the harpist on the sound track of 'Lord of the Rings'. They will be joined by West End star soprano, Jill Washington. Jill Washington has performed the lead role of Christine in Andrew Lloyd Webber's "Phantom of the Opera" more than any other performer worldwide. She has sung the role with Michael Crawford and David Willetts. Jill was also a principal singer in the Gilbert and Sullivan D'Oyly Carte Company.



The concerts will include beautiful arrangements of carols for harp and strings, carols for soprano and ensemble, baroque Christmas concerto, seasonal favourites such as "I'm Dreaming of a White Christmas", "Walking in the Air", Lloyd Webber's "Pie Jesu", with appearances from Scrooge, and even a Christmas fairy!

The Locrian Ensemble are top classical musicians working in London, and have a large body of critically acclaimed recorded works to credit. Their "Candlelight Classics" series of concerts, performed in sumptuous period costumes, have proved enormously popular over the past years, and the ensemble have carved a unique and enviable position for themselves in British music-making. The Locrian enjoy a unique rapport with their audiences, presenting their programmes with energy, commitment and good humour. They have such a busy and varied schedule that they are considered one of the most dynamic groups working in the field of classical music today.

When not performing in theatres, members of the Locrian enjoy high-profile careers working in the studios of London, supporting top names in the pop world, as well as appearing on the Oscar-winning soundtracks to films such as "Harry Potter", "Lord of the Rings", Bond 007, "Quantum of Solace", "Gladiator", "The Golden Compass" and "Da Vinci Code" to name but a few. On television, their members provide the backing music to programmes such as "X Factor" and BBC's "Judge John Deed".

FOR FURTHER INFORMATION PLEASE CONTACT GERRY KELLY **087 2462636**

ANNUAL CIT CORK SCHOOL OF MUSIC CONFERRINGS

took place on the 2nd November '09



Sinéad Frost and Shane Ladden both graduated with a BMus.



Mairéad Murphy who graduated with a BMus with Dr Barry O'Connor, Registrar and Vice President for Academic Affairs, CIT.



Fionn O Ceallacháin, who graduated with a MA; and Anne Ralph, who graduated with a BMus.



Cormac McCarthy who graduated with a MA; and Gemma Sugrue, who graduated with a BMus.



Dr Geoffrey Spratt, Director, CSM; with Niall O Luasa and Amy Prendergast who both graduated with a MA.



Orlaith Ní Challanain and Peter Hanley both graduated with a BMus.



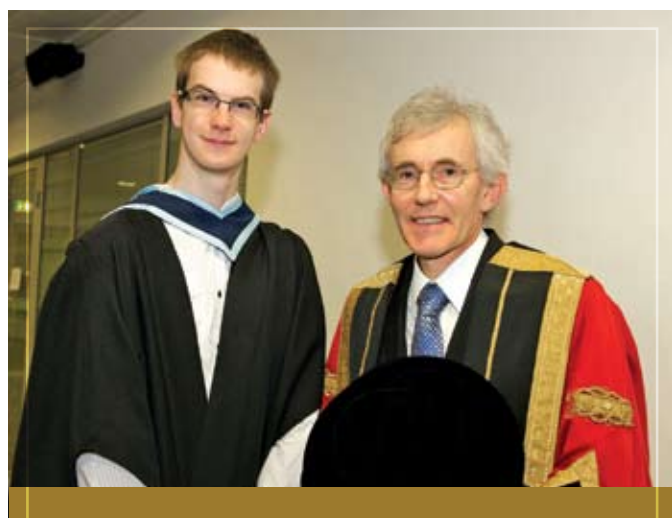
Dr Susan O'Regan with Pauline Frizelle who graduated with a MA.



Sarah Barry who graduated with a BMus with her daughter Caoimhe Hickey Barry.



Thomas Mulcahy, was awarded an MA. Having been diagnosed with Dyslexia late in life, Tom returned to education and for his MA he pursued his interest in Jazz and studied the effects of dyslexia on Music Education. He surmounted his problem with reading, especially music, and now utilises Interactive Metronome (IM) a cutting edge neurological assessment and treatment tool that is redefining traditional expectations for brain development.



Conor Palliser, the 2009 Student of the Year is pictured here with Dr Brendan Murphy, President, CIT. An exceptional student, Conor is the highest placed student in the B Mus Degree. He specialised in performance in both French Horn and Piano and achieved extraordinary results in both. He is the first recipient of the Mabel Swainson Pianoforte and RTE Lyric FM Award; he has been selected to perform with the European Youth Orchestra and has been engaged professionally to appear with both the National Symphony Orchestra and the Irish Chamber Orchestra.

CIT Makes a Big Impression at Social Marketing Conference

The 8th International Congress of the International Association on Public and Non Profit Marketing (IAPNM 2009) was held in Valencia, Spain on the 18th and 19th June. CIT's Management and Marketing Department was represented by Maurice Murphy, Lecturer in Marketing and Management and three Masters students; Barry Griffin, John Healy and Fergus Murphy, who presented two full papers and three works in progress.

The Congress had a twofold objective, first, to compile and edit the latest developments in the field of research in Public and Non Profit Marketing, and secondly, to gather in a discussion forum professionals and academics interested in the area of this marketing discipline. The Conference included the following topics – marketing in public organisations, marketing in non profit organisations, social and political marketing, marketing the arts, sports marketing, education marketing, health marketing, ethics and social responsibility and other issues relating to marketing in the Public and Non profit areas.

The keynote speaker was Alan Andreasen, Professor of Marketing at Georgetown University, USA and Executive Director of the Social Marketing Institute. Professor Andreasen is a specialist in consumer behaviour and a world leader in the application of marketing to non-profit organisations, social marketing, and the market problems of disadvantaged consumers. He is the author and editor of 17 books and over 120 articles and conference papers. He was awarded the 2007 Richard W. Pollay Prize for Intellectual Excellence in Research on Marketing in the Public Interest.

Delegates at the conference came from all over Europe, as well as Australia, South Africa, Uruguay, Mexico and USA. Maurice Murphy was nominated as the Irish representative on the IAPNM Organising Committee. As well as enjoying the talks themselves, very pleasant social events were organised around the conference, including a tour through ancient Valencia, as well as a trip to the Albufera Nature Reserve and the numerous night spots in Valencia.

Maurice Murphy presented a paper entitled *Preventing Adolescent Drinking in Ireland: The Use of Social Marketing*. Countless studies have shown that young people who begin drinking before the age of 15 are 4 times more likely to develop an addiction to alcohol than those who did not start drinking until they were of legal age. This paper dealt with social marketing and its application to the problem of Irish teenage drinking. It analysed what anti-alcohol advertisements should contain in order to prevent/reduce adolescent drinking. The merits of physical and/or social threat appeals to younger

audiences were investigated along with whether the arousal of fear is necessary to change behaviour. As most teenagers consider alcohol consumption as normative behaviour, the issue of a harm-reduction approach rather than total abstinence was advocated.

Also presented was a paper on *Does Social Marketing have a Role in Reducing Collisions among Young Male Irish drivers?: The Role of Physical Threat/Fear Appeals*. There were 279 road fatalities on Irish roads in 2008 – the lowest level since records began. Young male drivers are 7 times more likely to be killed on Irish roads than other road users. The car driver fatality rate was found to be approximately 10 times higher for young male drivers than for female drivers. Young male drivers in particular demonstrate a high proclivity for risky driving behaviours. These include drink driving, speeding, drug-driving and engaging in aggressive driving. Speed is the single largest contributing factor to road deaths in Ireland. This study focused on how dangerous driving behaviours may be addressed through social marketing by analysing the appropriate level of fear that needs to be induced in order to change young male driving behaviour.

Barry Griffin presented his work on *The Use of Social Marketing Messages in an Anti-Tobacco Context: An Investigation of Irish Female Adolescents*. Estimates from the Irish National Cancer Registry show that lung cancer is increasing by 3% a year in women. From being a predominantly male disease for the past fifty years, lung cancer will be predominantly a female disease by 2020. The United States' FDA classifies smoking as a "paediatric disease". Nearly nine out of ten smokers begin smoking in their teenage years. Smoking initiation at an early age has a greater cancer risk, independent of smoking intensity and years of smoking. Cigarette smoking by adolescents is a major public health concern, since it exacerbates respiratory conditions, diminishes the growth of lung volume when the exposure occurs before the age of maximum lung growth and is an independent risk factor for lung cancer. This paper analysed the role of social marketing in preventing young females taking up smoking.



(L-R) Maurice Murphy, Fergus Murphy (Masters student), Marta Garcia (Conference Organiser), Maria Lanero (Conference Organiser), Barry Griffin (Masters student), and John Healy (Masters student).

John Healy presented his work on *The Application of Social Marketing in Increasing the Supply of Blood from Young Donors, Non-Donors and Lapsed Donors*. This paper dealt with how blood donation is dependent on the goodwill of people to voluntarily donate blood, without financial reward. There is a continuous need for new blood donors, because the demand for donor blood is increasing, whereas the supply of blood is declining. Only 3% of the eligible population in the Republic of Ireland donate blood. This leaves an enormous potential blood donor base, which if tapped into and maintained could lead to an adequate reserve of donations to meet the transfusion needs of this country. The focus of this study is on how social marketing can be effective in increasing blood supply. Understanding and facilitating the recruitment and retention of blood donors is the major contribution that the social and behavioural sciences can make to transfusion medicine.

Fergus Murphy's paper was entitled *The Use of Social Marketing Messages to Reduce Binge Drinking among Third Level Female Students*. Ireland has one of the highest rates of binge drinking among university students in the world. Binge drinking has been identified as the number one substance abuse problem in university life. Women are at an increased risk from alcohol use because they need less alcohol per kilogram of body weight than men to attain the same peak blood alcohol level and level of impairment. The focus of this study is to assess if social marketing messages through the area of harm reduction, are effective in reducing binge drinking among third level female students.

Copies of any of this work can be obtained by e-mailing maurice.murphy@cit.ie



(L-R) Dr Miranda Trevino (Mexico), Prof. Alan Andreasen (USA), and Maurice Murphy.



chaplaincy student support

silver jubilee

1984–2009 of the chaplaincy/
student support team

On 29th May, the Chaplaincy Student Support Teams from the past 25 years gathered together for an evening of Reflection and to celebrate the Silver Jubilee of Chaplaincy/Student Support. Dr Brendan Murphy welcomed all to CIT and a Liturgy/Reflection Service was held. After the Liturgy, a Tree Planting ceremony took place in the Courtyard, with a member from the first ever Student Support Team (1984), Conor O' Donovan, and Julie O'Sullivan from the current Team (2009), The group retired to a sumptuous buffet supper and shared memories of their time at CIT.



Fr Kieron O'Driscoll; Fr Ben O'Brien; Dan Collins; Linda Barry; Edel Dullea; Fr Michael O'Regan and Paul Moriarty at the celebration of the Chaplaincy/Student Support Team Silver Jubilee.



Past and present members at the celebration of the Chaplaincy/Student Support Team Silver Jubilee.

Information Day for Career Guidance Counsellors



On the 5th Nov 2009 Dr Barry O'Connor, Registrar and Vice President for Academic Affairs, CIT was pictured with Yvonne Bane and Sephine Hallahan, Coláiste Choilm, Ballincollig; and Keith Ricken, GAA Development Officer, CIT; at the Information Day for Career Guidance Counsellors at CIT with the Sigerson Cup.

Open Day

CIT's Open Day was held at the Bishopstown Campus on the 21st November. Due to the severe weather conditions and flooding, numbers were down on last year. Throughout the day there was an extensive range of activities that were of particular benefit to students selecting higher education courses and planning their future careers. A series of information sessions and demonstrations took place in the various departments throughout the Bishopstown Campus. Students availed of the opportunity to meet with lecturers and to tour the extensive facilities available in CIT including extra-curricular activities.



Theresa Cosgrove and Carina O'Connell, Tralee, Co Kerry; at the Department of Electronic Engineering stand.

Staff and Students Raise Funds for

Alzheimer's Cause

Staff and students recently participated in the 2009 Cork City Mini-Marathon to raise much needed funds for the Alzheimer's Cause. The event was organised by Clare O'Riordan, CIT, and co-ordinated by Norma Buckley, CIT's Sports' Office.

The objective was not simply to raise funds but also awareness of the condition itself. This disease is unfortunately becoming more and more prevalent in Irish society with devastating consequences for both the sufferer and their relatives. Such is its growth that scientists are predicting it will most likely reach epidemic levels within the next 10–20 years.

While the common perception of the disease is that it affects the elderly (and this is so) there is also a lesser known form which may affect those in the 30–50 age bracket. This is known as 'Early Onset Alzheimer's' and is thought to be genetic.

The total amount raised came to: €1,437 euro – substantial for its inaugural year and given the current economic climate.

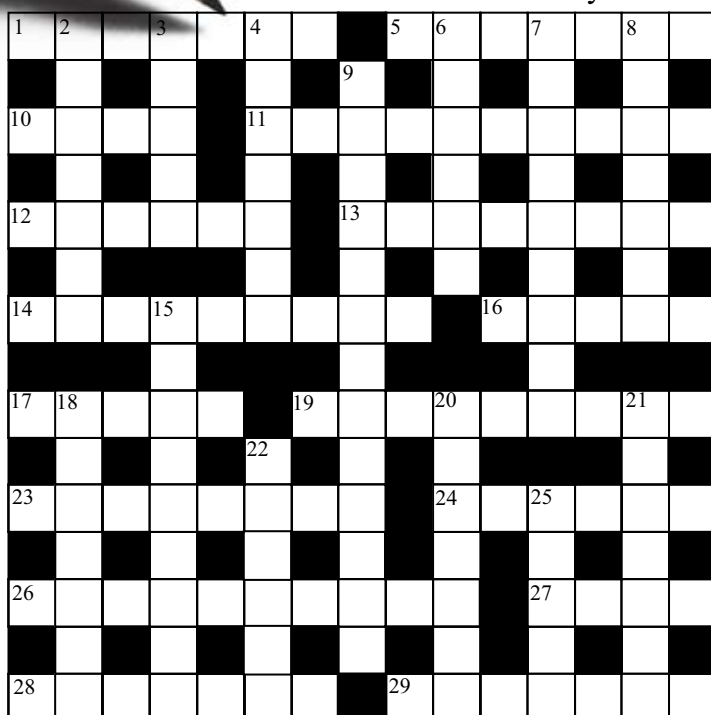
The organisers would like to thank both those who generously gave of their time and effort to train and fundraise, and those who contributed financially to this very worthy cause. It is hoped to attract more staff and students to participate at next year's event.



Organisers Norma Buckley and Clare O'Riordan, CIT Alzheimer's Mini-Marathon Fundraising Initiative.

crossword

No. 12 Set by Cassa



ACROSS

- 1 Quietly subside, having been in front, covered in 25 (7)
- 5 Story of adulterated dope is entertaining at first (7)
- 10 Carry 8, reportedly (4)
- 11 Get mineral out for 25 (10)
- 12 25 once was man of the cloth, they say (6)
- 13 25 into esoteric hard subjects! (8)
- 14 Extra sentence for having murdered? Quite the opposite! (5,4)
- 16 Possessed by 25? (5)
- 17 Power produced by 25 (5)
- 19 Tone breve produced? It won't happen! (5,2,2)
- 23 Fundamental goal of cabalism when I replace beginner (5,3)
- 24 Be affronted here without front! (6)
- 26 Spooner's dismissing locks where servants were engaged (6,4)
- 27 Responsibility and where it might fall (4)
- 28,21 Work of 25s impoverishes feast (7,7)
- 29 25 follower of Goody? (7)

DOWN

- 2 Green – perhaps a mere lad of 25 (7)
- 3 25 partly rebounded upwards (5)
- 4 Record gore of the intestine (7)
- 6 Brownish-purple note embedded in 25 (6)
- 7 24 clue for Lusk, perhaps (4,5)
- 8 Stripped – or the reverse? (7)
- 9 Bad encounter, it is said, might make you ill (9,4)
- 15 Treebeard, say, drinking and weaving together (9)
- 18 Stated taste for 25 (7)
- 20 The true air of old Italy? (7)
- 21 See 28
- 22 Pastry cutter for lips of 25 (6)
- 25 Harshly criticise soap, say (5)

solutions on page 71



Highlighting **flexible options** to part time students



Have you ever thought about going back to college, but unsure about committing all of the time and money needed to complete the course? College the first time around was great, but now you have a full time job, possibly a family and a mortgage as well. The juggling act can be quite daunting. Every prospective part time student is faced by the same questions:

- ▶ **Can I afford the time and money to go back to college?**
- ▶ **How do I choose the course best suited for me and my career?**
- ▶ **Will the college recognise my existing qualifications and experience?**

The Institutes of Technology have just launched a major new flexible learning initiative, www.BlueBrick.ie, designed to address these challenges faced by someone who wants to return to college.

As result of funding provided by the Higher Education Authority the Institutes of Technology have created a web based portal, www.BlueBrick.ie, that provides easy access to over 300 flexible modules and courses within 14 Institutes. In launching BlueBrick.ie, the Minister for Education and Science, Mr Batt O'Keeffe TD said that "BlueBrick.ie is as important to part-time learners as the CAO is to direct entrants and school leavers." BlueBrick.ie invites employers/employees to search, compare and apply for programmes that match their needs, all in one web site.

The launch was brought forward by 12 months to meet the needs of the labour market, thus ensuring that resources are

maximised for education and training in the higher education sector. To that end, each Institute has increased the number of flexible learning courses on offer through the use of virtual learning and the training of staff in new technologies. Courses have been converted into flexible learning formats making modules and courses available in Business, Education, Engineering, Management, Marketing, Science and Technology.

"The institutes aim to dramatically increase the number of programmes and modules available through BlueBrick over the next three years of this project and increasing the flexibility of the programmes that they offer" said Dr Mark Glynn, Senior Executive in Flexible Learning with the Institutes of Technology of Ireland. BlueBrick.ie will make it easy for students to access information on and apply to their courses of interest.

For further information please visit www.bluebrick.ie or e-mail info@bluebrick.ie



BlueBrick.ie launch with Minister for Education and Science, Batt O'Keeffe and Dr Richard Thorn, IOTI. Director of the Flexible Learning and Research project.

Gary O'Connor wins a Bronze Medal @ ITS World Congress 2009

Gary O'Connor, postgraduate research student in the new CIT Nembes Centre and the Department of Electronic Engineering returned from Stockholm where he presented his Masters thesis work in the CVIS project application competition at the ITS (Intelligent Transportation Systems) World Congress, the world's premier event in the area of Intelligent Transport Systems.

Gary won the Bronze prize and €7500 for his outstanding research at the Award Ceremony which was held on the 24 September. The ITS application Gary developed is a software agent based system, where a software agent in the car

of a driver looking for petrol identifies, based on the cars location, the cheapest local petrol station and will direct the driver to this station. The system also allows software agents to collaborate with other drivers' agents in seeking cheap petrol and in forming a purchasing consortium of agents that can negotiate special bulk fuel prizes with the petrol stations agents.

Gary was one of four finalists selected of the Cooperative Vehicle-Infrastructure Systems project competition to present his work in a special display at the ITS World Congress in Stockholm.

The focus of the ITS World Congress 2009 was on the implementation of solutions which improve everyday lives in helping make transport systems cleaner, safer, more efficient, reliable and secure.



**16th ITS WORLD CONGRESS
STOCKHOLM 2009**



St. John's Newfoundland...

St. John's in Newfoundland became a temporary home last summer for eight students as a result of an EU Canada funded project where CIT and the Fisheries and Marine Institute of Memorial University of Newfoundland (MI) are partners.

CIT is the lead partner on the European side of the International Food Link project which aims to share knowledge in the areas of food quality systems, food safety and international food trade. The project provides opportunities for students from the Food Science and Bioscience area in CIT to travel to Canada to complete work placements while Food Technology and Food Safety students from Canada can travel to Cork, Nottingham or Copenhagen to take part in similar work placement programmes.

In total, eight students from CIT travelled to St. John's in May 2009 to begin three-month work terms with local businesses, with one student conducting research at the Memorial University campus.

Jurate is from Mallow and is studying biological sciences and biotechnology at CIT. While in St. John's, she worked in a research lab in Memorial University's Department of Biochemistry. "The greatest benefit for me has been the research I have conducted here," said Jurate Daugelaite about her work placement at Memorial. "I will be able to apply a lot of the techniques I learned here when I return to CIT next semester. I worked with people from China, Sri Lanka and Canada. It's all new experiences both at work and in getting to know different cultures and new people."

The Food Link project is set up to help international students understand the specific requirements of food safety and quality in other parts of the world. The Marine Institute, Canada's lead on the project, is working closely with the British Columbia Institute of Technology and Dalhousie University in Halifax, Nova Scotia. CIT is working with the University of Nottingham and the University of Copenhagen to ensure all the students involved benefit from the experience.

The experience of coming to a new country for a work placement has been positive for Sarah Shanahan. She says her hometown of Little Island is similar to St. John's in a lot of ways, which made for an easy transition. Since May 2009 Sarah worked at Central Dairies at Mount Pearl in St. John's where she gained valuable experience in her pursuit of a degree in Food Science and Technology at CIT.

"I think the greatest benefit of doing my work placement in St. John's is that it has shown me how to live independently

and how to manage my own finances," said Sarah. "I also feel that doing my placement in another country will be good for my C.V."

Both Sarah and Jurate say that in addition to their work placements, they have also enjoyed other aspects of living in Newfoundland. The culture, scenery and people of the province remind them of Ireland.

"Before we arrived in St. John's, we were told there were a lot of people living there of Irish descent and that the people there were great fun. We all have great memories of our long walks around the beautiful lakes and we have seen some great sites like Signal Hill and The Rooms museum," Sarah said. "The coastal areas and inlets are quite similar to those in Ireland. We have found also that it rains just as much here in St. John's as back home, however the snow in the middle of May is not something we see back in Ireland."



mizen to malin vintage rally

€20,928 raised for MS Ireland

The organisers of the Mizen to Malin Vintage Rally would like to thank most sincerely all the contributions, monetary or otherwise, which was organised by staff, students and friends of CIT. The Rally, which was held in June, raised funds for Multiple Sclerosis (MS).

MS is a degenerative, neurological condition of the central nervous system. Common symptoms include fatigue, visual disturbances, lack of co-ordination/mobility and altered feelings in the arms or legs. A number of studies have looked at the benefits of physiotherapy and exercise-related activities for people with MS.

MS Ireland (Southern region) has 340 people involved in a range of exercise classes run by physiotherapists, fitness instructors and yoga teachers and also direct one-on-one physiotherapy interventions to those with more significant levels of disability. The response of people has been overwhelming with their MS improving as a result but also from a psychological perspective, people enjoyed the group situations.

Funds raised by CIT will help towards the provision of this Exercise Programme/ Physiotherapy in the southern region. The fund exceeded all expectations by reaching a staggering €20,928 and a cheque was formally presented to MS Ireland in October.



 **MS Ireland**
THE MULTIPLE SCLEROSIS SOCIETY OF IRELAND

Conferrings 2009

Speaking at the first conferring ceremony for more than 2,000 graduates, Dr Brendan Murphy, President, confirmed that CIT has proposed to the National Review Body on Higher Education the urgent need to establish a National Technological University Sector consisting of Technological Universities in Cork, Dublin and Waterford with the other 11 Institutes combined into a single Technological University.

"Higher Education is increasingly becoming a service that can be traded internationally. Ireland needs to develop a single coherent Higher Education system, not a system of individual institutions," said Dr Murphy.

Dr Murphy congratulated all those graduating and wished them success in their future careers. Graduates included 25 research students from CIT's Faculty of Engineering and Science who have completed research at Masters and PhD level; highly skilled and industry ready researchers who are ready to drive the next phase of innovation which is critical to the future well being of Ireland's economy.



Michael Wixted and Rachel Kelly both graduated with a BSc in Interior Architecture.



Ronan O'Donoghue graduated with a BEng in Mechanical Engineering; and Lydia O'Leary graduated with a BSc (Honours) in Process Plant Technology.



Pierre Tetsowo graduated with BSc (Honours) in Information Technology Support; and Sandra O'Neill graduated with a BSc (Honours) in IT Management.



Malcolm Porter, Philip O'Reilly, Deirdre Quinn, Denise Cronnelly, Vera Cahill, Davida O'Brien, John Bohane, and Ian Smiddy were the first ever graduating class for BEng (Honours) in Biomedical Engineering.



Dr Jonathan Ward and Dr Michael Morrissey both graduated with a PhD in Applied Physics.



Sandra Wall, James Murphy, and Patricia O'Dwyer all graduated with a BSc (Honours) in Architectural Technology.



Karen O'Sullivan, Brian Ahern, and Elaine Patrick all graduated with a BSc in Analytical Chemistry.



Dermot Fitzgerald and John Thomas Gould both graduated with a BSc (Honours) in Construction Management.



Stephen Tracey, Michael Twohig, and Brendan O'Brien, all graduated with a BEng (Honours) in Electronic Engineering.



Dr Barry O'Connor Registrar and Vice President for Academic Affairs, CIT; with David Mullins and Patrick Manning who both graduated with a BEng in Structural Engineering.



Clare Cahill; Hannah Phelan; Jennifer Bailey; and Sarah Moore; all graduated with a BA in Fine Art.



Joseph O'Halloran and Quinten McCarthy both graduated with a BEng (Honours) in Mechanical Engineering.



Helen O'Keeffe; Maeve Hickey; Nora Buttimer; Carol Breen; and Brigid Delahunty; all graduated with a BA in Fine Art.



Dr Ambrose Furey, Supervisor with Dr Keith O'Callaghan who received a PhD in Analytical Chemistry.



a lot of savings for CIT!

CIT introduces the Sustainable Campus Programme, managed by the Buildings and Estates office and supported by the Clean Technology Centre. CIT has hired Dr Mary Purcell, Green Campus Facilitator, specifically to work on this project. This indicates CIT's commitment to improving the Institute's environmental performance. The project focuses on all areas of sustainability, and aims to reduce the water, energy, resource use and waste generated on campus. CIT has huge annual spends on electricity, gas and water and this project will reduce the usage of these resources significantly. These reductions will have obvious environmental as well as economic benefits. The project will raise awareness amongst staff and students at CIT as well as in the wider community.

This project is funded as part of the Science, Technology, Research and Innovation for the Environment (STRIVE) Programme 2007–2013 under Phase 4 of the EPA Cleaner Greener Production Programme (CGPP). The programme is financed by the Irish Government under the National Development Plan 2007–2013 and it is administered on behalf of the Department of the Environment, Heritage & Local Government (DEHLG) by the Environmental Protection Agency (EPA) which has the statutory function of co-ordinating and promoting environmental research.

CIT intends to demonstrate the potential for an Irish Sustainable Campus, to illustrate how it can be achieved, and to produce a blueprint, that can be adopted and adapted by others. Your continued support is essential for this project to succeed and we would like everyone to get involved in making this project a real success. CIT hope to raise the bar for environmental improvement on campus.

What's new?

A green team has been formed to aid the success of Green Campus CIT. This newly formed Green Campus CIT Green Team, with representatives from both the student body and staff, will function as a fundamental stimulus to help motivate CIT and ensure the project keeps its momentum across all areas of the Institute.

Regular eNewsletters will be sent to staff and students and the newly designed website is available at www.greencampuscit.ie. This website functions as a portal to keep you informed of our progress and also has some interesting news and facts about CIT. The Newsletters will keep you up to date with any upcoming events and offer tips on how you can get involved in greening CIT.

What's happening?

CIT has already made some great moves towards greening the campus. Among which include:

- Introduction of the Cycle to Work Scheme
- Tourism and Hospitality aiming for the Gold Green Hospitality Award
- The main Canteen joining the Green Hospitality Awards
- CIT Green Campaign 23rd – 25th November
- European Week for Waste Reduction (EWWR) Food Waste Reduction Fair 26th – 28th November

What is Green Campus CIT doing now?

The Green Campus CIT project is now well underway, focusing on energy, water, waste, resource use and promoting the project. Detailed baseline data has been gathered for the Institute and opportunities for improvements have been identified and prioritised. Energy and water meters have been installed with a number of sub-meters also in place. This information is sent to a central computer system in the Buildings and Estates office for investigation and analysis. This system is being built on and improved constantly.

Waste

A waste survey has been carried out on campus with results available through the greencampuscit.ie website and Green Campus CIT Newsletters. This survey weighed and sampled waste from CIT's Bishopstown campus for a day. Recommendations from this survey will help improve waste management, behaviors and facilities at CIT.

Energy

A lot of energy wastage is a result of failing to switch off appliances and lighting when not in use. There is a high energy usage at evenings and weekends at CIT, where obvious savings can be made. An energy audit has been conducted in order to evaluate where energy savings can be made on-campus. It was found that a number of computers and other energy using equipment were left turned on at weekends. We urge all staff and students to turn off electrical equipment when not in use. Turning off equipment will save a lot of energy. For example, a photocopier left on overnight uses enough energy to produce over 1500 copies. That is a lot of energy wasted in a week! It's not just you who likes to switch off at night!

SEI SEEEP funding

The management of Green Campus CIT has secured funding from Sustainable Energy Ireland under the SEEEP programme to optimise energy efficiency on campus. This major environmental project will deliver significant, quantifiable energy savings at CIT. This funding has been used to remove inefficient circuits from physical switches to day/night and motion PIR sensors in corridors and toilet areas across the campus, to optimise energy usage. Motion sensors will ensure that unused areas will not be unnecessarily lit. Energy efficient lighting is being retrofitted on campus. Existing 10W EXIT bulkheads have been replaced with more energy efficient 2W LED fittings and timers will be installed on boilers. Additional sub-metering is also being installed as a management tool to optimise energy usage. This sub-metering will help delineate high energy usage areas and devise further plans in energy consumption for these areas. This will lead to both energy and maintenance savings at CIT. Specifically from this project, it is envisaged that CIT will save more than 338 tonnes of CO2 emissions and 628,960 kWh per annum, which equates to approximately €80,000 savings per annum. Other means of energy efficiency on campus are also being investigated. Improved energy efficiency will substantially reduce the Institute's carbon footprint.



Water

A major leak detection and water use optimisation project is also under way. Flow rates from taps, showers, kitchens, changing rooms etc. have been documented and a plan is underway to improve water usage at CIT. It is envisaged that this project will lead to substantial resource use improvements at CIT. Water usage at CIT has been investigated with high usage peaks found to occur during the night hours. Improvements in water usage patterns will greatly reduce the unnecessary wastage of water at CIT. It is important that we conserve water and reduce the generation of wastewater by reporting any leaks or dripping taps. Did you know that a dripping tap can waste up to 90 liters of water a day!

Events

To celebrate the European Week for Waste Reduction (EWWR) CIT in association with the Clean Technology Centre held a Food Waste Reduction Fair 26th - 28th November. The event kicked off with a delicious zero waste meal prepared by the Hospitality Management students under Séamus Forde and Tom Kelly, Department of Tourism & Hospitality Studies. The waste (preparation waste and plate waste) was 0.368 kg per person. This is 34.5% lower than the industry standard, as measured by the Clean Technology Centre. The catering industry in Ireland produces more than 100,000 tonnes of organic waste per year. If everyone performed as well as the CIT students, there would be 34,500 fewer tonnes of waste going to landfill. Information and demonstration sessions were held in the Nexus, which attracted large numbers of students and staff as well as the general public. This event also launched the new food waste reduction booklet compiled by the Clean Technology Centre and the EPA. Celebrity Chef Kevin Dundon conducted a cookery demonstration in the demonstration kitchen in Tourism and Hospitality on 28th November.

How can I get involved?

Being part of the Green Campus Project will enrich both student and staff experiences at CIT. Everyone at CIT can get involved in the Green Campus CIT project. By being more aware of energy efficiency; by turning off computers and lab equipment when not in use and switching off lights that are not needed; as well as using the correct bins for your waste - you can make a huge difference. For more information or suggestions on Green Campus CIT, please contact the Green Campus Facilitator by email mary.purcell@cit.ie or log onto www.greencampuscit.ie

Congratulations to the MBS Gamma Class & Treemetrics

John Meyler

Taught MBS (Part Time), Coordinator

Congratulations to the MBS Gamma Class and Treemetrics a start up company based in the Rubicon Centre in CIT. Treemetrics won the IBM's SmartCamp competition and also an award of €25,000 from the National Digital Research Centre, (this was awarded to the company who best demonstrated partnerships with third level institutions), and a three month mentorship with IBM, culminating in a trip to Silicon Valley. The mentorship will prepare TreeMetrics to be investor ready and to present to the top Venture Capital banks in America.

Treemetrics is an Irish software company that provides commercial forestry measurement systems. The innovative system developed by TreeMetrics allows for more accurate and cost effective measurement of trees prior to harvesting. This enables growers to sell their trees at the optimum representative price and for purchasers to improve their product recovery.

IBM's SmartCamp is an exclusive networking and mentoring event for entrepreneurs with global ambitions. The programme is dedicated to great entrepreneurs who believe that technology can make our world a better place. It provides access to world-class advisors plus a direct route to seed and venture capital.

TreeMetrics attended a day-long event to network with 25 leading entrepreneurs, investors and industry experts.

As part of the module Applied Corporate Strategy, on the Taught MBS Part Time Programme, students are introduced to working in a consultancy capacity with an organisation. Treemetrics was selected for this Module in 2009. This involved Treemetrics making presentations to the class on its Business Plan, Site Visits, Suppliers, Manufacturers of equipment and other relevant areas. Detailed reports were then presented to Treemetrics on its future Business Plan, Strategy, Branding, Scalability and Go to Market Strategy.

"Working with the MBS programme was a very valuable experience as it helped to shape our strategy for the coming years. This strategy was central to us in winning the IBM SmartCamp award," said Garret Mullooly, Director, TreeMetrics.

We would like to thank TreeMetrics Directors Garret Mullooly and Enda Keane for their help, assistance and attention to detail in assisting the students in the Applied Corporate Strategy Module.



MBS (Part Time) Coordinator John Meyler; MBS Students Tara Conlon; Wim Cloosterin; Gerard Harrington; Gerard O'Dwyer; and Claire McLoughlin with Treemetrics Director, Garrett Mullooly.

Chamber Congratulates CORK CITY SCIENCE STUDENTS



Chairperson of Cork Chamber's Science, Research and Innovation (SRI) Committee and General Manager of FMC International, Brendan Keane, congratulated students from St Brogan's College, Bandon, on winning the Cork Chamber School Science Award 2009 with their project "Working to the Rhythm". The project was one of a number of prize-winning entries at this year's event which was held at CIT and sponsored by Boston Scientific.

Speaking at the event, Mr Keane said, "Science is an important subject and we are fortunate to have a cluster of world-class science-based industries in the Cork region. The Chamber, through the SRI Committee, has been working for the last number of years to promote science and engineering subjects at all levels of the education cycle. Science is a subject of huge relevance to the development of our region and our society as a whole, and offers promising career prospects. These budding young scientists will soon be making subject choices for their Senior Cycle and we are keen that they consider choosing science options."

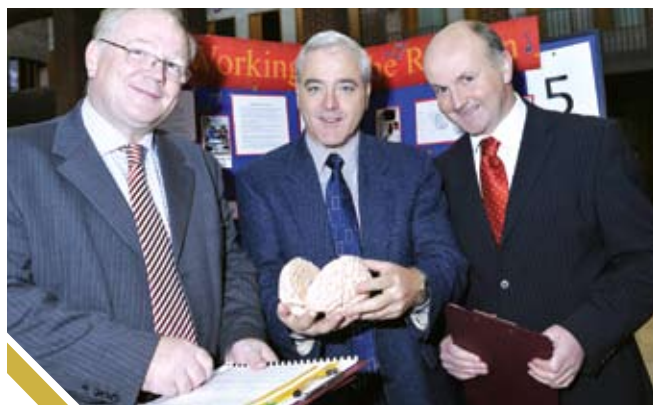
Mr Keane added, "The support we received from CIT in hosting this year's event has been an important factor in its realisation and demonstrates the significance of collaboration on such initiatives by key players in education and industry in Cork."

'Working to the Rhythm' by St Brogan's College in Bandon was chosen as winner of the Award by judges from Boston Scientific, ConocoPhillips and CIT. 'Pigeons' by North Presentation Secondary School and 'Respiration and Breathing' by St Patrick's College were awarded with 2nd and 3rd place prizes respectively. There were Special Commendations for 'Miracle Water' (St Brogan's College), 'Volcanoes' (St Patrick's College) and 'Endangered Animals and Global Warming' (North Presentation Secondary School).

This is the second year of this competition which was open to applications from a number of schools in Cork with a view to generating interest in science among pre-Junior Certificate students.

Speaking at the event Tom Mangan, Managing Director of Boston Scientific, said, "We are proud to be involved in this competition for the second time. The quality of the projects has been very impressive and demonstrates a real interest in the creativity and sense of discovery that science offers to young people. In supporting the efforts of these students we hope that they will consider a career in science in the future. This is essential if the country is to address the current imbalance between the supply and need for science graduates."

In its work to promote science and engineering in the Cork region, Cork Chamber's SRI Committee also works with the Access Office in CIT and the UCC Plus Office on the Cork Chamber Bursary Scheme. This scheme facilitates sponsorship by Chamber member companies of undergraduate students of science and engineering subjects for the duration of their four-year programmes.



(L – R) Dave Austin, ConocoPhillips; Tom Mangan, Boston Scientific, sponsor of the awards; with Michael Loftus, Head of the Faculty of Engineering & Science, CIT.



Chairperson of Cork Chamber's Science, Research and Innovation (SRI) Committee and General Manager of FMC International, Brendan Keane, with the students from St Brogan's College, Bandon, Liam O'Donovan; David Hurley; and Daniel Harrington; on winning the Cork Chamber School Science Award 2009 with their project "Working to the Rhythm" as they are being presented with their award by Tom Mangan, Boston Scientific. "Working to the Rhythm" was a study into the effects of listening to music whilst studying.



2nd Place went to North Presentation Secondary School for its project on 'Pigeons'.



3rd Place went to St Patrick's College for its project on 'Respiration and Breathing'.

reception for Innovation Competition Awards Recipients in CIT in 2009

On the 1st October, Dr Brendan J. Murphy, President; and Mr Michael Delaney, Vice President for Development, hosted a reception for 2009 Innovation Competition Award Recipients. The event coincided with the launch of the CIT Prize for Innovation which has a prize fund of €10,000.



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1 Michael Delaney, Vice President for Development, CIT addressing students and their families and members of the CIT Governing Body at the reception.

2 Siemens Engineers Ireland Innovative Student Engineer of the Year 2009 Award (L – R) Commodore Frank Lynch, Irish Naval Service (INS); Artificer Colm O'Brien, Irish Naval Service, a Bachelor of Engineering student in Electronic Engineering; Seán O'Sullivan, CEO, South Cork Enterprise Board and Sponsors of the CIT Prize for Innovation; and Dr Brendan Murphy, President, CIT.

3 (L – R) Helen O'Shea, Lilly Publications Creative Design, Winner of Best Exhibition Stand at the CIT Prize for Innovation 2009; Diane Lilley, Lilly Publications Creative Design, Winner of Best Exhibition Stand at the CIT Prize for Innovation 2009; and Ciara McGee, Business Advisor, South Cork Enterprise Board.

The Rubicon Centre

Commercialising Innovation & Creativity



In the current economic environment, successfully developing and maintaining a business can prove quite challenging. The Rubicon Centre, based here on campus in CIT, offers a modern and dynamic working environment, providing professional support and invaluable services to Entrepreneurial as they launch into the business world. As Ireland's premier business incubation centre, the Rubicon has developed strong links with many successful businesses and works closely with CIT. These links provide many benefits to the entrepreneurs based in the Rubicon, as they have access to the Research and Development facilities of the college and on-site academic expertise.

"The Rubicon Centre is a valuable resource for early stage businesses in need of support, in particular technology startups which need much development to be brought to market. As well as the essential support of incubation space and access to the expertise of mentors and trainers, The Rubicon Centre provides a positive and

motivational environment for people who are committed to developing a successful business." Dave Cody, Chief Executive Officer, Cork City Enterprise Board www.corkceb.ie

Due to the demand for suitable incubation space, an extension to the existing building is now well underway, which will provide much sought after entrepreneurial office space, laboratories' and additional support facilities.

The Genesis Programme (www.gep.ie) is also based at the Rubicon, offering participants the opportunity to avail of a 12 month rapid incubation programme, which aims to support and accelerate graduate entrepreneurs in developing their business from a very early stage. The centre also continues to develop links with other incubation centres nationally and internationally assisting in the development of national and international market opportunities. Further details on The Rubicon Centre can be found on their website www.rubiconcentre.ie

SCIENCE & COMPUTING AWARDS

On the 12 November, students from Science and Computing were honoured at its annual prizegiving ceremony.

Michael Loftus

Head of Faculty of Engineering & Science

On behalf of the Faculty of Engineering & Science, I wish to congratulate everyone who received an award and to wish you well in the future in your chosen careers. Many of you will go on to work in industry either here locally or further afield. Others amongst you will continue to study and become involved in postgraduate programmes and research. Either way, I believe that you will be excellently equipped to deal with the challenges that we see developing in the world currently.

Ireland faces many economic challenges at present. These will have a direct bearing on the career opportunities available to all of you, our graduates. Some will find work in Ireland, some will travel further afield and some will continue with their studies. Regardless of the path chosen, the value of your qualifications is high and will stand you in good stead throughout your careers. Education is one of the key areas in which we must continue to develop to drive the economy forward. Education in science, engineering and technology is vital in this context and CIT will continue to play a full part in contributing in this areas.

As award winners, you have achieved a level of excellence in your chosen fields of study. If you have the inclination, I suggest that you consider seriously the option of continuing your studies. It is becoming clearer by the day that Ireland needs to produce a higher number of talented scientists, engineers and technologists. For our country to thrive in an era in which our position will be defined by our ability to innovate, move quickly and adapt to ever-changing circumstances, we will need more people like you



Donal O'Connor, BSc (Hons) in Software Development with Computer Networking; was awarded the Alex Andrade Medal which was sponsored by McAfee, Inc.



William Lupton, BSc (Hons) in Software Development; Best Student Award which was sponsored by VMware, Inc. and Sarah Kate Shanahan, BSc in Food Science & Technology; Best Student Award which was sponsored by Biosciences Ltd.



Emma Gabriel, BSc (Hons) in Applied Biosciences; Best Student Award which was sponsored by Cruinn Diagnostics Ltd., and Elisabeth Johnson, BSc in Analytical & Pharmaceutical Chemistry; Best Student Award which was sponsored by the Royal Society of Chemistry.



Caroline Roche, BSc in Applied Physics & Instrumentation; Best Project Award which was sponsored by Janssen Pharmaceuticals Ireland Ltd.

SCIENCE & COMPUTING AWARDS

than ever before. I hope that many of you will realise your potential in this context and that we will be able to provide the means by which you can accomplish this goal.

We are particularly pleased to have present with us today friends and colleagues from industry. Co-operation and engagement with industry has been a differentiating characteristic of the CIT educational experience. Through good times and bad, local businesses have continued to work with us, providing placement opportunities for our students, providing advice and feedback regarding new course proposals and developments, helping shape our research vision and activity. In turn, we have attempted to develop graduates who can make an immediate contribution in the work place but also who are equipped with the broad base of education so important to long term career and social development. We are indebted to the sponsors who are present here this evening and we look forward to continuing to develop and deepen these relationships over time.

I would like to congratulate all of you, our award winners, on your great achievements. We wish you well in your future careers and we look forward to staying in contact with you in the years to come and to celebrating your successes.

In addition, I wish to congratulate your parents, partners, supporters and families on this special day. The academic journey is seldom travelled in isolation and without your support, many would not have seen it through to conclusion.

To conclude, I would like to voice my appreciation for the efforts of all involved in the organisation of today's event. Clair Nadkar has been to the fore in this regard and the hotel staff has provided us with an excellent service. I wish our prize-winners, their guest and all present, a most enjoyable evening.



Beatriz Pascual, BSc (Hons) in Applied Physics & Instrumentation, Best Project Award which was sponsored by Kentz Group; and Monika Klasa, BSc in Applied Biology; Best Student Award which was sponsored by Bank of Ireland.



Daniele Artipoli, BSc in Information Technology Support; Best Project Award which was sponsored by IT@Cork and Marie Jamie O'Sullivan, BSc in Biomedical Science; Best Student Award which was sponsored by Serosep Ltd.



Patrycja Daly, BSc in Analytical & Pharmaceutical Chemistry, Best Student Award which was sponsored by Cognis Ireland Ltd.



Daniel Mulcahy, BSc in Science in Computing, Best Student Award which was sponsored by the School of Computing & Mathematics.

THE CHANGING FACE OF THE PHARMACEUTICAL INDUSTRY



On 6th November, CIT co-hosted a conference exploring "The Changing Face of the Pharmaceutical Industry", in association with Cork County Council and UCC in Cork County Hall.

The conference brought together national and international industry figures, academics, policymakers, local government and State agencies. Its purpose was to increase understanding of new business models that are emerging in this sector and to suggest strategies to consolidate and grow the sector that is responsible for a large percentage of the country's exports. The conference heard that many sectoral interests believe that the future business model will see big pharma companies retaining their development, branding and marketing/distribution functions while shedding elements of primary and secondary manufacturing. Major pharma companies may also shed much of their R&D, choosing instead to aggressively licence-in compounds from smaller innovative pharma and biotech companies for whom these changes present significant opportunities.

Ireland has a global reputation as a centre of excellence for the pharmaceutical industry, according to Michael Delaney, Vice President for Development at CIT, "The consistent meeting of international quality standards, the environmental regulation of the sector, the quality of Ireland's R&D Centres and the existence of a responsive Third Level sector are all strong positives in maintaining the country's pre-eminent position in this industry. We must ensure that we are alert to the way the sector is changing if we are to protect our leading position and to go on from there to add even further value to this critical sector of the Irish economy."

Cork County Manager, Martin Riordan, described the pharma sector as one of Ireland's great foreign direct investment success stories. "The sector is responsible for over 40% of Irish exports. It is a key creator of employment with more than 50% of the industry's workforce being Third Level graduates. It is a massive, ongoing generator of construction activity. Sixteen of the top twenty global pharmaceutical companies are located in Ireland, many of which are in Ringaskiddy in Co. Cork. However, the sector is undergoing rapid change and Ireland Inc. needs to adjust to the new dynamic which is emerging. Comprehensive preparation for the next generation of pharma/biopharma activity and the development of innovative connectivity between key stakeholders in Ireland, can identify new opportunities within this changing environment." The conference featured major speakers from the global and indigenous pharma and biopharma sectors as well as those representing job creation and health care agencies. For information on the conference please log on to <http://www.corkcoco.ie/> > corporate affairs > publications

CIT hosts Launch of Student Entrepreneurship Competition

The 2009/2010 Newstalk 106-108 fm Student Enterprise Competition, in association with The Irish Times, was launched in October at CIT.

Now in its fourth year, the competition is designed to develop an understanding of business management and promote early-stage entrepreneurship among third level students. Using a case study format, the competition encourages participants to research companies and, as part of a team, devise solutions to real life business scenarios. A record 1,300 students, across 330 teams entered the 2008/2009 competition. The competition is exclusively open to students from Ireland's 15 Institutes of Technology and the National College of Ireland. Teams must submit written proposals to their local co-ordinator for the first round, which will be judged by their colleges. The top four entries from each college will then be given a second case study on which

they present their submission to their local judging committee.

The winning team from each of the ITs will receive prize money along with accommodation and hospitality in Dublin for the National Semi-Final and Final in February, 2010. The overall prize for the winning team and its team coach is a study trip to the Caribbean where they will shadow senior executives in leading telecommunications company, Digicel Group.

Commenting on the launch of the competition, Denis O'Brien, Competition Chairperson, said, "Since its introduction in 2006, the Newstalk 106-108 fm Student Enterprise Competition has gone from strength to strength. It gives students the opportunity to work together outside their normal college environment and allows participants to put into practice the knowledge they have gained from their studies. Now, more than ever, it is essential that the business community across the country helps to support and develop the next generation of Irish entrepreneurs."

CIT/Teagasc student wins RDS Medal

On the 11 November, the 2009 Teagasc Walsh Fellowships Seminar took place at the RDS, Dublin, as part of Science Week Ireland, and highlighted the achievements of young scientists working in the fields of food, agriculture, environment and economics. This year's Walsh Fellow of the Year and winner of the RDS medal was Brid Coffey, a postgraduate student from CIT and Teagasc Moorepark Food Research Centre. Brid received the award for her research work and paper on Biocontrol of *Escherichia coli* O157:H7: Evaluation of two anti-E coli O157:H7 Bacteriophage in the cattle rumen. Brid is from Caherciveen, Co. Kerry. She is jointly supervised by Dr Aidan Coffey (CIT Biological Sciences) and Prof. Paul Ross (Teagasc).

Speaking at the seminar, Teagasc Director Prof. Gerry Boyle said: "Scientific advances, security of the world food supply, consumer trends and market developments, place the agri-food sector right at the heart of Ireland's smart green economy. There is growing concern about securing a supply of safe and nutritious food, promoting a high-quality rural environment, improving energy security and building on Ireland's indigenous strengths. PhD students today must be prepared for a variety of careers outside of academia and they must be to the forefront in building Ireland's international reputation in agri-food and in green technology and sustainable development."



Brid Coffey is pictured with Jim Flanagan (left), Chairman of the Royal Dublin Society Committee of Agriculture and Rural Affairs and Prof. Gerry Boyle, Director of Teagasc.

Blackrock Castle Observatory

the **space** for science

"In the universe there are things that are known, and things that are unknown, and in between, there are doors"

William Blake, Poet (1757-1822)

When the idea of converting Blackrock Castle into a science centre was conceived in 2002, Ireland was a very different place. The economy seemed to be on an inexorable path upwards and our futures were to be assured through a cultural change to a knowledge-based society. The purpose and vision of Blackrock Castle Observatory – *"to affect positive change in attitudes toward science, engineering and technology in Ireland"* – fitted in very well with our national vision.

Despite considerable investments in education, however, we have not made the transition to a society that really values the worth of being able to solve problems, to generate new ideas and to embrace the freedom that comes with better understanding the laws of the universe in which we live – the laws that govern how things work; the laws which place the ultimate constraints on whether an idea really can do what we want it to. We don't have enough young people who "get" the importance of science and engineering; we don't have enough older people who really understand why this is something we should be worrying about; and we still put people into discipline boxes – science, engineering, business, humanities, arts, music, sport – and construct barriers to make it difficult for them to talk constructively to one another. Too often we fail to appreciate the enormous benefits that accrue from multidisciplinary research and education.

This article looks back at a few of the highlights at Blackrock Castle Observatory (BCO) since it opened its doors in November 2007, and summarise some of the impacts that a centre of science outreach and research can bring to a region. These impacts include fostering the multidisciplinary enquiry-based ethos that employers are increasingly demanding from graduates in order to be better positioned to compete in the global marketplace.

Some basic statistics

Since opening its doors to the public in August 2007, BCO has welcomed over 55,000 visitors to its exhibition. An additional 75,000 people have participated in BCO outreach activities into schools, through students (particularly transition year pupils making career decisions), parents and teachers, industry, the general public and community groups, with many thousands more participants becoming involved at national events. BCO has been featured in local and international print media, radio and TV. Monthly visitors to the BCO website (www.bco.ie) have risen by 2371% to 5000 per month between August 2007 and October 2009.

The Observatory has hosted 10 CIT students completing their third- and fourth-year projects, 12 Erasmus and intern students and 9 Transition Year students. BCO trading as Cosmos Education Ltd employs 3 full time and 5 part time staff members.

The Exhibition

At the heart of the BCO experience is the internationally award-winning exhibition *"Cosmos at the Castle"*, designed by the Dublin-based company Martello Media, with broadcaster Leo Enright acting as the Scientific Consultant. Content was provided by CIT's Astronomy and Instrumentation Group; they are now housed at the Castle. BCO is the first, and only, Irish-designed visitor attraction to receive a THEA 'Award for Outstanding Achievement' from TEA, the world association for themed attractions. The THEA award was presented to members of BCO at the THEA annual awards ceremony in Los Angeles in March 2008. The exhibition has also received five national awards - a Local Government Excellence in Economic Development Award, two Digital Media Awards, the IDI Ideas 2008 and Cork's Better Building Award 2008 Heritage and Conservation award.



The staff of Blackrock Castle Observatory and the THEA award.

Cosmos at the Castle highlights recent discoveries of extreme life forms on Earth and examines their implications for life in space. It invites interactive debate on mankind's ultimate place in the Universe. A gallery of cinema sized high-definition digital video screens with proximity sensors allows visitors to interact with the process of the evolution of the entire Universe and of life on Earth.



In an exhibit that is unique to BCO, visitors can send an email to space (or a message to Santa at certain times of the year); in another experience unique to BCO, visitors to its interactive theatre use scientific data that they themselves collate, to launch a space mission to save the Earth from destruction by a comet. The success of this element of the BCO experience lead to the development of an interactive game in association with CIT's Paul Walsh (Computing) and Gearoid O'Suilleabháin (DEIS), and Julie-Ann Sime (Lancaster University). The game was piloted among 26 boys aged 10-12 and resulted in a peer-reviewed conference paper entitled *"The Role of Games in Facilitating Preparation for Future Learning"*. This multidisciplinary collaboration is continuing, with further projects in the design phase. There is enormous potential for CIT to use its computing and pedagogical expertise, allied to its BCO facility, to develop and validate teaching and learning tools and to better understand the connection between the two.

Primary level aged children can explore educational issues in a fun and accessible format in *"The Forum"* with *Cosmo*, our friendly virtual astronomer, and a laboratory-styled classroom allows groups to prepare and debrief before and after the exhibition experience. An onsite Education Officer facilitates all visits and workshops.

The BCO exhibition is dynamic and extremely flexible. Since all of its content is multimedia driven, it is possible to change the content as required for specialist visiting groups, or to develop new content to keep the experience "fresh" for returning visitors and also to customise every display screen to individually promote every Department in CIT during promotional events, for example, or to meet the needs of corporate events and festivals.

Research

BCO houses CIT's Astronomy and Instrumentation Group (AIG), part of the larger Photonics Strategic Research Cluster. The Group concentrates on developing and applying new techniques for precision measurement of the brightness of astronomical objects (a technique called photometry). It was one of the first groups in the world to use low-light-imaging CCD technology for this type of research and it has just begun commissioning an exciting new photometer with the help of a grant from Science Foundation Ireland. This photometer can image extremely low light levels in two different colours simultaneously and this turns out to be a very powerful technique for diverse scientific applications. The Group is particularly interested in using it to search for extrasolar planets and to extend its research into gaining a better understanding of quasars (the most powerful, continuously-emitting objects in the universe). Once fully commissioned, the photometer will be installed on a telescope in South Africa. All the instrument control and data reduction software was developed at BCO, a particularly impressive feat for the CIT-educated researchers when one considers that data is produced and analysed at a rate of up to 1 terabyte per night. In an unforeseen twist of fate, the relatively poor observing conditions at BCO led to the development of a new technique for removing atmospheric turbulence that could have potentially revolutionary effects at any observatory using low-light-imaging technology.

In keeping with the Institute's strategy for research and innovation the AIG is constantly looking for commercialisation avenues for its research and currently has one application to Enterprise Ireland under review. The Group has also performed consultancy work for a number of companies interested in low-light-imaging and spectroscopy and are presently in discussion with a number of European partners to develop new low-light-imaging products and processes under the EU's Framework 7 programme.

Local and International Partners

Thanks to both its iconic landmark status in Cork history, and a cutting edge outreach and science programme, CIT's BCO enjoys links with a wide and varied cross section of local, national and international associates. In addition to the primary link between CIT and Cork City Council, there are extended and enhanced links with civic and marketing groups such as the Cork Heritage Circle, Cork City Marketing Partnership, Fáilte Ireland Southwest Region, Cork City Learning Forum, Cork Festival Forum and the Discovery team.

BCO works closely with its sister science centres at Armagh Planetarium and the Northern Ireland Space Office. BCO and Armagh Planetarium operate a Memorandum of Understanding to work together on a cross-border basis in a joint initiative called *"Armagh and Blackrock – the A and B of Astronomy in Ireland"*. *StarDome*, a state-of-the-art Portable Planetarium and science outreach tool, operated in association with Armagh Planetarium, is a very active extension of the BCO astronomy programme. *StarDome* programmes have primarily been developed to inspire an appreciation and wonder of the night sky, however, BCO school programmes have been customised to support curriculum objectives found in science and social studies. Over 12,000 visitors and school children have experienced *StarDome* to date and in these recessionary times the fact that *StarDome* is mobile makes it a particularly attractive option for schools.

Social Inclusion

A key element of the BCO ethos is that of social inclusion – the belief that education should be equally available to all, irrespective of their social backgrounds. Because the BCO believe strongly that everyone, young or old, has a right to learn about who they are, where they came from and their place in the universe, it means that the pricing structure for visitors, schools and students is kept as low as possible. Through the delivery of its programme in this all-inclusive manner, including outreach to local disadvantaged DEIS and RAPID communities, the BCO can ensure its goals are met, new skills are learnt and diverse neighbourhoods are connected.

Membership and Sponsorship

The BCO Community has over 200 individual and family members to date. Corporate members include Bord Gáis, Bus Éireann, Merchants Quay, Docklands Directorate and Promethean Interactive Learning Technology.

The Evening Echo is its media partners for the International Year of Astronomy. The support of members is essential to sustaining the award winning exhibition *Cosmos at the Castle* and to bringing scientific exploration and research, exhibitions and educational programs to thousands of Ireland's schoolchildren and hobby astronomers annually. BCO continues to seek new members and new sponsors as it seeks to improve and expand the existing delivery.

CIT's BCO is a high-profile operation, with excellence at the core of its operation. To be effective, it needs to be in the public eye as much as possible. To date it is the most successful science center in Ireland in terms of publicity generated nationally and internationally. BCO has hosted a number of very high-profile events including a 10-minute live hook-up with the International Space Station on 4 Feb 2008, watched live by an estimated audience of 2.5m (between Sky News and NASA Web-TV).



the solar system trail

In October 2008, BCO in conjunction with ArtTrail and the Cork Astronomy Club, established Ireland's first and only Solar System Trail with a series of framed banners mounted in Cork City, marking the correct distance-to-scale locations along the orbital paths, placing the Sun at St Patrick's Bridge and Neptune at BCO, the inner planets of the Solar System, Mercury, Venus and Earth, fitted along Merchant's Quay with Mars situated at the Bus

Station, Jupiter located at Victoria Road, Saturn at Centre Park Road and Uranus at The Marina. Travelling along the trail, through the Docklands, to the outer edge of Cork city centre (and the solar system) to BCO and the skies above, one got a feeling for how close the inner planets (Mercury, Venus, Earth and Mars) are together, compared to the enormous outer "gas" giants (Jupiter, Saturn, Uranus and Neptune).

2009 - The United Nations International Year of Astronomy

2009 was the 400th anniversary of King James I returning control of Blackrock Castle to Cork City and was designated by the United Nations as the International Year of Astronomy, celebrating 400 years since Galileo Galilei revolutionised our view of the universe when he turned his telescope towards the heavens. BCO capitalised on this opportunity to forge links with science centres and astronomy networks whilst building its brand on an international scale.

One of the major successes was the theming of the Cork St Patrick's Day Parade as *Cosmic Chaos* in recognition of the International Year of Astronomy. Over 55,000 people lined the sun soaked streets and enjoyed the spectacle of science, dance, music and theatre in one of Cork's biggest ever parades. Interpreting the theme of Cosmic Chaos was a challenge met with enormous enthusiasm by the participants as space appeals to everyone. It reached across abilities and ethnic groups; it connected to unanswered questions, large scale resources and innovative technologies. Beyond science, it had global, environmental, ethical, humanitarian and enterprise dimensions. Perhaps no other theme afforded as much opportunity to interest, motivate and influence young and old alike.

2009 saw BCO involved in numerous other local and national festivals such as Discovery, Science Week, Engineered – A Week of Wonder, Maths Week, Heritage Week, the Cork Midsummer Festival, Jazz, Choral and Film Festivals, the Electric Picnic, Art Trail and the Lifelong Learning Festival, to name but a few.



Discover Science and Engineering

The Observatory is an accredited Discover Science and Engineering Science (DSE) Centre. Exhibit visits and workshops are accredited as part of the Discover Primary Science programme through DSE. For visiting primary and second level classes, BCO runs workshops entitled *Comets at the Castle*, *Mars Mysteries* and *Web of Stars*. These are tailored to suit the ages and abilities of the participants.

European Southern Observatory

ESO, the European Southern Observatory, is the foremost intergovernmental astronomy organisation in Europe and the world's most productive astronomical observatory. BCO is responsible for interacting with the media and general public in Ireland in connection with ESO developments, press releases, exhibitions and more.

Hands on Universe (EU FP7 Science in Society)

BCO is Ireland's representative in the European Union's "Hands on Universe Project". EU-HOU is a Europe wide project to train post primary teachers in astronomy tools that can be used in the classroom to support science and technology curricula. The Observatory is also involved in a number of other FP7 applications based around the theme of Science in Society.

continued >

Telescope Viewing Events

Throughout the year, BCO offered 8 free first-quarter moon viewing sessions and 12 monthly Open Nights, *First Fridays at the Castle*, when staff and researchers gave of their time to assist members of the public in their viewing experience through the telescopes. BCO has recently begun recruiting Astronomy Volunteers – members of the public with an interest or passion in astronomy – to be part of the BCO community of teachers. Working together with the core team, the volunteers will enable BCO to interface better with the public and to offer more events. The Cork Astronomy Club regularly bring their telescopes and, just as importantly, their expertise and enthusiasm, to nighttime events. Workshops and speakers are part of *First Fridays at the Castle*. One of the workshop highlights was *Hands on Saturn*. This was a combination of a workshop for children designed around the planet Saturn, followed by a lecture from the world renowned speaker Carolyn Porco, Imaging Director for the *Cassini* spacecraft mission to Saturn, followed by viewing Saturn from the courtyard of BCO – a memorable event!

Capture the Cosmos

This initiative was a Cork City Council Arts Office and Community & Enterprise Project in partnership with Cork Printmakers. This RAPID/Access collaboration made it possible for children from 4 schools across Cork City to explore the world of astronomy and express their new learning through printmaking workshops. The subsequent exhibition in the City Hall, *Capture the Cosmos*, brought together prints donated from each participating child. Money raised from the sale of the prints enabled the purchase of telescopes and binoculars which benefitted 5 partner primary schools in the Monduli region of Tanzania. A full colour publication accompanied the exhibition which was launched by Dan Tani, NASA astronaut.

The Vatican Astronomer Brother Guy Consolmagno

BCO, in association with the Dublin Institute of Advanced Studies, hosted the Vatican's Astronomer Br Guy Consolmagno in March 2009. Br Guy toured Ireland over 5 days to capacity crowds. Br Guy also made a number of radio appearances and his Cork visit featured a trip to the birthplace of Rory Gallagher which was featured in all national papers.

Globe at Night 2009 16-28 March

BCO worked with the public to count the stars in the constellation of Orion during observing sessions held on clear nights in the weeks preceding **Earth Hour**. Earth Hour was a global event in which participants switched off unnecessary lights for one hour with the intention of raising awareness of the importance and ease of saving energy.



In the Footsteps of Galileo

An international exhibition of astronomical drawings, curated by Deirdre Kellegghan, President of the Irish Astronomical Society and sponsored by BCO, hung in the 16th century castle from February to September '09. It featured 2 previously unseen works by the eminent astronomer, writer and TV presenter Sir Patrick Moore.



space camp

In summer 2009 BCO added an extra week of Space Camp to its annual summer camp schedule as a result of the popular demand for the programme. Students aged 8 to 12 spent 3 weeks in July and August doing exciting activities using science and engineering to explore the universe. The *space cadets* found out about life as an astronaut, the solar system and the search for alien life. Amongst all the fun-filled activities, space campers also got to experience first hand the thrill of building and launching their own rockets from the castle! To celebrate the 40th anniversary of the Apollo 11 moon landing, the castle restaurant baked a giant birthday cheese cake and guests enjoyed a Slice of the Moon!

On the 22 July, 2009, folks joined BCO's bicycling astronomers for a social cycle visiting all the planets of Cork's very own scale model of the solar system. The Cork Cycling Arts Festival tour left the Sun at the city centre Cork finishing at Blackrock Castle Observatory and the site of Neptune.

warsaw science picnic

On 31 May 2009, a seemingly endless queue formed in Warsaw at the BCO *Stardome*, in a venture run by the Irish Embassy in Poland at Europe's largest outdoor science-popularisation event. The *StarDome* itself was without a doubt one of the of the busiest of the 250 exhibits, as BCO researchers took 1500 eager visitors on a whirlwind tour of the Solar System in association with Polish staff of the Irish Embassy in Warsaw who kindly provided live narrations in Polish.

web of stars

BCO has partnered with the Chabot Space & Science Center, California, USA for **Web of Stars**, a unique pilot remote astronomy project, designed to teach science and astronomy using a live internet link. In this programme, astronomers at Chabot observe the sky at night and deliver real-time astronomical images to second-level students in Ireland. The objects are selected by the schools and the results are processed by the students with the help of BCO staff into full-colour images that they can display in their schools and homes. Students also get the chance to discuss the properties of the objects they photograph and share their experiences about the night sky with others. This opportunity takes advantage of the eight-hour time difference between Cork and the San Francisco Bay Area. The project was conceived to celebrate the 25th anniversary of San Francisco and Cork becoming sister cities and the 2009 International Year of Astronomy and is funded by Cork City Council. (The latest information on the programme can be viewed at <http://www.bco.ie/WoS>)



"This educational opportunity is an extraordinary way to celebrate the 25th anniversary of San Francisco and Cork becoming sister cities," said San Francisco Mayor, Gavin Newsom. "The telescopes at Chabot Space & Science Center will provide inspirational science education to the students in Cork. The two cities will continue to strengthen the links between them and explore possibilities for further commercial, tourism, cultural and educational contacts."

At the official launch of the programme in September, astronomer Ben Burress delivered a talk about the history of astronomy in the San Francisco Bay Area and the telescopes at Chabot, live from the Chabot Space & Science Center. His talk was followed by a transatlantic Q and A session with the audience/school participants at BCO.

Six pilot sessions are scheduled from Oct 09 – March 2010. All sessions are free and transport costs for schools are grant aided by Cork City Council. The first session has already taken place – on the 21 October, North Presentation, Farranree, selected as a designated school from the CIT *Access to Education* programme, successfully completed the live image-making workshop followed by a rendition of *On the banks of my Own Lovely Lee* from Blackrock Castle to Chabot. The song was a very pleasant surprise to the astronomers at Chabot!

BCO continues to evaluate and monitor **Web of Stars** as a blueprint for connectivity through education programmes with the sister cities - using astronomy and space science as learning tools for STEM skills. Ultimately BCO would like to create portals or *wormholes* from one science centre to another where visitors can blog, game and share images and information. For example, following meetings facilitated by Supervisor Elsbernd, San Francisco City Hall and SF District Schools Education Committee, the Visualization Studio Team at The California Academy of Sciences in San Francisco is interested in forging these links of interactivity between Cork and San Francisco through our respective science centres and James Fang, Chair of the San Francisco-Shanghai Sister City Committee has introduced the concept to his Shanghai colleagues. Given that Cork is also twinned with Shanghai, as well as San Francisco, there is a very real possibility of the Web of Stars expanding its reach in 2010.

the future

BCO is a good example of what can be achieved when regional strategic partnerships are cultivated. BCO has come a long way in just two years and both CIT and Cork City Council can be justly proud of what they have achieved. The Observatory has already become an internationally respected interactive science center with an ever-growing footprint within the community and has enormous potential to make a valuable contribution to Irish society. There are many challenges ahead, but also many opportunities. BCO hopes to see a marked increase in 2010 in the level of engagement with individual Faculties, Schools and Departments in CIT so that the full contribution that the Institute is making on a regional and national level is communicated to the public at large and the policymakers in whose hands so much lies.

Enquiries about BCO can be made to bco@bco.ie



The CCAD 17th Annual Honours Degree show 19TH - 27TH JUNE



Elizabeth O'Callaghan



Mari Buttmer



Anne-Marie Kirby



Louise Hogan

This year's show is titled Site 46, which refers to the number of students exhibiting a range of work from painting, print, sculpture, photography, installation, multi-media and ceramics.





Marion Gilroy, recipient of one of three CIT Registrar's Bursaries, pictured here receiving her award from Dr Barry O'Connor, Registrar and Vice President for Academic Affairs, CIT. Marian exhibited her work in Siamsa Tíre, Tralee, in "Pieces of Eight", film-based work from recent graduates sponsored by the Cork Film Centre.



Degree Show Committee Chairperson Sinéad Hehir receiving a floral tribute from Aoife O'Brien on behalf of her classmates. Sinéad is currently doing the Higher Diploma in Art & Design Education.



Dr Brendan Murphy, President, CIT with Alannah Byrne, who won the Art Trail Graduate Award and whose work was exhibited in ArtTrail 2009 ("Rediscovering Locality").

in the making

In the Making was a unique exhibition at the James Barry Exhibition Centre bringing together students from the MA in Art Therapy at CIT CCAD, showcasing their own work as practicing artists, and exploring the relationship between their individual art practice and their current studies and therapeutic work. The Exhibition included painting, print, ceramics and mixed media work.

A crowd of over 100 friends, relatives, and art aficionados filled the Exhibition Centre for the opening of 'In the Making', on the 25th October. The Apollo String Trio, made up of current and recent students of the CIT CSM, entertained visitors to the exhibition, while outside members of the CIT Juggling Society showed off their skills in the bright sunlight. Suzie Cann, renowned Art Therapist and Environmental artist, gave a public lecture on 'The Relationship Between Art & Art Therapy' in the Rory Gallagher Theatre.



Suzie Cann, Art Therapist and Guest Lecturer with Clodagh Connaughton, artist and current MA Art Therapy student.



Gerry Lee, 'Bed of Roses'

mark ewart reviews . . .

The partnership between Aoife O'Brien and Elizabeth O'Callaghan for their contribution to Culture Night is fruitful one for a number of reasons. Firstly the opportunity to view their accomplishments in CCAD offers the chance to experience their work within the environment in which it was created. Furthermore, it is poignant that they return tonight as emerging artists embarking upon careers rather than simply as graduates.

The connection between the two is tangible for artistic reasons also. Initially there appears to be discordance between their styles - especially in the treatment of colour - as a battle rages between heightened lively hues and more somber muted tones. But if you take time with the work, it is possible to appreciate how both artists treat surface textures with equal reverence; as layers and expressive mark-making help unite the shared direction within their creative endeavours.

So for these two young artists, there is a clear joy in working with the textural properties of paint itself. Surface is perhaps just as important to these paintings as the imagery and the themes that underpin them. The layering and re-working of the paint tells a story of artists' who are acutely aware of their medium and the sensations and reactions that are potentially provoked within the viewer.

Of the two, Elizabeth is driven most strongly by this impetus to elicit evocative sensation through the tactility of the painted surface. Her canvases become a conduit for intense explosions of colour, as paint is driven, dripped and splashed in the greatest traditions of Pollock and the Action Painters. Her inspiration comes from an emotional reaction to the "energy and vitality of the sea", and even though the colour is removed from the naturalism of the source, it seems as if the artist has disconnected from corporeality, and has focused instead on the essence and spirit of her subject.

Aoife's acrylic paintings are strongly connected with the exploration of spatial environments – but these locations are notional and borne more from the subconscious mind. Austere objects such as doorways, windows and couches populate these spaces and take on a sinister note through the low key atmospherics of the colour and the veils of paint which obscure them. The artist is interested

in placing 'the viewer at a distance from reality'. This sentiment is reminiscent of the theory of remote viewing, where autosuggestion, hypnosis or buried memories emerge through a catalogue of transient objects that float in and out of view. This work on some level may help us to confront and address the lexicon of symbols and events that constitute our own personal history.



Aoife O'Brien



Elizabeth O'Callaghan

kevin callaghan RECEIVES THE FRANK RYAN TRAVEL BURSARY AWARD



The Frank Ryan Bursary, established by the Institute of Designers in Ireland (IDI), recognises Frank Ryan's contribution to design education and is an IDI commitment to celebrating excellence and exploration among emerging designers in Ireland.

At the IDI annual awards, 4th year BA (Hons) in Ceramic Design student Kevin Callaghan was awarded the prestigious Frank Ryan Bursary 2009. The award is a travel bursary (worth €5,000) that funds a design student (or students) wishing to pursue an international educational opportunity or a design project overseas. Kevin received the award in recognition of his travels last summer in China, where he took up a residency at the Jingdezhen Pottery Workshop. Jingdezhen, located in south east China, has been known as the Porcelain City since the Song Dynasty with a history of 1700 years porcelain-making.

sue cunliffe



CCAD lecturer Sue Cunliffe gave a solo exhibition 'Laughter and Tears' at the Doswell Gallery in September '09. The Exhibition, which was opened by Judy Kravis, writer and lecturer, referred to the numerous joys and paradoxes that life offers/springs upon us, the observations made, the lessons learned and the accumulated wisdom that hopefully ensues.

Sue was chairperson of the Cork Printmakers from 1999 to 2002 when the studio moved to its present purpose built facility in Wandersford Quay, Cork. She has exhibited throughout Ireland and abroad with solo shows in the Crawford Gallery, Cork (1994, and 1996), in the Graficki Collective, Belgrade (1996) and in the Fenton Gallery, Cork (2001). Her work has appeared in many group exhibitions in Ireland, America, Canada, China, Germany, Poland and the UK. Sue has been awarded many prizes and commissions. This year she was a prizewinner both at the Impressions Exhibition (2009), Galway Arts Centre and at the Wrexham International Print Exhibition, Wales. Her work can be seen in many public collections including UCC, Crawford Art Gallery, Cork and the RTE Print Collection.



Evelyn



In the beginning version 2
(3 views) lino and bronze.



work placement in venice

Two current fourth year Crawford students, were this summer awarded with a scholarship to work for the Irish Pavilion at the 53rd Venice Biennale. Jennifer Marshall and Theresa O'Leary received a four week work placement invigilating the works of Gareth Kennedy and Sarah Browne, two of Ireland's most promising new artists. The exhibition, curated by Caoimhin Corrigan and funded by the Irish Arts Council, was an immense success. Both Jen and Theresa described it as a life changing experience that provided them with an invaluable insight into the contemporary art world.

As Time Flies . . .

Located on the steep side of Gurrabraher Road on the north side of Cork city, James Hayes's work 'As time flies...' appears to ascend from the top of the newly built Gurrabraher Development Centre. This large scale, permanent, public artwork surveys the expanse of Cork city, being visible from the centre of the city and its surrounding areas. The piece is just over 10 metres in height and is constructed from stainless steel and highly polished stainless steel.

This technically complex work consists of four diamond shaped kites with flowing tails which spiral upwards as the kites take flight from the roof of the building. At night, the kites emanate light due to a sophisticated computer controlled Fibre LED lighting system, which cycles through spectrums of colour. Cross shaped slits in the kites separate the panels and allow for airflow from high winds as well as generating striking multicolored cross like symbols after dark.

The artist, James Hayes, Lecturer in CCAD was asked to work with the community in Gurrabraher and the users of the centre and to respond to the regeneration initiatives set in place by Cork City Council. The work was developed and constructed over a year long period in 2008/09 and was installed in early September 2009.



The work is underpinned by Hayes' consistent use of the 'everyday object' within his practice. Conceptually the work corresponds to Hayes's desire to transform the most humble and ephemeral objects, into celebratory and permanent relics, a transformation which elevates the status of these unassuming objects and lends them a heightened sense of significance.

'As time flies...' aims to embody and explore a sense of optimism and also signifies and connotes aspects of play, flight and departure....

The sculpture was launched on the 27th November and is a wonderful celebration of the achievement of one of CCAD staff members.

Conferrings 2009



Kate Hanover and Danielle Daly graduated with BBS in Business (Honours) pictured with Eimear McCarthy and Alison Moore who both graduated with a BBus in Marketing.



Annette Collins, Aisling Walsh, and Debra O'Sullivan all graduated with a BA in Human Resources Management.



Louise Patrick, Joyce Tobin, and Elaine Walsh graduated with a BBus (Honours) in Accounting.



Roisin McMorrow and Debbie Linehan both received a BA in Social Care.



Donal Walsh, Eadaoin Hornibrook, and Craig Crowley, all graduated with a BBus in Culinary Arts.



Andrea O'Sullivan and Mairéad Collins both graduated with a BBus in Hospitality Management; and Margaret Harman graduated with a BA (Honours) in Counselling & Psychotherapy.



Christina O'Shea, Marcus Flynn and Sheila Lewis all graduated with a Master of Business.



Tracy O'Reilly, Declan Lynch, Rhona Quinn, and Tina Feeney graduated with a Master of Business.



Prof. Claudia Soeller Eckert and Prof. Andrea Krajewski, Hochschule Darmstadt; Dr Brendan Murphy, President, CIT; and Prof. Torsten Froehlich, Hochschule Darmstadt; pictured with Kevin O'Mahony (centre) who graduated with a MA in Media Design.

Minister launches CTC Schools Energy Initiative



On 7 September, the Minister for Education & Science, Mr Batt O'Keeffe T.D. officially launched the Clean Technology Centre coordinated and Bord Gáis sponsored **European Energy Saving Award (EESA)** competition 2009/10 for second-level schools in Ireland and the related **Intelligent Use of Energy at School initiative (IUSES)**.

Minister O'Keeffe; John Mullins, Chief Executive of Bord Gáis; and Noel Duffy from the Clean Technology Centre; (who are co-ordinating the initiative in Ireland as part of the EU programme – Intelligent Energy Europe), were joined at the launch in Bord Gáis headquarters, Cork, by about 50 invited guests. These included dignitaries, teachers, educational stakeholders, environmentalists, energy specialists, NGOs as well as transition year students from Coláiste an Spioraid Naoimh, Bishopstown, and Nagle Community College, Mahon Cork (who will be participating in the initiative during this school year).

The IUSES 2009/10 project is an educational programme that aims to show second-level school students the basic principles of energy efficiency and give a comprehensive guide to saving energy in their everyday lives via an interactive educational and experimental programme. The European Energy Saving Award (EESA), as part of the IUSES project, recognises schools and students that are enthusiastic and active in bringing about reduced energy consumption and who can demonstrate how simple changes can make a difference.

Speaking at the official launch of the EESA competition and IUSES initiative, Minister O'Keeffe said: "Energy consumption is a staple component of all our daily lives. Preparing breakfast, charging our phones, travelling to school, listening to music, using the internet - these are typical examples of how we use energy. Intelligent Use of Energy at School and the European Energy Saving Awards competition will encourage students to reflect on their everyday activities and make small adjustments that, together, will have an impact on our carbon footprint. The competition will showcase students' ingenuity, talent and ability as they compete at national and European levels."

Also speaking at the launch, Bord Gáis Chief Executive, John Mullins said: "Bord Gáis is proud to sponsor the IUSES Educational and Awards Initiative in Ireland through our Alternative Energy Research and Development Fund. As a leader in promoting and encouraging energy efficiency at all levels, Bord Gáis is delighted to support an initiative which sows the seed of energy awareness in energy consumers and procurers of the future. This generation will dictate the direction of our energy use and its ultimate impact on our environment."

Commenting on its role as the Irish Partner for the initiative, Noel Duffy, CTC, said: "Clean Technology Centre is delighted to co-ordinate the IUSES programme and EESA awards on behalf of the Intelligent Energy Europe. In line with its principles and objectives, CTC views the programme as a perfect opportunity to reach out to second-level schools to promote actions that will contribute to our energy sustainability and reduce our negative impact on the environment."

The award will comprise three categories: Schools, Individual students & Videos/Media (individual and/or group). The competition consists of two qualifying rounds: national winners, where for each category, three winners (1st, 2nd, 3rd) will be selected in every participating country; and European winners, where the winner of each category from all 14 participating

countries will compete for the European Award. In Ireland, the IUSES project and EESA competition are coordinated by the CTC, in association with the Intelligent Energy Europe programme and Sustainable Energy Europe.

IUSES has developed a behaviour-oriented educational kit, supported by the Intelligent Energy Europe programme and sponsored in Ireland by Bord Gáis, which includes: handbooks, multimedia animations and an extensive experiment tool-kit. The educational kit has been made available to participating second-level schools and teachers (who have been trained by CTC in its usage) and will engage students in all stages of the project.

Further details on the competition, application process, substantial prizes and the educational resources are available on www.iuses.eu or through Clean Technology Centre, CIT at T: 021 4344864 or E: iuses.ctc@ctc-cork.ie.



(L - R) Pearse O'Hanrahan, Board Member, Bord Gáis; Noel Duffy, Director, CTC; Lord Mayor of Cork City, Cllr Dara Murphy; Andrew O'Regan, Coláiste an Spioraid Naoimh, Bishopstown; Cllr Derry Canty, Mayor of Co. Cork; Rose Hynes, Chairman, Bord Gáis; Minister Batt O'Keeffe; John Mullins, CEO Bord Gáis; Cian Keane, Nagle Community College, Mahon; and Dr Brendan Murphy, President, CIT.



Noel Duffy, Minister O'Keeffe and John Mullins with students



Noel Duffy, Director, Clean Technology Centre.

Other CTC News

CTC has begun work on several new environmental initiatives including:

Food Waste Prevention and Home Composting

CTC, with partners Composting and Recycling Consultants Ireland, Irish Peatland Conservation Council and Wastedown Consultants, has been engaged by the EPA to develop and coordinate a major national food waste prevention and home composting programme under the National Waste Prevention Programme (NWPP).

This project will build on the successes of Local Authorities in promoting home composting, increasing the levels of food waste prevention, as well as further developing the success of householders taking responsibility for their waste.

The programme of work aims to provide a wide and effective range of information based tools and instruments for Local Authorities that will assist them in further encouraging food waste prevention and home composting. Some currently proposed examples are:

- “how to” information
- a dedicated website
- training programmes with support presentations and portable displays
- designs for demonstration gardens
- a Master Composter volunteer programme and sample promotional materials
- pilot trials

Further info: www.stopfoodwaste.ie

Local Authority Prevention Network (LAPN)

Following completion of its work with the 2006 – 2009 Local Authority Prevention Demonstration (LAPD) Programme (www.ctc-cork.ie/lapd), CTC has been commissioned by the EPA to provide expert assistance and support to Local Authorities in the Local Authority Prevention Network (LAPN).

CTC is currently working with several local authorities in the promotion of EPA funded prevention based programmes and projects in their own regions. Local Authorities, with CTC guidance and support, are working individually and together with others to create prevention awareness and potential in several sectors, such as healthcare, hospitality, agriculture, food and within the local authorities themselves.

Further info: www.localprevention.ie

Economic study of solvent recycling and treatment

The Environmental Protection Agency, as part of the National Waste Prevention Programme, have engaged CTC, in conjunction with EPS Consulting, to examine the economic and technical barriers inhibiting distillation or recycling (as material or energy) of solvent in Ireland. The potential for national reuse, achieving greater self-sufficiency and reducing business risks associated with export will be reviewed as part of the study.

Greening of Events and Conferences

CTC has been awarded a Fáilte Ireland commission to produce Environmental Guidelines for the ‘Event’ sector in Ireland. Fáilte Ireland has identified that Ireland is failing to compete in some areas of the Business Tourism sector due to a lack of environmental management credentials within the sector. On behalf of Fáilte Ireland, CTC will produce a set of Good Practice Guidelines in the Environmental Management of Conferences and Events for the Business Tourism Sector for use in Ireland. This follows on from CTC’s work with the hospitality sector in the major national Green Hospitality Award scheme

Further info: www.ghaward.ie

Best Practice for Vehicle Servicing and Garage Sector

The reduction of hazardous waste, by both industry and society in general, is a key element of the 2nd National Hazardous Waste Management Plan, which was published by the EPA in 2008. One of the priorities set out for the next five years, the management of hazardous waste from the vehicle servicing and garage sector in Ireland, is the basis of this project. The Guidance Notes to be developed by CTC will be drawn up in consultation with a number of national stakeholders and reflect all the current regulations pertaining to this sector. From these a Best Practice booklet will be developed for use by garages. This will outline proper waste management practices as well as a number of additional options designed to save garages money and reduce their environmental impact. CTC will also develop audit protocols and implement a audit piloting programme.

Farm Hazardous Waste Study

CTC has been commissioned by the EPA (as part of its work under the National Waste Prevention Programme and to implement the National Hazardous Waste Management Plan) to aid an increased understanding of the types and amounts of hazardous waste generated on farms. CTC will also lay the groundwork for the establishment of strategies that will contribute to the prevention, minimisation and suitable treatment of farm hazardous waste. Particular emphasis will be placed on waste agri-chemical containers, veterinary waste and sheep-dip waste. Project partners are Martin & Rea (Agricultural Consultants); Blarney Veterinary Clinic and Monaghan County Council.

Waste Management Life Cycle Assessment

CTC is part of a consortium that has been granted funding from the EPA 2009 STRIVE Programme for the project: Development of an integrated waste management life cycle analysis and carbon footprinting tool for the major waste streams in Ireland. The goal of this project is to create an Ireland-specific modelling tool that considers the environmental impacts of waste management from life cycle and carbon footprinting perspectives. The research consortium is led by SRI Research Ltd. from Northern Ireland in partnership with CTC and Environmental Futures Ltd. from England.

NAUTILUS BEV MINTER AWARD

On the 19th October, the Nautilus Bev Minter Award was presented to Arklow native, James Burnell, a Nautical Science student at the NMCI. This is the first time that the Award, presented each year to the most worthy cadet who demonstrates determination and positive attitude to succeed in their chosen career, has been made to a cadet studying in Ireland.

Nautilus is the Dutch/UK Union for Maritime Professionals and the Award is presented in memory of Capt Bev Minter who was Chair of the Unions Governing Body from 1989 to 1995 and was first presented in his memory, in 1995.

(L – R) James' Training Officer, Bob Brook, Chevron Shipping; Cadet James Burnell; and Mark Dickinson, Deputy General Secretary of Nautilus.



Presentation of elearning package in Rotterdam

The NMCI is a member of a Maritime Education Platform (MEP) project supported by 'Leonardo da Vinci' funding. The main concept of this EU project is to produce and share high quality educational material. This is being accomplished by developing a virtual learning space assisted by organised seminars. Partners include maritime colleges in Denmark, Estonia, Finland, Romania, Norway and The Netherlands.

Each partner in the project has to develop a high standard and up to date e-learning module(s) on a certain maritime subject. One of the tasks of NMCI is to develop a course for lecturers concerning Automatic Identification System (AIS).

The material developed in this case uses various methods that will offer a multitude of resources that can be used in the learning process and include SCORM packages, video, hyperlinks and

PowerPoints. This elearning package will be used by maritime teaching establishments and will follow the ethos of quality learning under the Maritime Education Platform (MEP).

The elearning package was presented at a seminar by Peter Walter in STC Rotterdam. Key contributors in this project were Bill Kavanagh (Lecturer, NMCI) and Maria Murray (Multimedia Developer, DEIS, CIT).

Further information can be obtained from <http://mep.stc-r.nl/> or peter.walter@nmci.ie

LIFELONG LEARNING PROGRAMME – MARENG PLUS

The NMCI is taking part in a European Union Leonardo da Vinci project funded under the Lifelong Learning programme, titled "MarEng Plus". The aim of the project is to develop e-learning programmes to help International seafarers improve their Maritime English. Shipping is a global industry and many diverse nationalities work on board ships trading worldwide. In the shipping industry, English is the standard language for official purposes and is the most common language in use for everyday activities. Many International students attend the NMCI and other maritime colleges in the EU and find that they have to work hard to master technical terms in English. The new learning programme will make that task easier. The latest programme, which will also be available on DVD, focuses on Transport, Security and the Marine Environment, and will include a teacher's manual.

Project partners are from the University of Turku, Kymenlaakso; University of Applied Sciences, Åland; University of Applied Sciences and Lingonet Oy, Finland; University of Antwerp, and the Institute of Transport and Maritime Management, Antwerp, Belgium; the Latvian Maritime Academy, Riga; Shipping and Transport College, Rotterdam, Netherlands; Gydina Maritime University, Poland; University of La Laguna, Spain; and the National Maritime College of Ireland.

<http://mareng.utu.fi>



Pictured above at a partner meeting in Turku, Finland include (first on left) Bill Kavanagh, NMCI Project Leader, and (fifth from left) Ger Lowney, NMCI Project Administrator.

Deirdre O'Neill



Deirdre O'Neill and the Irish Lights Tender "Granuaile".

Deirdre O'Neill from Waterford was conferred with a BSc (Honours) in Nautical Science degree in June '09 in the NMCI. She is the first person to be conferred with the degree having undergone a process of Recognition of Prior Learning (RPL). Deirdre obtained her Chief Mate and Master Mariner's written examinations previously in the NMCI and although she obtained her professional qualifications, she was not granted credits towards a degree at the time. Deirdre's research dissertation focussed on the cutting edge technology of Virtual Buoyage and the resulting maritime safety benefits. She is presently working as a Navigation Operations Officer with the Commissioners of Irish Lights (CIL) on the Irish Lights Tender "Granuaile". Former students of the NMCI who obtained professional mariners qualifications are now encouraged to undergo the process of RPL to work towards the BSc (Honours) in Nautical Science.

Captain Cormac MacSweeney

Captain Cormac MacSweeney, Assistant Lecturer in Nautical Science, was presented with an award by the Chartered Institute of Logistics & Transport in Dublin. Cormac obtained the best marks in Ireland in the examinations for the BBus in Supply Chain and Transport Management. The course was co-ordinated in the NMCI by Patrick Mullen, MBA."



(L – R) Rory Maguire, Divisional Manager of the Irish Maritime Development Office presenting an award to Capt. Cormac MacSweeney.

Students visit 'Independence of the Seas'



Students visited the 'Independence of the Seas' one of the largest passenger ships in the world. The students witnessed first hand the magnificent array of facilities on board. This included the adventure pool and water park areas, numerous restaurants and diners, nightclubs, full spa and leisure facilities, an impressive Flowrider, an ice-rink, rock climbing wall, basketball and volleyball courts, miniature golf course and a large shopping mall. The officers on board also showed the students some of the modern electronic systems on board which will help them in their studies at the College.

The ship was in the Port of Cork on an overnight stay, the first of two visits this year. Thanks must go to the Port of Cork and the kind assistance of the Captain, officers and crew.

Retirements



Bernard Toft retired at the end of August. Bernard worked in Nautical Studies for 29 years. Capt. John Clarence, Head, NMCI, presented a magnetic compass to Bernard and a bouquet of flowers was presented to Bernard's wife Breda by Kim Mulcahy, Nautical Studies lecturer.



In September, Denis Cremin retired from the Department of Mathematics. Denis was a service-in lecturer in NMCI since the Department of Nautical Studies departure from the Bishopstown campus. A party was held for Denis in the NMCI staffroom and the picture shows him surrounded by some of his colleagues. Both Bernard and Denis will be sorely missed.

Rugby News

The CIT/NMCI rugby team lost narrowly to Tipperary Institute of Technology in a thrilling encounter (17-14) in Thurles RFC. The team played very well and were unlucky not to win. They were only centimetres from the Tipp try-line driving forward to score a winning try when the match ended. All can be proud and were led by player/coach John Conlon, Chief Mate. CIT/NMCI is truly an International team and included players from five countries speaking six languages!



Conferrings at the NMCI 19th June



(L – R) Sub Lieutenants Shane Mulcahy, Aisling O'Flynn and Stephen Stack relaxing during the ceremony.



Ciaran Jackson and Maarten Verweel both graduated with a BEng in Marine & Plant Engineering.



Peter Cahill and Thomas Gallagher both graduated with a BEng in Marine & Plant Engineering.



Deirdre O'Neill and John Dawson both graduated with a BSc (Hons) in Nautical Science.



Michael Kearney was conferred with a BSc in Nautical Science and Martin Conneely was conferred with a BEng in Marine & Plant Engineering.



Shane Mulcahy graduated with a BSc in Nautical Science with his girlfriend Katie who is a 4th Year nursing student in UCC.



Brendan Curtin and Niall Kelly both graduated with a BSc in Nautical Science.

MA Programme in Public Relations Successfully Launched

The inaugural MA in Public Relations with New Media has been successfully launched by the Department of Media Communications.

This one year full-time course got underway in September with 16 students accepted on to this new and innovative programme of study. The students involved are graduates from a range of disciplines and educational institutions. A number of the students are CIT graduates of Business Studies, Multimedia and Structural Engineering while the course has also attracted graduates of UCC, UL, NUI Galway and Carlow IT.

The MA in Public Relations with New Media is delivered over two taught semesters and concludes with a Master Thesis. Among the modules being taught are Public Relations Theory and Application, Media Writing, Multimedia, Strategic Management and Cyberculture.

The new course was devised to meet the changing needs of those wishing to pursue careers in the public relations and professional communications sectors and offers the opportunity to gain a

comprehensive understanding of the strategic function of public relations as a form of communication and of the role and workings of the mass media. Much of the focus of this new course aims to equip students with the practical skills required now by employers in this emerging industry.

A significant portion of the course concentrates on new media and online communications. Students will gain key practical multimedia skills as well as focus on the changing nature of the mass media and corporate communications as a result of the emergence of digital and interactive media.

Rose McGrath, Head of Department of Media Communications, expressed delight with the calibre of students opting for this course. "The students are from a range of backgrounds and disciplines and we are delighted at this as it has proved a very strong dynamic in the group. It is an exciting time for the staff involved and the students".

The MA in Public Relations with New Media is an addition to the provision of Public Relations education in CIT. The Department of Media Communications also delivers the

Higher Diploma in Arts in Public Relations (Level 8) – a one year part-time course of study which this year has an enrolment of 25.

For further information on the MA in Public Relations with New Media and the Higher Diploma in Public Relations please contact: Emmett Coffey, Dept of Media Communications. T: 021 432 6649
E: emmett.coffey@cit.ie

Particular emphasis will be placed on the development of key practical skills such as media and report writing and personal presentation and event management skills. The course will appeal to those who are currently working in a communications/PR environment or to those who wish to move to such a role. The Higher Diploma in Arts in Public Relations is accredited by the Public Relations Institute of Ireland.

Further Information:

Further information on course content, entry requirements can be found on the webpage:

www.cit.ie/parttime.cfm/section/narrow/aID/188/action/page/CatName/Courses/http://media.cit.ie/mapublicrelations/

Donal Power Retires

The Media Communications Department staff would like to wish its colleague Donal Power a very happy retirement. We had 3 lovely occasions to wish Donal all the best for the future. At the Graduate Exhibition in June 2009 we took the opportunity to present Donal with 2 beautiful print pieces from the work of Illustrator and NCAD lecturer - Brendon Deasy.



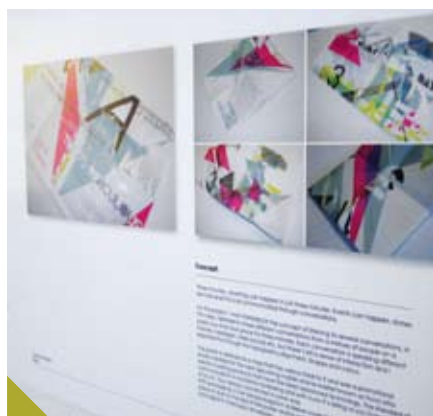
- 1 Ed Riordan, Kevin Gill, Eva Juhl with Donal.
- 2 Catherine Elwood and Donal Power.
- 3 Orla Flynn, Margo and Donal Power, Rose McGrath, Damien Courtney.



Twenty Six Degrees Exhibition

The BA Design Communications 3rd year students undertook a student initiated exhibition, which was organised and planned by the students, along with lecturers Donal Power and Valerie Renahan. An opening evening took place on the 28th May which marked the successful completion of 3 years of hard work, before embarking on their futures in industry or further study on the Visual Communications Degree. The exhibition demonstrated work undertaken over the course of their final year and ran from 28th May – 2nd June 2009 in the Gallery Area, upstairs in the Nexus Student Centre. The creative array of work involved experimental, corporate and industry based design projects. The gallery walls were a fusion of creative solutions from a number of Graphic Design disciplines - Experimental Typography, Illustration, Photography, Branding, Advertising, Promotion, Web Design and Packaging.

Congratulations to all students. A special thanks was also attributed on the opening night to lecturer Donal Power (recently retired), who contributed greatly to the creative development of these students and who was actively involved in the planning and organisation of the BA in Design Communication exhibitions.



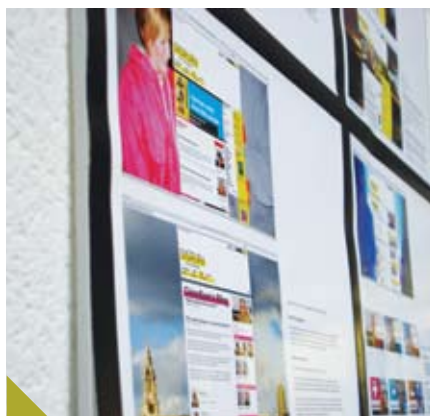
Claire Buckley



Lizzie Reid



Niall Flynn



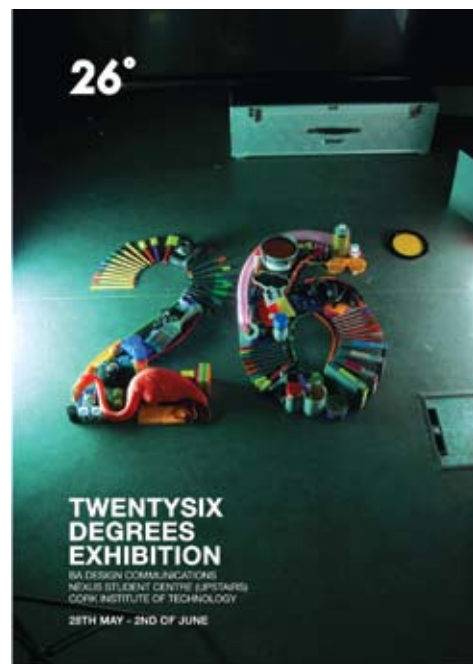
Pearse O'Shea



Tom Ashe



John Cronin



White Space

Visual Communications & Multimedia Graduate Show 09

WHITE SPACE took place in the Tourism & Hospitality Building and was officially opened by the President of ICAD, David Joyce. **White Space** explored creativity, imagination and innovation in visual communications and digital media.

Entitled **WHITE SPACE**, this exhibition displayed the final year projects of students in the Visual Communications & Multimedia honours degree programmes in the Media Communications Department in CIT on the 5th of June. The culmination of four years study, **WHITE SPACE** featured the work from 30 students who have now embarked on careers and further studies in design and digital media.

Included in the exhibits was a interactive digital displays and artefacts ranging from a digital version of the classic children's game Twister, an in-car device aimed at detecting driver fatigue, a multi-touch screen displaying tourist information and installations that used cutting edge sensor technology to encourage social interaction in public spaces. **WHITE SPACE** also showcased the work of the first graduate of the MA in Media Design in CIT, Kevin O'Mahony.

The Visual Communications projects that were on display included a poster campaign alerting the public to the issue of Social Phobia and the branding of a diverse array of products and services such as traditional Irish tea, 100% cotton clothing, a new late night café in Cork city, a summer arts festival, a new sunglass store and a campaign aimed at encouraging healthy eating among school children.

Commenting on the upcoming exhibition, Head of the Media Communications Department Rose McGrath stated that this offered the students the opportunity to put on show the high levels of innovation and creativity that are required of those wishing to work in the design and digital media industries: "These students will enter competitive and fast-changing work environments and **WHITE SPACE** is an opportunity for them to display their considerable talents. The lecturing staff was very proud of the students and the manner in which they progressed over the last four years".

More information on the exhibition and on the work displayed can be viewed on: media.cit.ie/graduateshow09



Media Communications staff at the Exhibition: (L - R) Hilda O'Driscoll, Paul Green, Donal Power, Joey Campbell, Carol Lynch; and Trevor Hogan.



The exhibition was opened by David Joyce, President of the Institute of Creative Advertising & Design (ICAD).



Dr Barry O'Connor, Registrar and Vice President for Academic Affairs, gave a warm welcome.



Aaron O'Driscoll – BA in Visual Communication Graduate.



The work of Sineád Collins, Eileen McConigley and Gillian Powell - BA in Multimedia Graduates.



Kevin O'Mahony - MA in Media Design Graduate.



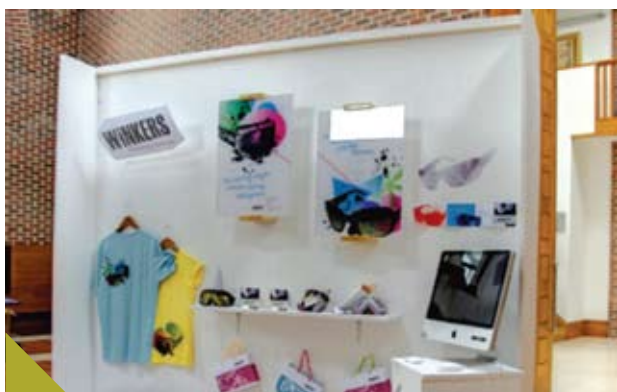
The work of Tommy Hannon and Adam Lyczakowski - BA in Multimedia Graduates.



The work of Roisín Hanley – BA in Visual Communication Graduate.



Iola Pearse and Aonghus O'Ceilleacháir - BA in Multimedia Graduates.



The work of Martin Whelan – BA in Visual Communication Graduate.



David McLoughlin – BA in Visual Communication Graduate.



lactic acid bacteria

Isolating and Characterisation of New Bioactives

Drs Aidan Coffey (Department of Biological Sciences) and Ambrose Furey (Department of Chemistry) have recently secured funding under the Department of Agriculture, Fisheries and Food Programme (FIRM 2008). This project focuses on developing new methodologies to isolate and identify antifungal compounds produced from Lactic Acid Bacteria (LAB) species. This project is part of a research team combining expertise from CIT and UCC (Prof. Elke Arendt) that plan to characterise antifungal compounds from lactic acid bacteria with a view to producing natural preservatives for improved food safety and extended shelf life.

Fungal contamination is a major problem in a broad range of food products. Fungal growth causes food spoilage and this leads to product and concomitant economic losses. Lactic acid bacteria have GRAS-status (Generally Regarded As Safe). They are frequently found in fermented foods, due to their tolerance to lower pH ranges. This allows them to out-compete other bacteria in a natural fermentation, as they can withstand the increased acidity from organic acid production. This group has recently identified a strong antifungal LAB strain and successfully identified the compounds responsible for such activity. The strain has been patented and licensed, as industry has recognised that its products can be used as new natural food preservatives. This project aims to identify, isolate and characterise another LAB strain that shows a distinctly different host pattern and/or may belong to a different species than the previously patented strain. The inhibitory activity of the producer LAB as well as of the purified antifungal compounds will be assessed in vitro.

The post-graduate funded under this programme, Brid Brosnan, is a graduate of Limerick Institute of Technology with a degree in Pharmaceutical and Forensic Analysis. After graduating in 2008, Brid took part in the FÁS Science Challenge; a programme organised by FÁS to provide Irish graduate students with a unique opportunity to train for six months at prestigious research institutions in the United States. The initiative served to enhance the skill sets of these individuals, strengthen linkages with world ranking institutes, broaden the research base in Ireland and nurture the future generation of industry. Brid was awarded one of the positions available at Kennedy Space Centre in Florida. There she worked in the Life Science Laboratory with Dynamac Corporation. Dynamac is a company subcontracted by NASA to perform basic and applied life sciences research and development activities. They also provide scientific

and engineering support to nearly all of the life science experiments chosen to fly aboard a Space Shuttle or on the International Space Station.

Brid was involved in a project testing new materials for their ability to absorb carbon dioxide, humidity and Volatile Organic Compounds (VOC) from the air supply within the space shuttle or on board the International Space Station (ISS). The materials tested had to adequately remove these compounds as well as having the ability to be regenerated and reused. While at the Kennedy Space Centre, Brid got the opportunity to partake in unique opportunities to test the air supply from Leonardo. Leonardo is a large pressurised container (Multi-Purpose Logistics Module - MPLM) used on the shuttle missions to transfer cargo to and from the international space station. Supplies are delivered to the ISS and completed space experiments and waste are returned to Earth in the Leonardo. On return to Earth, all air and material within the Leonardo was tested for contamination. Brid was involved in the ABRS (Advanced Biological Research System) chambers pre flight testing, checking the performance and lifetime of the filter beds contained within the system. This was being performed for a flight payload that was on board the shuttle launch in November 2009.

The experience gained in Florida convinced Brid that she would like to continue a life in research in pursuit of a PhD, with particular emphases on isolating bioactives to increase the shelf life of food products.



Brid pictured with her supervisor Dr Oscar Monje at the International Space Station Centre at Kennedy Space Centre, Florida (Leonardo MPLM in background).

Four Major Awards in Enterprise Competition

CIT picked up four major awards at the Enterprise Ireland/Invest Northern Ireland Student Awards Finals 2009 at the University of Ulster, Coleraine. Senior Lecturer, Sean F. O'Leary, who has guided many CIT innovators to international success was also recognised with the Enterprise Ireland/Invest Northern Ireland/Cruickshank Academic Award.

The Cruickshank Most Technologically Innovative Product €7,500 Award went to Vision RE™ for "A Terrain/Obstacle Detection System for the Visually Impaired". The team is made up of Etaion Ní hAilpín and Norma Downing, Business Studies; and Kieran O'Callaghan, Mechanical Engineering.

The Enterprise Ireland/Invest Northern Ireland Solving Problems for Industry €7,500 Award was NebulAer™ for "Nebuliser Noise Attenuation System Development". Team - Ciara McKenna, Biomedical Engineering; Luke Crowley, Kevin Gilmartin and William Murray, Mechanical Engineering.

The Enterprise Ireland/Invest Northern Ireland €2,500 Award of Excellence joint winner was Rigi-Jig™ for "Innovative Engine Tool Development". Fiona Hedderman, Damian Buttimer and William O'Shea, Mechanical Engineering; and Dave Cronin, Biomedical Engineering.

Dr Brendan Murphy, President, offered his congratulations to the winning teams and their supervisors Finbarr Sheehan, Chris Gibbons, Dr Michael J. O'Mahony and Seán F. O'Leary. "This is a great honour for the Institute and is testament to the hard work and innovation of our students and staff. We at CIT have a strategy of research, innovation and commercialisation and these successes reinforce our position as a leading centre for research. Congratulations also to all in the Development Office, who have been crucial to our continuing success."



The Enterprise Ireland/Invest Northern Ireland Solving Problems for Industry €7,500 Award was NebulAer™



The Cruickshank Most Technologically Innovative Product €7,500 Award went to Vision RE™



(L – R) Dr Michael J. O'Mahony, Course Coordinator CIT; Dr Barry O'Connor, Registrar and Vice President for Academic Affairs, CIT; Paul Walsh, Final Year Mechanical Engineering Degree, CIT; Elaine Fennessy, Talent Acquisition Specialist, Human Resources, Abbott Ireland, Vascular Division; Dr Brendan Murphy, President, CIT; and Matt Cotterell, Head of School of Mechanical and Process Engineering, CIT.

Inaugural Abbott Ireland Intern Award and Bursary

Presentation by Elaine Fennessy, Abbott Ireland, of the Inaugural Abbott Ireland Intern Award and Bursary to Paul Walsh, Final Year Mechanical Engineering Degree, was made at the Abbott Ireland stand at the Careers Fair on 6th October. The award and bursary was based on Paul's excellent participation as a CIT Work Placement Student in Abbott Ireland, Vascular Division, Clonmel, Co. Tipperary during the academic year 2008/09.

Global Student Entrepreneur Finalist Award

On the 20th November, in a red letter day for Ireland and CIT, Kieran O'Callaghan, of Vision RE™ was honoured with a 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. Kieran received high acclaim from the distinguished judging panel of international entrepreneurs, was very highly rated right throughout the judging process and was accorded particular mention and praise for the innovative technical expertise and the highly ethical nature of his developing enablement products for the visionally impaired.

Kieran performed with the greatest distinction, enthusiasm and honour throughout a gruelling series of workshops, presentations and exhibitions over two days – a remarkable ambassador for his country as the first ever Irish student to reach the GSEA Finals from a nominated worldwide entry of over 1,500 students. The GSEA programme is the premier international entrepreneurial and innovation student award. Short-listed finalists compete against their peers by presenting their business to a panel chosen from over 60 judges. The finalists are afforded an unequalled opportunity to engage with world class entrepreneurs, receive media exposure, win cash and share in over \$150,000 in donated business services.

The competition awards the title of Global Student Entrepreneur of the Year 2009, a US\$10,000 cash prize, plus tens of thousands in business products and services donated by Entrepreneurs' Organization members, including Web services, printing, PR, and consultancy.

Ireland and Cork Institute of Technology can be hugely proud of Kieran and of his equally deserving Vision RETM team members Norma Downing and Etaion Ní hAilpín.

For more information on Vision Research Enterprises:
<http://visionre.cit.ie>

The Global Student Entrepreneur of the Year 2009 was awarded to Simon Fraser University student Milun Tesovic, and it all started with a love of technology and music. When Tesovic started Metroleap Media at age 15, he immediately recognised that the recording industry and the consumer were equally craving a better way to find music lyrics online. While simultaneously carrying a full course load of classes, Vancouver-based Tesovic created MetroLyrics.com that has become an Internet music megalopolis. Today, all of those late nights were validated when Tesovic became champion of the 2009 Global Student Entrepreneur Awards and the recipient of \$70,000 in cash and donated services that will help to support his company and development as an entrepreneur. Tesovic also received the GSEA Innovation Award for his creativity and unique approach to business.



Global Student Entrepreneur Finalist Award winner Kieran O'Callaghan with trophy at GSEA Finals in Kansas City.

2nd in the world

at the World Skills Competition



WorldSkills Calgary 2009 was, in the words of WorldSkills International President, Jack Dusseldorp, the **“Best Competition Ever”**.



848 Competitors and thousands of delegates from around the world descended on Calgary, Alberta, Canada for one magical week in September. During their time here, they toured the world-renowned Canadian Rockies and Banff National Park, they cheered as they proudly crossed the Grandstand stage at the Opening Ceremony, they competed simultaneously in 45 skill categories in four days of intense competition, they laughed and danced at the City of Calgary WorldSkills Cultural Celebration at Olympic Plaza, they enjoyed superb weather throughout and they shed a tear and saluted their new-found friends at the emotional Closing Ceremony and Farewell Party. Hailed as the pinnacle of global skills, trades, and technology competition, this bi-annual event sets a precedence for world-competency industry standards. All in all, it was truly an event to remember.



The Irish team for the WorldSkills 09 was selected from among the DES winners from the 2008 and 2009 National Skills Competitions. A stringent selection process for team participants depends on a combination of factors, including results in a NSC, performance at interview, and performance during the special training programme.

CIT hosted a reception for members of the Irish World Skills Team who finished second in the World. This is the highest result ever achieved by an Irish team since becoming a member over fifty years ago. Ireland's team of 11 competitors achieved great success winning three gold medals, two bronze medals and five medallions of excellence. Five of the team were from CIT and these students obtained one Gold Medal, one Bronze Medal, a 4th place and two Medallions of Excellence.

Fermoy apprentices Barry Dennigan and Gerald Roche won gold and bronze medals respectively in the competition. Barry won a gold medal for his skills in carpentry while Gerald won a bronze medal in the construction metal works category. They both went to school in Coláiste an Chraoibhín in Fermoy.



Barry Dennigan; Minister for Education and Science, Batt O'Keeffe; Dr Brendan Murphy, President, CIT; and Gerald Roche.



Thomas Sheehy from Dingle, Co. Kerry, won a Medallion of Excellence for his skills in Refrigeration.



David Gough from Curracloe, Co Wexford, won a Medallion of Excellence for his skills in Electrical Installation.



Matthew Keating from Portlaw, Co. Waterford won 4th place in the Plastering Category.

Speaking at the reception, Dr Brendan Murphy said: "This is a celebration of the successes in Calgary. It demonstrates that even though we are a small country we can, and do, produce world class experts, which bodes well for the future."

According to CIT's John Twohig, Competition Manager and Team Leader for Experts, the participation and success of the Irish competitors showcases our highly skilled workforce and our ability to support technically advanced industries and service providers.

"The experience and results of all the competitions provide valuable feedback both to the individuals and the systems and enterprises in which they are being trained. For some, it is recognition for outstanding achievement, while for others it provides the motivation and knowledge to aspire to higher standards. For the onlookers it is a revealing experience to see highly competent and skilled young people in action. The Competition is particularly effective in the context of providing positive career role models for school aged youth and provides a unique means of exchange and comparison of world-class competency standards in the industrial skills and service sectors of the global economy."

The two CIT students who won medals for Ireland at the World Skills Competition in Canada have a bright future ahead of them in the trades area, according to the Minister for Education and Science, Batt O'Keeffe TD who said "I want to again congratulate the Irish competitors who came second in this year's World Skills Competition. As Minister, I made sure that funding was available to send the team to Canada this year and, when you consider that they were competing against 50 other countries and regions, the scale of their achievement is enormous. We've shown that we can compete at the highest level on the world stage. The team's achievement underlined the need for continued training and upskilling of our workforce so that we can compete for jobs here and abroad and meet the challenges of the new economy."

London will host the largest international vocational skills competition in the world. It will be held at the ExCeL exhibition and conference centre in London's docklands from 5th - 8th October 2011.

2009

London International YOUTH SCIENCE FORUM (LIYSF)



The opening ceremony of the 2009 London International Youth Science Forum (LIYSF) took place on 29th July. Now celebrating 51 years, this exciting annual event brought together some 300 young science students from almost 60 countries across the five continents. Ireland was well represented by the 13 third-level students that the RDS has helped to send.

Two students from CIT, Jessica Prendergast and Seán O'Callaghan, give their account of an exciting fortnight at the Forum.

Jessica Prendergast

Having learned that I would become a participant at the London International Youth Science Forum I was filled with excitement and anticipation. My expectations were high, and I am delighted to say that those expectations were not only met, but completely surpassed. The first day of the Forum consisted of the opening ceremony. I was thrilled to hear a speech from Prof. Robert Winston. Having been a devoted viewer of his programme 'Tomorrows World' I was truly star struck upon meeting him. I am currently studying Biomedical Science at CIT, thus biology is my primary interest and I was fascinated by his work on fertility treatment.

One of the many highlights of the Forum for me was a lecture from the President of LIYSF Prof. Richard O'Kennedy. This was the most relevant for me as it involves specifically my field of study. The research Prof. O'Kennedy and his team are undertaking at the moment, I found very engaging, they are trying to use antibody based systems to treat cancers and other common diseases. I also learned about the Biomedical Diagnostics Institute in Dublin, where this research is being carried out. This lecture was very significant to me as it gave me a better idea of what I'd like to pursue after my degree. Before the Forum I had no

definite goals for my future as a Biomedical Scientist, and wasn't sure what, if any, research was being carried out in this area in Ireland. Having attended the Forum and seen the myriad of possibilities for research I am now sure that research is the avenue I would like to pursue. The Forum was instrumental in widening my horizons in my own career as well as being exposed to countless other scientific disciplines.

Another lecture that stands out in my mind was Dr Maesha Deheragoda's entitled 'Bioscience'. During this lecture we debated topics such as stem cell research and the Genome Project. I had already formed opinions on these topics but debating them with people of all different backgrounds, both conservative and liberal, I now have been challenged to reassess my assumptions.

One of the strong points of the Forum I believe is that it gives young people an opportunity to discuss such controversial topics as abortion and genetically modified organisms, and overall become more educated and informed about them. As scientists of the future, it is we who will be making the key decisions regarding these topics in the future. Therefore it is imperative that we remain open-minded about them, and do not let our cultures to completely influence our attitudes.



Once again my views were questioned by Dr Robert Adam's lecture entitled 'Drugs, dopamine and impulsivity'. This lecture began as a lecture examining what causes a person to be impulsive and Dr. Adam demonstrated some very entertaining experiments performed on monkeys. This lecture however then lead on to more philosophical questions such as what controls human impulses, and the concept of free will. Are we all just robots programmed to make certain choices? Or do we, in fact, determine our own destiny? Having never considered these important questions before I was completely enthralled by this lecture and it has left some lasting questions in my mind.

The theme of this year's Forum was 'Science Serving Mankind'. The principle crises the world faces in the future will be food and energy production to sustain our expanding population.

The latter was most comprehensively dealt with by Prof. Steve Cowley's talk 'Fusion- Powering the future?'. I have a limited knowledge of physics and an even more limited interest in the subject. However these have both been altered following Professor Cowley's lecture. His

work involves joining four small hydrogen atoms to form a helium atom in a process called 'fusion'. If scientists can perfect this technique, the world's energy crisis would be averted. This lecture gripped me and demonstrated what a pivotal role we as scientists will play in the future of civilisation as we know it. Prof. Cowley encouraged us to all become proactive and to use our interest in science to better our world. His research could mean an end to the burning of fossil fuels and the phenomenon of global warming. This fact alone astounded me, and certainly pushed me to take my role as a scientist more seriously.

Having been exposed to such a plethora of brilliant scientists for two weeks and learning about the groundbreaking research being undertaken by them, I have certainly been inspired to maximise my own potential as a scientist of the future. Perhaps one day, I could be speaking to students at the Forum about research I have been involved in!

The social aspect of LIYSF is as big a part of the Forum as the scientific side, and one of the aspects that has left a lasting impression on me. It was such a unique

opportunity to mix with peers from so many different countries, backgrounds, and ethnicities. The delegation of thirteen Irish people made for something of a motley crew, however we formed great friendships with delegates of all nationalities. This was most clearly demonstrated in our 'International Cabaret'. We elected to perform a ceili which consisted of 13 Irish, 2 Israelis, 1 American and 1 Spaniard, and I am pleased to report that nobody missed a beat!

The Forum also afforded us the opportunity to discover London for ourselves.

The weekends were free for us to go sightseeing, and I took full advantage of this and visited all London's major tourist attractions. Visiting the Science Museum, Big Ben and the changing of the guard at Buckingham Palace are some fond memories I hold of London. Seeing 'Wicked' and 'Les Miserables' in the West End were my personal highlights of the city.

During the Forum I made every effort to wring as much enjoyment out of this unique experience as possible, and I know the memories of the Forum will remain with me long after those amazing two weeks.

Sean O'Callaghan

LIYSF was simply an experience of a lifetime that, unfortunately, no report of any length can ever hope to capture, but here are just some of the amazing experiences that LIYSF had to offer. We were treated to an amazing opening ceremony that set the mood, standard and really rallied us for the trip. I was especially impressed with the big names that appeared at the opening ceremony, Prof. John Ellis and Prof. Lord Winston. Lord Winston gave an inspirational speech concerning the ethics of being a scientist and Prof. Ellis gave a fantastic physics lecture concerning CERN which impressed and interested physicists and non physicists alike. It truly displayed how professional and prestigious LIYSF is.

Prof. Richard O' Kennedy's lecture on 'Exploiting antibodies for the treatment of cancer' was an important and relevant lecture that, although being quite complex, was explained in an easily accessible manner whilst still being entertaining and personally caught my eye and gave me a line of ambition since it is along the lines of my career path. Prof. Steve Cowley gave a lecture on Fusion. It highlighted how important energy is for our developing role and gave me the stark reminder that there are problems out there that need fixing, and seeing this scientist in action made me realise that I really can be part of the solution with just some hard work and time.

Another lecture that seized my attention was entitled 'Did maths cause the credit crunch?' by Stacy Williams. This lecture

explained what happened in the current credit crunch and gave long sought simple answers that I have been asking since the GED started. He taught us the basic principles behind stocks, business and how science is indeed intimately entwined amongst it all. A very important lesson that, quite frankly, I cannot believe I was unaware of since I now know the importance of it all.

The day trips were hands on proof of the incredible and borderline unbelievable world that science opens up to mankind. All the trips were terrific experiences as they showed the tangible side of science that I could actually grasp with my hands. My favourite trip was the Mullard Space Lab. This was a country home come lab where they lived and worked. They planned and constructed components and also monitored satellites. This trip was good as numbers were small and it gave me the chance to interact with the professional and it also cleared up misconceptions I had about how you put what you learn into everyday practice. So even though this trip had little to do with my line of study, its themes were still universal and I ended up taking a lot more away with me that expected. It really epitomised what LIYSF was all about.

Finally an aspect of LIYSF that I simply loved was the plenary sessions we had where we were split into groups and we ourselves got our hands dirty. The topic of 'Science Serving Mankind' was the most engaging. In this we discussed different aspects from biosciences to

oceanography and engineering to cutting edge nanotechnology. We looked at our respective aspects and probed the ideas of solution, their possibility and, perhaps most importantly, the ethics behind what we chose to do. This session is where I learned so much more than simply science and saw things never seen before from all perspectives.

An experience of a lifetime was had, and it was one that I will remember for the rest of my life. On a serious note behind the fun; being social and being able to communicate, understand, tolerate and have empathy for the people we share this planet with is an aspect for scientists that enough emphasis is seldom put on. LIYSF hit the nail on the head with this one.

I would like to give a sincere thanks from the bottom of my heart to all of the people that so willingly provided this trip for me, your time and resources were well spent and more than the most advantage was taken, you can be rest assured. I would like to give a special thanks to my college, Cork Institute of Technology, the kind people at HETAC, the RDS and Karen Sheeran who did an outstanding job with a pleasant smile even at ungodly hours.

Thank you all for a trip of a lifetime. Someday, with work and a little luck, I will give my own back when I am a scientist in a position to do so.

retirements

Brian Donovan, Derry O'Mahony and Paul Sliney

A retirement dinner was held on the 5 June in the Kingsley Hotel to say a special farewell to 3 colleagues who all started out in the Department of Electrical and Electronic Engineering as it was then known. Brian Donovan, Derry O'Mahony and Paul Sliney, along with their respective wives, Brid, Mary and Anna, were the guests of honour and many colleagues, current and former, from the Institute turned out to give them a great send-off. Led by the MC for the evening, Joe Connell, tributes were paid by Matt Cranitch, John O'Sullivan and Michael O'Gorman. Outstanding contributions made by all 3 were recalled; Brian's endless capacity to help students with their projects, Derry's work with part time students, and also with the TUI, and Paul's computer engineering expertise plus his organisational knowhow in several management functions. An award was also made to Derry on the night specifically from his maritime electronics colleagues. The night was rounded off perfectly with an address from Larry Poland who finished with an invitation to all 3 to apply for membership of the department's retirees club.



Derry O'Mahony, Brian Donovan and Paul Sliney.

Liam Hodnett

A highly enjoyable retirement function was held on the 26th September in McCarthy's Bar to mark the retirement of Liam Hodnett, former Head of the Faculty of Engineering after many years of service to the Institute. The attendance included Liam's family and many current and former colleagues in CIT. The delicious barbecue was followed by a number of speeches from Joe Harrington, Barry O'Connor and Pat Kelleher, former Director of CIT. The speakers alluded to Liam's many and varied activities and responsibilities over the years and highlighted his significant contribution to the development and expansion of the Institute, both on the academic and the sporting side. Liam thanked everyone in a humorous speech reminiscing on his years in the College. Presentations on behalf of the staff were made to Liam and his wife Margaret. A great night was had by all.



Liam with Barry O'Connor and Joe Harrington.



Clair Sinnott

A large gathering of family, friends, CIT colleagues and external colleagues both past and present attended the retirement function which was held on 12 November 2008 to honour and celebrate the work and achievements of Claire Sinnott, the first Secretary/Financial Controller.

As a lecturer, Claire made her presence felt from the beginning, she took the students under her wing and spent time and effort in ensuring that every student reached their full potential. As Secretary/Financial Controller she produced documentation that gave structure to the Institute and her wonderful facility with numbers and computing ensured that the Institute was able to function as a vibrant Third Level Institution.

The President stated in his speech that "Claire has been a great public servant. She not only served CIT well but also the Higher Education sector as the Department of Education & Science and the HEA will testify. We were privileged to have had such a great first holder of this office who set the tone for the Institute through her hard work, honesty, openness and fairness and who ensured that CIT had a reputation for efficient use of public monies with a clear bill of health each year from the Comptroller and Auditor General. We thank you for your long and dedicated service to CIT and wish you and Tom a long and happy retirement".

A presentation was made to Claire on behalf of all her colleagues past and present, her colleagues on the Institute Executive Board and members of Governing Body past and present. A presentation was also made on behalf of the Students Union by its President, Gearóid Buckley, as an acknowledgment of her lifelong commitment to CIT and its students.



Dr Michael Noonan

The Governing Body and a gathering of CIT colleagues past and present attended a retirement function which was held on 2 July to honour and express appreciation to Dr Michael Noonan's enormous lifelong contribution to CIT.

Michael joined the Crawford Municipal Technical Institute in 1972 as a Lecturer in Biochemistry and became Head of Department of Chemistry and Biology in 1978 where he developed many innovative courses. He will be remembered especially for developing the Degree in Chemical Technology, now titled the Degree in Chemical and Biopharmaceutical Engineering.

In 1992, Michael was appointed Assistant Principal and he became involved in the major building activities in the College, his achievements include the three beautiful buildings, the Student Centre, the Tourism & Hospitality Building and the Administration Building clustered about the lovely courtyard as well as the refurbishment of many laboratories and workshops which today are some of the best in Ireland.

At the presentation, the President stated in his speech "Michael, you can look around this campus with pride in a job well done and that is vital for the future of CIT, its students, staff and wider community. You will not only be remembered for the wonderful new buildings and the quality refurbishments of the old infrastructure but for your obliging and helpful character, your enthusiasm and loyalty to CIT and to your colleagues and your concern for the good reputation of CIT. For this we express our appreciation and we thank you and wish you the quality retirement that you deserve".

The President presented Michael with a painting from CIT CCAD graduate Aileen Phelan on behalf of all his colleagues past and present and his colleagues on the Institute Executive Board past and present.

The Chairman of Governing Body, Dr Paddy Caffrey, also presented Michael with a piece of artwork by Suzanne O'Sullivan, a graduate from the CIT CCAD and stated that "this was a token of Governing Body's appreciation of your huge contribution to the Institute over the last 36 years".

Eamon O' Connor

When Eamon first arrived to the Crawford Municipal Technical Institute, he recalls that including himself, the entire administrative staff in the Institute numbered just 3 people. It was in the days before computerised systems took hold and Eamon remembers spending his first weeks updating student record cards by hand. The decision to provide free second-level education to all in 1967 meant there was a huge influx of students to the third level sector from 1972 onwards and Eamon oversaw a rapid expansion in the administration of both Admissions and Examinations.

The Eighties saw the introduction of computer systems to CIT and Eamon organised, in his words, "the installation of a fairly primitive Apple Macintosh network in the General Office". From that point on, the management and storage of data became much smoother. Over the years, Eamon's work and dedication effected significant improvements to the student experience. Before his departure, he presided over an extremely complex but smooth administrative changeover to semesterisation and implementation of the Banner Record system.

At a retirement function held for Eamon O'Connor, on 24th Sept, Dr Barry O'Connor, Registrar and Vice- President for Academic Affairs, praised Eamon's administrative skills and his extensive knowledge of and expertise in the Central Applications Office procedures. Tributes were also paid by Teresa Moran and Anna Kirby to Eamon's democratic and supportive management.



Eamon with Susan Varian and Noreen Kelleher.

The **10th** Fitter/Turner Awards Ceremony



The Staff of the Precision Engineering Section would like to congratulate all of the award winners on their success and wish them all the best in their future careers.

The 10th Fitter/Turner Awards Ceremony was held in CIT on 22 October. It consisted of awards to a number of apprentices at Phase 4 and Phase 6 in Fitting and also an award to the "Best Employer" at both phases. This is to honour the employers of the overall winners at both levels because they play no small part in selecting and motivating these apprentices. Avoncourt Packaging Ltd., Ballycurreen Industrial Estate, Cork, was awarded Best Employer Phase 4; and Pfizer Biotechnology, Ringaskiddy, Co. Cork, was awarded Best Employer Phase 6.

Excellence does not come easy. The example set by these apprentices is a credit to their families and teachers who from the earliest age instilled the qualities which have resulted in their success.



Peter Deasy makes a presentation to Pat O'Shea to mark his retirement.



Stefan De La Cour presents Peter Zachardala with a Certificate of Excellence, 1st Place Fitting Overall Phase 4. Peter is serving his apprenticeship with Avoncourt Packaging Ltd., Ballycurreen Industrial Estate, Cork.



William France presents James O'Keeffe with the award of 1st Place in Workshop Practice Phase 6. James served his apprenticeship with Stryker Howmedica Osteonics in Limerick. James also won 1st Place Overall in Phase 4 2007/2008.



Peter Deasy presents John O'Brien with the award of Best Overall Phase 6 Apprentice. John served his apprenticeship with Pfizer Biotechnology, Ringaskiddy, Co. Cork. Having completed a Maintenance Technician Course at night in CIT, John is now well on the way to becoming a qualified Mechanical Engineer.

news from the access office

Deirdre Creedon, Access Officer

CIT has been approved funding through the HEA Dormant Accounts to develop Access Initiatives within CIT. Four projects have been funded: Kick Start; Finish Line; Science for Life; and Helping Hand.

Mature Student Welcome Lunch

In October the Access Office organised a Mature Student Welcome lunch which was attended by almost 100 students. The new mature students were treated to lunch where they were introduced to the Student Services team and information was disseminated on the supports available. The students were informed about the Mature Student Support Network and the programme of activities that are being organised for this academic year.

Mature Student Programmes

The CIT Access Office has recently appointed Sinéad O'Neill as Mature Student Project Officer. It is envisaged that the Mature Student Project Officer will increase the number of full time and part time mature students entering CIT and also provide the supports necessary to support the students to obtain a qualification. This will be achieved through two programmes.

The **'Kick Start'** Programme - A pre-entry support programme will aim to improve the information and guidance to prospective full time and part time mature students and will provide a comprehensive programme of pre entry activities which will increase the number of full time and part time mature students commencing Level 6, Level 7 and Level 8 programmes in CIT. This will be achieved by:

- Enhancing relationships with local and regional community development organisations;
- Collaborating with Further Education providers and working closely with local community groups to motivate and encourage mature students into third level;
- Recruiting mature students through general advertising, attendance at educational and training expos, etc.

The Mature Student Officer will also work on developing policies, procedures and good practices for mature students.

The **'Finish Line'** Programme - A post-entry support programme will aim to further develop supports for mature students studying at CIT through the following:

- Further development of the Mature Student Support Network;
- Development of programmes which will address the academic, personal and social needs of the mature student;
- Working in collaboration with CIT personnel in increasing mature student participation, retention and completion rates, and meeting the needs of the mature student.

Sinéad O'Neill is a graduate of UCC having completed a Degree in Social Science in 1999. Following a period of travel Sinéad progressed to attain a MSoc Sc in Youth and Community Work in 2003 which incorporated a term in South Africa undertaking community development work. Sinéad has spent the past three years as Coordinator of County Waterford Community Forum developing a strong network of volunteers who represent the needs of their communities on key development structures in the county. Sinéad was also responsible for organising the Annual County Waterford Community & Voluntary Awards Scheme, now a key date in the community events calendar in the county. She was based in Dungarvan, where she continues to deliver a FETAC Level 5 Module in Social Studies to mature students.

Science for Life

The Science Project Officer is responsible for the delivery of the "Science for Life" programme. The project is a joint initiative between the CIT Access Office and the School of Science in CIT.

The "Science for Life" programme will deliver to four cohorts of student:

- (1) Primary school children (dream);
- (2) Junior cycle (focus);
- (3) Transition year (experience); and
- (4) Senior cycle post primary students (achieve).

Main objectives of the "Science for Life" programme are:

- To coordinate and deliver pre-entry access activities which promotes science in DEIS schools in Cork e.g. schools visits programme, school and institute based science programmes;
- To evaluate and review existing initiatives and identify developments and new initiatives to promote access to science programmes in CIT;
- To build on the relationship between CIT and the DEIS primary and second level schools in the city;
- Participate in Open Days, CIT Sci Fest, organize 'Science Week' activities;
- Increase the numbers of students from participating schools taking science to leaving certificate and in third level;
- Increase awareness of the range of science courses in CIT among leaving certificate students, their parents and their teachers;
- Liaise with parents to promote science education;
- Enhance link between CIT and local employers of graduates.

Dr Sharon Lawton has taken up the position of the Science Project Officer within the Access Office. Sharon graduated from NUI Maynooth with a BSc in Biology. She undertook a PhD in Microbiology with the Alimentary Pharmabiotic Centre (APC) in UCC. While writing and completing her PhD, she took up the position of a post-doctoral researcher in the Environmental Research Institute (ERI) in UCC. Sharon was also involved in the APC's science education and outreach programme and frequently visited schools, delivering interactive talks to students and demonstrating and supervising science experiments with them. She also wrote numerous articles for the APC's education and outreach magazines which targeted primary, post primary and third level students.

Disability Service

Laura O'Rourke has been appointed as the Disability Officer in CIT. Laura is a past student of CIT, having studied Applied Social Studies in Social Care and progressing on to complete her degree in Social Care. Laura has a background in residential and respite care, working with minority groups and in special needs schools. She has worked with adults and children with physical and intellectual disabilities and mental health difficulties. Laura has recently relocated to Cork, having worked in Galway for a number of years managing a residential and respite unit for adults with a wide range of disabilities.

CIT is committed to a policy of equal opportunity in education and to ensuring that students with a disability have an equal access to education at third level as is reasonably possible to provide to them. Every student with a disability has the right to reasonable and appropriate accommodations determined on an individualistic basis in accordance with the students certified disability. The Disability Service in CIT operates a strict confidentiality policy and all students' records and disclosure of information will only occur with the student's consent.

There is a fund available to students with disabilities which was introduced in 1994 called the Fund for Students with Disabilities. The purpose of this fund is to provide students with a disability assistance and equipment, where applicable, to enable them to access, participate and to complete their chosen studies. Students attending full time courses in the EU are eligible to apply for the fund.

There are a number of different categories of support that can be offered to students with disabilities in the form of:

- Personal assistants
- Sign language interpreters
- Note takers
- Speed text operators
- Photocopying
- Additional tuition
- Assistive Technology

The Disability Service is constantly evolving and trying to create levels of awareness throughout CIT and the learning environment about the difficulties that can face students with disabilities. The service endeavors to create an awareness of the supports which can prove invaluable in the duration of students' academic lives.

Pathways to Education – Home School Family Links Strand

Elaine Dennehy
Community Access Officer

The Home School Family Links (HSFL) strand of the Pathways to Education Programme (a Joint Access Initiative of CIT & UCC), aims to deliver a cross institutional, cross-sectoral strategy to enhance accessibility to and widen participation in third level education. The HSFL strand works directly with three schools on the Northside of Cork City; namely; North Presentation, Farranree; North Monastery, CBS; and Terence Mac Swiney, Community College, Hollyhill.

To date all schools have been actively involved in planning a programme of activities for their schools for the current academic year, and some activities planned include homework clubs, I.T. & Internet skills, reading programmes, youth leadership and sports journalism short courses.

Assistive Technology Disability Project

Carmel Hennessy
Assistive Technology Outreach Coordinator

The Assistive Technology (AT) Disability Project aims to increase awareness of Assistive Technology and its potential in the fields of education and disability, so that students with disabilities, their parents, teachers and special needs assistants are familiar with and fully ready for the opportunities that are available at further education. The Project works with second level schools, parents and disability organisations to deliver:

- Information Evenings on Disability Awareness and Assistive Technology (county wide);
- Assistive Technology Training Workshops (College-based & Out-reach);
- In-school Assistive Technology Awareness Workshops;
- Demonstrations;
- College-based Aspiration Raising Days for second level students with disabilities;
- Assistive Technology advice.

Assistive Technology Project Reaches Out

To date, the Project has worked with a number of second level schools in both the city and the county. Training has been provided to parents, teachers, special needs assistants and students in a number of assistive technology software and hardware solutions, such as Read and Write Gold 9, Inspiration, Touch Type Read & Spell, Zoom Text, Opti-verso etc.

The Project has also been involved in aspiration and awareness-raising for students with varying disabilities. A CIT/UCC collaborative three-day Easter workshop for students who are Deaf/Hard of Hearing was held in CIT. In early June, a two-day workshop for students who are Deaf/Hard of Hearing and students who are Blind/Visually Impaired was held in UCC, in a collaborative UCC/CIT initiative.

In October, second-level students attended a UCC based Technology and Rapping workshop during which students heard from a third level student with a disability, saw many types of Assistive Technology and learned how to make a rap developing their self confidence and creative expression; concentration, co-ordination and social skills, with GMC, Cork's own rapper! A similar day took place in CIT in November.

In mid-June, an Information Day was held in the West Cork Education Centre in Dunmanway for students who are Deaf/Hard of Hearing and their parents from the West Cork area. Information was provided on the supports available at third level, the Supplementary Admissions Route, funding issues and relevant technology. The students also spent some time working with technology. A similar workshop will take place in CIT in November.

Assistive Technology Awareness Workshops have been held in Passage West and Dunmanway for Special Needs Assistants raising the profile of Assistive Technology and promoting productive discussion on the use of AT within the schools.

Monthly information workshops are held around the county with follow-up training on specific technologies being provided to teachers, parents, special needs assistant and teachers.

Pathways Access CIT Week

In July, incoming second year students from North Presentation secondary school, Farranree, attended the first ever Pathways Access CIT Week which introduced students to CIT and the future possibilities of attending the college. The week was organised by CIT based Community Access Coordinator in conjunction with the Assistive Technology Outreach Coordinator and the Community Access Coordinator at UCC.

The girls enjoyed making outfits from recyclable materials, with Catherine Philips of CIT CCAD, which were exhibited at a fashion show later that day. Cork Music Works delivered a full day workshop of samba, Soundbeam music technology and rap, with the girls performing, producing and recording their own unique CD. The students also availed of the sports facilities at CIT with sprinting, high jump, long jump and relays. After completing a course in Touch Type Read and Spell the girls were rewarded with a trip to the Blackrock Castle Observatory where Dr Niall Smith, Head of Research at CIT, gave the girls a VIP tour of the award winning science centre and the Web of Stars programme. The Web of Stars

programme is an exclusive educational opportunity which allows participating schools take part in an astronomy project linked to the Chabot Space and Science Centre in the San Francisco Bay area. During this pilot programme, which began in October students were given the opportunity to obtain night time images of the sky from the 36" reflector telescope at Chabot Space Centre during school hours; taking advantage of the nine hour time difference between San Francisco and Ireland.

Elaine Dennehy, Community Access Coordinator, attributes the success of the week to the positive attitude and enthusiasm of the girls saying "the girls were great to work with; they were energetic, interested and great fun. The girls helped plan the week right from the start and applied themselves to every activity throughout the week. Their principal Ciaran Cooke and Home School Coordinator Eileen Geaney were a great support also. The girls are an absolute credit to the school and the great work the teachers have been doing with them all year long is evident"



Students from North Presentation Secondary School, Farranree at the CIT Blackrock Castle Observatory.



Students from North Presentation Secondary School in Farranree modelling off their new creations during Pathways Access CIT Week.

news from the access office

CIT Alumni Association (CITAA)

Upcoming Events

Date and Time	Event	Venue	Cost
Friday 23rd April 2010	CIT Alumni Association Golf Classic & BBQ 3 person team event First Tee Off: 14.04pm	Lee Valley Golf and Country Club, Ovens, Co Cork.	€60 per person (includes golf & BBQ)
Spring 2010	CIT Alumni Awards	TBC	Invitation Only

Previous Events

CIT Upskill

On the 28th August, the CIT Alumni Association supported by the Evening Echo, organised CIT Upskill, a free event aimed at graduates, final year students and people who are in employment but wanted to gain additional skills/qualifications.

The economic downturn has resulted in some executives and graduates joining dole queues so measures need to be taken to help. This is just one such event that CIT is organising to help graduates, final year students and anyone else interested in attending.

Frankie Sheahan, former Ireland and Munster rugby player, addressed CIT Upskill. Sheahan played for Munster from 1996 up to the end of the 2008-2009 Season and talked about the extraordinary times we are living in, where; according to the 29 time capped Irish International, "nothing is impossible".

CIT Upskill came about through CIT graduates contributing ideas as to how the Institute could assist those who may have become unemployed, or, who feel they need to add to their skills to secure their current or future employment prospects.

On the day, options such as starting your own business, postgraduate programmes at CIT and talks on how experience in the workplace can translate into recognition of prior learning and can qualify for course exemptions, were examined.

In addition to information on specific topics, there was also a series of short talks on study skills, time management, career advice and marketing yourself along with making your CV work. There were "hot desks" where high profile graduates were available to answer industry specific questions on where the opportunities are now and where the opportunities will be in the future.



Graduates and Frankie Sheahan.



Development Office Scrum.



Michael Delaney, Vice President for Development, CIT; Frankie Sheahan; Paul Healy, Rubicon Centre Manager, CIT; Joe Burke, South Cork Enterprise Board; and Joe Kelleher.

What can we offer new graduates?

The CIT Alumni Association offers members the following benefits and services:

- Access to worldwide and regional chapters of the CIT Alumni Association
- A choice of CIT affinity credit cards with either AIB or Bank of Ireland which offer cardholders preferential rates
- Class reunions service
- Discounts for services
- Monthly E-News (please ensure we have an up to date email address)
- Mailing of the Learning City magazine (please ensure you keep us updated with contact details).
- General information about careers, interview skills and CV development for recent graduates (for 1st year out graduates)
- Access to CIT facilities (including library membership)
- Invitations to various events.

Affinity Cards

A large number of graduates, students and friends of CIT have now become holders of CIT Affinity Cards. Did you know that whenever you use the special Visa/MasterCard from AIB or Bank of Ireland, you are helping your Alumni Association? Every time you use the card the bank makes a contribution to CITAA..... at no cost to you. For further information, please contact:
Bank of Ireland, CIT on 021 454 5177 or
AIB, CIT on 021 454 1672
Terms and conditions apply

Organising a Reunion

CIT Alumni Association offers a support service for those wishing to organise a reunion. We can also provide you with the contact details of your former classmates. Call us on T + 353 21 4326589 or E: alumni@cit.ie for more information. We would be delighted to include your photos in the next edition of Alumni News.

Find a Friend

The Alumni Office offers a free service for CIT Alumni who are seeking to contact old friends. If you would like to contact a class-mate or another College friend, all you have to do is contact us to post a request.

Class Notes

Let your classmates know what you have been doing. If you have news promotions, marriages, births, awards, publications etc. please contact us. If possible, please include a colour photograph with your name and address printed on the reverse.

Whatever your news, forward it to: The CIT Alumni Association, CIT or contact us at T: 00 353 21 4326589, E: alumni@cit.ie

Keeping in touch

Register for FREE with the CIT Alumni Association at www.cit.ie/alumni

Update your details at through our online facility at www.cit.ie/alumni

Get Connected Online with FACEBOOK

Get connected now and be introduced to a global CIT graduate network via the CITAA Facebook page

Check out the CITAA **LinkedIn** page!



A Global Network

DUBLIN – LONDON – NEW YORK – FLORIDA – SYDNEY – SHANGHAI – NEWFOUNDLAND – VANCOUVER – DUBAI

We wish to expand our global network so if you are aware of any CIT Alumni living abroad who has an interest in becoming involved or setting up a CIT Alumni Chapter, please email alumni@cit.ie for details.



sports + societies day 2009

In early September, a very lively and vibrant Sports and Societies Day gave Freshers their first opportunity to jump on the rollercoaster of college life. Thousands of students from all years poured into the Student Centre from early morning to be greeted by an array of colourful exhibitions and stalls.

Gamers and Jugglers amazed the crowd with their dazzling demonstrations, showing all that practice really does makes perfect. Rockclimbing club members breathtakingly abseiled from the rafters of the student centre building, surf club members entertained all with their wobble board mimicking the balance needed for surfing that perfect wave! Muscular strength was tested by the Boxing Club in a 1 minute Press-Up Challenge. While some high kicks, excellent skill and demonstrations were performed by both the Karate and Tae Kwon Do Clubs. Amongst the stalls, the students sampled fair trade chocolate spread on toast and hitting the highest scores on the latest gaming technology.

Credit must go to all clubs for making such a great effort in displaying colourful and informative stands. There was a great buzz and sense of anticipation throughout the day.



Carol Kiely, AIB, presenting an Apple iTouch to Edward Corcoran, 1st year Mechanical Engineering, who won a competition sponsored by AIB on Societies Day with Societies Officer, Mervyn O'Mahony.



Mark O'Donovan and James Davis, Rowing Club.



Bryan O'Sullivan and Darren Shorten, DJ Society and Radio Society.



Darren Donohoe, Kate Curran and Jamie O'Donoghue, Traditional Music Society.



*Ezgi Muderrisoglu (Turkey) and Sandra May (Germany),
International Students' Society.*



*Eoin Murphy and Pádraig McGrath,
Boxing Club.*



*Paul Linehan, David Lewis, Brendan Duggan and Conor Maguire,
Mountain Biking Club.*



Capoeira performers



*Laura O'Callaghan
and Laura Kaci,
Photographic
Society.*

sportsnews

cit sailing team come 5th in the student yachting worlds



Reigning World Champions CIT travelled to Marseille in October to defend their title. Italy was well ahead and secured victory. CIT fought hard with little between the remaining teams finishing CIT 5th overall ahead of the Swiss and UL.

The CIT team was under the reigns of a new skipper, George Kenefick (Business Studies 3), this was George's 3rd time competing in the Student Yachting World Cup, having placed second in 2007 and first in 2008 as a crew for CIT. Along with George the team has 3 further members who competed at the Worlds previously, Joe Bruen (Structural Engineering 3), Cian Twomey (Structural Engineering 3), and Silvia Phelan (Tourism 2), all of whom were on the CIT team last year. New members joining the team this year were first year students Judy Costigan (Marketing 1); Kevin Goulding (Chemical Engineering 1) and Denis 'Donnagh' Good (Business studies 1), along with 2nd year Nathan Kirwan (Marine Engineering 2) all whom have been training with the crew since the end of August. Team Manager was Deirdre O'Rourke a former CIT student and a member of the CIT crew last year, Deirdre is currently studying Event Management in LIT.

The CIT sailing team would like to acknowledge the support of their title sponsor "3 Ireland" who came onboard to support the team in September. Also thanks to CIT for its support and encouragement." A big thank you to Silvia Phelans' parents, Denise and Conor Phelan, who kindly provided their boat "Endeavour" to aid the team's preparations.

news in brief

The newly formed **Pool Club** is currently competing in the CUSAI Pool League and will represent CIT in the Intervarsities in February.

The **Rowing Club** has relocated training to the National Rowing Centre in Farran Woods. The Intervarsities will take place in Cork next April and CIT hopes to enter strong teams in senior, intermediate and novice.

Ladies and Men's Hockey Teams travelled to Belfast for the Hockey Intervarsities in October and returned victorious finalists in the Men's Plate narrowly losing out in extra time to Trinity.

Golf Team competed in the Intervarsities in Enniscrone, Sligo at the start of October. Tough competition came from NUI Maynooth who won the Team Event overall.

Rockclimbing Club travelled to Dublin to compete in the Irish Bouldering League. Over 11 students competed with notable points and rankings from all competitors.

Elite Gym

The launch of the Elite Gym took place on 4th November at the Sports Stadium and was attended by Sports students and staff. Past graduates Juliet Murphy (Cork Footballer); Rachael Vanderwal (Superleague Basketball Player); Ian Mc Loughlin (Superleague Basketball Player); and Emer O'Farrell (Cork Camogie Player), attended the event in support of this state of the art facility and service. The Sports Council, Member of the Sports Bursary Board and the Department of Social & General Studies Staff were also in attendance.

The Gym has been fully kitted out for the purpose of Team & Athlete Training in Strength and Conditioning and will be available for CIT Sports Clubs and Sports Bursary Recipients. Personnel have been trained by Pádraig Roche, current Academy Fitness Coach with Munster Rugby. The Institute has a long and successful tradition of helping to produce some of Ireland's finest sporting talent. This is a tradition it seeks to strengthen and progress by significantly supporting

the Elite Student Athlete and High Performance Teams. The Elite Gym will focus on developing the athlete so that they are in a position to achieve sporting success and development during and after their time in CIT.

For all bookings and further information
E: mai.oleary@cit.ie or T: 02143265



sports facilities

Significant investment in providing state of the art sports facilities has resulted in CIT being regarded as the most progressive third level institute in Ireland in catering for the sporting needs of students. To-date it has developed: 8 sand based playing fields for GAA, soccer and rugby; A spectator stand with a capacity of 1,150 - 6 dressing rooms; referee's changing room; and medical facilities. The stand also contains a gymnasium and weights training room and a multi-purpose area for aerobics; martial arts training; and general social events connected with sport. 3 of the pitches are fully floodlit while it is planned to floodlight another 2 pitches over the coming year.

The Irish manager of Ireland's Senior Women's Soccer team, Noel King, was impressed by the sporting facilities and used them to prepare the team for their crunch match against Kazakhstan. The game was played in Turner's Cross and the Irish girls secured a great 2-1 win.

Building on the existing facilities are many projects either underway or on the drawing board. These consist of a covered spectator stand in the athletics track which will be completed in time to host the 2010 Cork City Sports. It will also incorporate a tartan surface for an indoor athletes warm-up and training area. The stand will, in time, have additional changing facilities for athletes.

Plans are well advanced for the terracing and enclosure of the stadium pitch to allow matches with large spectator numbers be played in safety and comfort. The stadium currently accommodates GAA, rugby and soccer and it is proposed to host games that will put CIT on the sporting map as a premier Irish sporting venue.

CIT in partnership with the FAI continues to develop the FAI third level Football Development Plan. The aim of the plan is to provide more opportunities to play soccer, improve competitions, increase the number of qualified coaches, develop links with external stakeholders, raise the profile of the game and improve structures. Students will have the opportunity to develop their coaching skills as Kick Start 1 and 2 courses will take place throughout the year. CIT will again have men and women college teams, along with two Munster Senior League men's teams. Training for the Munster Senior League is already taking place. Any queries please contact Eric Marah, Soccer Facilitator E: soccer.facilitator@cit.ie

Another exciting development is the new campus walking and jogging track which contains approximately 1.5 miles of walkway around the perimeter of the sports fields. This campus walk links with the Cork City walkway stretching from the Curraheen Greyhound Track to the Lee fields at the Carrigrohane Road. To enhance the walking and jogging experience, 2 additional bridges have been placed over the Curraheen River and extensive tree planting is also underway which in time will provide a backdrop of green vegetation to add to the beauty of the river and playing pitches. It is hoped to provide continuous amenity lighting around the walking track that will allow year-round usage of the facility.



On the 23rd November - Ireland U/19 players Simon Henbidge, Christian Brothers College; David O'Mahony, Presentation Brothers College; and Kevin O'Byrne, University College Cork; with Ollie Hodgson, IRFU; and Dr Barry O'Connor, Registrar; and Dr Eamonn Cashell, Head of School of Science; at the launch of the U/19 Rugby International, Ireland vs Australia, which took place at CIT on 2nd December.

a brief history of gaelic football at cit

The Cork Regional Technical College as it was formally known until its change of title to CIT in 1997, was officially opened in December 1977 by the then Taoiseach Mr Jack Lynch TD, himself a legend of both hurling and football. The College had been functioning academically since September 1974 and as befits a county with Cork's great tradition in Gaelic games, GAA has occupied a central role in the development of sport in CIT.

A student football team was formed in 1975 and a hurling team in 1976. The newly recruited staff of RTC also had an active GAA club competing successfully in the Cork Inter Firm competitions. They won consecutive junior, intermediate, and senior football championships in 1977, 1978, 1979, and were crowned Munster Senior Champions in 1980. Several of these staff members, such as the late Jim Blake (RIP), Seán McCarthy, Noel Collins, Kevin Kehilly, Liam Hodnett, Eamonn Wall, and the present Minister for Education Mr Batt O'Keeffe TD, were to play an active role in the promotion and development of student GAA activities in the RTC in those early formative years.

Student success was achieved quickly with a Div. 3 title in 1978 and hence promotion to Div. 2. This team included county seniors Ger Lynch of Kerry, Cork's Seán O'Shea and Jimmy Kerrigan whose son Paul is a member of this year's CIT Sigerson team. The Trench Cup which until 1985 was the premier competition for non-universities was won in 1979. In winning this prestigious competition, CRTC had to overcome Belfast Polytech (now UUU), Sligo RTC, Thomond College of Physical Education who were then the current All Ireland Club Champions, and in the final, the then Dublin Senior County Football champions St. Patrick Training College Dublin. Included in this history making team were P J McGarry, Mayo; Des Newton, Roscommon; and captain Diarmuid McCarty, Cork. Diarmuid and his son Jonathan created Cork GAA history by becoming the first father and son combination to win Minor Football All Irelands.



Intermediate Football Team after winning the 2007 All Ireland Final against DIT

Promotion to Div. 1 was achieved in 1982, which proved a topsy turvy affair with regular demotion and promotion over the years. Winning the freshers football championship in 1991 proved another GAA milestone in CIT. In an all Cork final, which went to a replay, CIT was victorious over local rivals UCC. This completed historic freshers double as CIT had already won the hurling again by a victory over UCC. The star of this unique double was Brian Corcoran, later to distinguish himself as one of Cork's greatest dual players. Backboned by this freshers team CIT gained promotion to Div. 1 in 1993 and has retained its status ever since.

CIT first competed in the Sigerson in 1995, but it took until the 28th February 2009 to achieve success in this prestigious competition. When Paul O'Flynn from Ballyclough lifted the cup, he catapulted the name of CIT into the sporting world as a place of excellence, a place where sport is given its rightful importance in the holistic development of the person and a place where opportunities are had and dreams come true.

When RTC Cork first opened its fledgling campus, sports facilities were not a priority as they consisted of two tennis courts and an all weather hockey pitch. Through the far sighted and enlightened efforts of the former Director Dr Pat Kelleher and Registrar Brendan Goggin, lands were purchased which allowed for the development of the modern facilities now available for all sports activities. The appointment of John Meyler in 1992 and Keith Ricken in 2000 as GAA development officers, gave further impetus to the development and structuring of GAA in CIT. Presently CIT GAA Club fields 14 teams in the various Comhairle Ardoideachais competitions. The club also competes in the Cork Senior Club Championships and the Inter County McGrath Cup - a competition where they reached the final of in 2006.

While undoubtedly the Sigerson win was the icing on the cake, the honour of hosting the event was in itself a very significant moment in the history of the club. The organising committee together with a large number of volunteers ensured that the whole event ran smoothly and indeed much praise was deservedly heaped on CIT from all sectors of the sporting world for the facilities and the flawless organisation of this event.



Paul O'Flynn proudly lifts the Sigerson Cup.



Sigerson Champions 2009

Today CIT Gaelic Football Club has a vibrant club structure which works consistently throughout the year ensuring that no stone is left unturned both on and off the field of play. It continues to capture the imagination of the students who attend the Institute as it has for the huge numbers that have worn the red and white hoops since 1975.

Below is a list of honours won by the club and also a list of all those graduates who have gone on to win All Ireland Senior Football Medals

CIT Football Club National Successes

1978 Div.3

1979 Trench Cup

1982 Div. 2

1982 Freshers 2

1990 Div.3

1991 Freshers 1

1993 Div. 2

2001 Div. 3

2002 Div. 3

2006 Div.2 (Inter) & Div. 3 (Juniors)

2009 Sigerson Cup

CIT Graduates who won Senior Football All-Ireland medals:

Cork

Jimmy Kerrigan, Tony Nation, Denis Walsh, John Kearns, Paddy Hayes, Mick Slocum, Dave Barry, John Cleary, and Conor Counihan.

Kerry

Eoin Liston, Ger Lynch, Tom Spillane, Aidan O'Mahony, Mark O'Shea, Michael McCarthy, Darran O'Sullivan, and Brian Sheehan.

crossword *solutions*

ACROSS

1 Pebbled 5 Episode 10 Bear 11 Tourmaline
12 Taylor 13 Richards 14 Added life
16 Woods 17 Watts 19 Never to be
23 Basic aim 24 Resent 26 Hiring fair
27 Onus 28,21 Beggar's banquet 29 Jadeite

DOWN

2 Emerald 3 Beryl 4 Enteral 6 Pumice 7 Sulk about
8 Denuded 9 Putrefied meat 15 Entwining
18 Apatite 20 Etruria 22 Jagger 25 Stone

gaa club 2009 presentation of medals

On 11 May 2009, Dr Brendan J Murphy, President, CIT, hosted a presentation to honour the historic 2009 Sigerson Cup and victorious Freshers Hurling All Ireland winning teams. Speakers were Dr Brendan Murphy, Jimmy O'Gorman, Chairman of the Munster Council; Des Cullinane, Chairman of the Munster 3rd Level Colleges GAA; Eamonn Wall, President of the CIT Gaelic Football Club and Bill O'Connell, Senior Director of EMC Ireland; who are the sponsors of the CIT GAA Club.

An attendance of over 200 people were treated to a most pleasant evening which was superbly conducted by the chairman of the CIT Sports Council Dr Eamonn Cashell. The event was very well supported by the family and friends of the players as well many principals of their former second-level schools. Also present was Gerry O'Sullivan, Chairman of the Cork County Board; the management of the Cork U21 winning team; members of the Cork Inter-county football and hurling management committees; and representatives of Ulster Bank who sponsored the competitions.

In all 63 students received their medals. The Club made presentations to the members of the selection committee and a special presentation was made to Liam Hodnett and his wife Margaret to mark his forthcoming retirement and his generous contribution to the development of Gaelic Games at CIT.

Traditional music was provided by Denis Stack (post grad student of Electrical Engineering) and friends and the evening's presentations were followed with refreshments kindly served by Geraldine O'Sullivan and the staff of the Students Services Company.

The CIT GAA Club would like to take this opportunity to especially thank Dr Brendan Murphy and his staff for hosting the evening and for the support he has given to the development of Gaelic Games at the Institute. The club would also like to thank Dr Barry O'Connor, Registrar and Vice President for Academic Affairs, the CIT Sports Office, Frank Hanley of the Student Centre Building and Dr Eamonn Cashell who not only was an excellent master of ceremonies but was instrumental in liaising with the various people in ensuring the whole event as a success.



Club President, Eamonn Wall presents Liam Hodnett with a signed jersey of the Sigerson champions to mark his retirement.

the CIT Prize for Innovation

Prizes Valued at €10,000

Shed light on your ideas to harness a piece of the prize. Your invention/ business plan can lead to a chance to earn a share of the €10,000 prize money.

This is a scheme that awards cash prizes to those whose inventions and business ideas are most creative, novel, innovative, and likely to succeed in the marketplace.

The breakdown of prizes is as follows:

1st Prize and coveted title of CIT Entrepreneur(s) of the Year = €4,000

Most Technically Innovative = €2,000

Best Business Plan = €1,000

Best Presentation Pitch = €1,000

Post graduate Award = €1,000

Best Exhibition Stand on Innovation Day = €1,000

The first step for entry is to complete the expression of interest form and submit it to the Development Office, Ground Floor, Administration Building, CIT. This will provide us with contact details for you and will ensure that you are on our list to receive further information about the competition and workshops that will be held throughout the year.

On www.cit.ie there is a calendar of events for workshop dates and other events held throughout the year that will help you with your business plan.

The competition organisers reserve the right to disqualify any team or candidate that violates the rules, regulations or the spirit of the competition. Please ensure you refer to the competition requirements and rules.

Eligibility is subject to individual review for special circumstances.

Sponsored by



Further information and relevant documentation are available at www.cit.ie