



NovaUCD Newsletter



The Innovation and Technology Transfer Centre

October 2008

Dear Colleagues and Friends

Welcome to the October 2008 issue of the NovaUCD Newsletter.

In this issue we report on the visit of Dr Jimmy Devins TD, Minister for Science, Technology and Innovation to UCD. While at UCD the Minister visited NovaUCD and the UCD Conway Institute of Biomolecular and Biomedical Research.

NovaUCD has a new stock of Laboratory Notebooks available for UCD researchers to purchase at a special below cost price. For details on how to obtain these notebooks along with some best practices tips on keeping laboratory notebooks go to page 4.

The 11th NovaUCD 'Entrepreneurs Live!' seminar series has been launched by Dr Steve Collins, co-founder of Havok. Havok, a major player in the computer games industry was bought by Intel for \$110 million in 2007. These seminars will continue each week until November 12 and further details of how to register are contained inside this newsletter.

Four new companies have joined NovaUCD's community of entrepreneurs bringing the total number of companies locating at NovaUCD to twenty-four. NovaUCD welcomes proposals from the promoters of high-quality, knowledge-intensive ventures who are interested in locating in NovaUCD.

In this issue we report on recent developments for ChangingWorlds, Duolog Technologies, Evolution, HeyStaks and Q-Validus along with the establishment of new links between UCD and industry.

NovaUCD has also recently established a NovaUCD 'LinkedIn Group' and details on how to become a member of this professional group are contained on page 9.

I would welcome any comments or feedback on this issue, please contact Micéal Whelan on t: 01-716 3712 or e: miceal.whelan@ucd.ie.

Dr Pat Frain, Director

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Minister Jimmy Devins TD Visits NovaUCD

Dr Jimmy Devins TD, Minister for Science, Technology and Innovation visited University College Dublin in July. While at UCD he visited both NovaUCD and the UCD Conway Institute of Biomolecular and Biomedical Research.

The Minister was welcomed to UCD by Dr Padraic Conway, UCD Vice-President for University Relations. At NovaUCD Professor Mark Keane, UCD Vice-President for Innovation briefed the Minister on UCD's planned Innovation Strategy (2009-2013). Dr Pat Frain, Director, NovaUCD then provided an overview of NovaUCD's background, aims and successes to date.

Following a tour of the NovaUCD facilities the Minister travelled to the UCD Conway Institute where he was met by Dr Hugh Brady, UCD President.



Dr Padraic Conway, Dr Pat Frain, Minister Jimmy Devins TD and Professor Mark Keane

While at the UCD Conway Institute, several UCD researchers gave presentations on four key research areas stretching from ICT to biotechnology.

Professor Barry Smyth, UCD School of Computer Science and Informatics gave a presentation on the CLARITY CSET which is being funded by Science Foundation Ireland, in collaboration with leading multinational firms and SMEs. This ground breaking research centre is focusing on the so-called 'Sensor Web', which captures the intersection between two important research areas, Adaptive Sensing and Information Discovery.

Professor Paddy Nixon, UCD School of Computer Science and Informatics provided the Minister with an overview of the TRIL Centre. The goal of this Centre is to accelerate R&D of independent living technologies which help people to live in their

homes of choice, even in the midst of age-related illnesses and injuries.

Professor Mike Gibney, UCD School of Agriculture, Food Science and Veterinary Medicine gave an overview of various functional food research projects currently taking place at UCD.

Professor Janet Allen, Director, UCD Conway Institute concluded by providing an overview of the Biopharmaceutical and Clinical Research which is currently ongoing in the UCD Conway Institute.

The Minister also toured the UCD Conway Institute facilities with President Hugh Brady and Professor Des Fitzgerald, UCD Vice-President for Research.

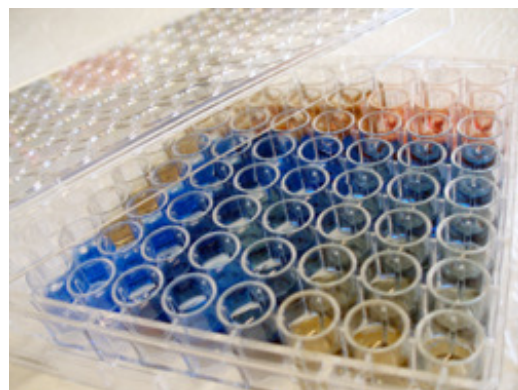
Protection and Commercialisation of Intellectual Property

NovaUCD is responsible for the implementation of UCD's policies relating to the commercialisation of intellectual property and for the management of the intellectual property arising from UCD's research programmes.

A key priority of NovaUCD is to work with UCD researchers in identifying, protecting and commercialising the intellectual property arising from their research programmes and to take innovative ideas from proof-of-principle to full commercial success.

UCD 2008 Invention Disclosures and Patent Filings

Thirty-six invention disclosures have already been disclosed by UCD researchers to NovaUCD since the start of 2008.





UCD patents filed to date in 2008 include:

A DNA-based test for association with elite sprinting performance in thoroughbred racehorses, Dr Emmeline Hill, UCD School of Agriculture, Food Science and Veterinary Medicine. An Irish and US priority patent application.

A DNA-based test for association with elite racing performance in thoroughbred racehorses, Dr Emmeline Hill, UCD School of Agriculture, Food Science and Veterinary Medicine. An Irish and US priority patent application.

A macrocyclic derivative and assemblies formed therefrom, Dr Rafe Darcy, UCD School of Chemistry and Chemical Biology. A UK priority patent application.

A method and apparatus for blind source separation, Dr Scott Rickard, UCD School of Electrical, Electronic and Mechanical Engineering. A European and US national patent application.

A modified promoter sequence, Professor Therese Kinsella, UCD School of Biomolecular and Biomedical Science. A UK priority patent application.

A searching system and method, Professor Barry Smyth, UCD School of Computer Science and Informatics. An Irish priority and US provisional patent application.

A system level power evaluation method, Dr Damian Dalton, UCD School of Computer Science and Informatics. A PCT patent application.

An encoding scheme and a decoding scheme using a series of LDPC codes based on finite inversive spaces, Dr Mark Flanagan, UCD School of Electrical, Electronic and Mechanical Engineering and Dr Marcus Greferath, UCD School of Mathematical Science. A PCT patent application.

An isolated population of amniotic fluid cells, Dr David McLaughlin, UCD School of Biomolecular and Biomedical Science. A European priority and US provisional patent application.

Automated building outline detection, Dr Hamish Carr, UCD School of Computer Science and Informatics. An Irish priority patent application.

Captodiamine, Professor Ciaran Regan, UCD School of Biomolecular and Biomedical Science. An Irish priority patent application.

Cluster aggregation point for load balancing in a sensor network, Gregory O'Hare and colleagues, UCD School of Computer Science and Informatics. A PCT patent application.

Cognition TxP (alternatively transcribed genes associated with memory consolidation), Professor Ciaran Regan, UCD School of Biomolecular and Biomedical Science. A US priority patent application.

Compositions and methods for the control of mammary cell number, Dr Annette Byrne, UCD Conway Institute of Biomolecular and Biomedical Research. A US national patent application.

High power EUV lamp systems, Professor Padraig Dunne, UCD School of Physics. A European, US national and Japan patent application.

Information retrieval, Dr Neil Hurley, UCD School of Computer Science and Informatics. An Irish and US priority patent application.

Integrated drilling, chamfering and deburring tool, Professor Gerry Byrne and Eamonn Ahearne, UCD School of Electrical, Electronic and Mechanical Engineering. An Irish priority patent application.

Method and apparatus for control of large scale sensor networks, Dr Raja Jurdak, UCD School of Computer Science and Informatics. An Irish priority patent application.

Method and system for monitoring sleep, Professor Conor Heneghan, UCD School of Electrical, Electronic and Mechanical Engineering. A PCT patent application.

Method of coating a thin liquid metal film onto a Solid Substrate, Dr Fergal O'Reilly, UCD School of Physics. An Irish priority patent application.

Method for producing polyhydroalkanoate (PET to PHA), Dr Kevin O'Connor, UCD School of Biomolecular and Biomedical Science. An Irish and UK priority patent application.

Meparfynol, Professor Ciaran Regan, UCD School of Biomolecular and Biomedical Science. An Irish priority patent application.



Microwave plasma sintering, Dr Denis Dowling, UCD School of Electrical, Electronic and Mechanical Engineering. An Irish priority patent application.

Nitrosylated Conjugated Linoleic Acids, Dr Orina Belton, UCD Conway Institute and Professor Des Fitzgerald and colleagues from RCSI. A UK priority patent application.

Pseudomonas putida styrene monooxygenase variants, Dr Kevin O'Connor, UCD School of Biomolecular and Biomedical Science. A UK priority patent application.

Schizo TxP (alternatively transcribed genes associated with Schizophrenia), Professor Ciaran Regan, UCD School of Biomolecular and Biomedical Science. A US priority patent application.

The conversion of a mixture BTEX compounds by defined mixed cultures to medium chain length polyhydroalkanoate, Dr Kevin O'Connor, UCD School of Biomolecular and Biomedical Science. A UK priority patent application.

Contact: For further information contact Dr Ciaran O'Beirne, Manager, Technology Transfer, t: 01-716 3713, e: ciaran.obeirne@ucd.ie.

CopenMind 2008 Conference and Exhibition

NovaUCD participated at the inaugural CopenMind Conference and Exhibition which took place in early September in Copenhagen, Denmark.

CopenMind was a groundbreaking conference and exhibition devoted to research and technology partnerships, in the area of 'cleantech' technologies.

CopenMind also enabled an intellectual match-making between more than 100 university and research institute exhibitors and industry/company representatives from around the world.

Following the submission of abstracts by NovaUCD, two UCD researchers were selected by an independent scientific board to present at one of the 'clean tech' scientific sessions which took place during the conference.

UCD was one of only a handful of universities or research institutes to have two researchers selected.

The UCD presenters were:

Dr Kevin O'Connor, UCD School of Biomolecular and Biomedical Science who presented on 'Converting petrochemical plastics into a high value virgin biodegradable polymer.'

Dr Anika Mostaert, UCD Conway Institute of Biomolecular and Biomedical Science who presented on 'Amyloid-based adhesives' authored with Professor Suzanne Jarvis.

Both of these technologies are available for licensing and/or other collaborative opportunities through NovaUCD.

Contact: For further information contact Dr Ciaran O'Beirne, Manager, Technology Transfer, t: 01-716 3713, e: ciaran.obeirne@ucd.ie.

Researchers PC

A dedicated PC with access to certain proprietary databases is available at NovaUCD to support UCD researchers in commercialisation activities. This will facilitate researchers in conducting market analysis on different industrial sectors, either to support grant proposals or to assist in the development of commercialisation plans. Assistance will also be provided in searching patent databases.

The PC is available on a 'first-come-first-served basis' and a time-slot to use this PC should be booked in advance via John Wrigley, NovaUCD, t: 716 3721 or e: john.wrigley@ucd.ie.

NovaUCD Laboratory Notebooks

Keeping a laboratory notebook is an essential part of scientific research. Besides being a vital tool for research management it may also provide vital evidence in determining ownership of intellectual property in the event of successful commercialisation of your research output.

NovaUCD has a new stock of laboratory notebooks available for UCD researchers to purchase at a special below cost price.

Contact: For further information on how to purchase these laboratory notebooks please contact Sinead O'Sullivan, t: 01 7163 715, e: osullivan.sinead@ucd.ie.



Best Practice Tips for Keeping a Laboratory Notebook

Your notebook should be detailed enough for someone else to read and understand exactly what you did and why you did it. All results should be kept in your notebook, not filed in folders or on your desk. This will minimise problems that may be encountered if any questions arise about your results and will be useful for planning future research, writing up the results for publications and ultimately your thesis.

In addition to the above, it is also important to adopt best practice in terms of maintaining a laboratory notebook if the results of your research are to be used as the basis of a patent application. This is especially important if the patent application is to be filed in the United States where the rule of 'first to invent' rather than the European standard of the 'first to file' applies.

The following suggestions are proposed to assist you in keeping an accurate and detailed record of your laboratory results for your own publication/thesis needs and also to ensure that the necessary evidence is available to prove both the date of the invention and one's entitlement to be named as an inventor.

1. Use a hardbound laboratory notebook with consecutively numbered pages.
2. Write in ink.
3. Date each page or entry.
4. Each experiment should ideally include the following sections:

Purpose. Begin with a short explanation of why you did the experiment.

Protocol. Include a detailed description of what you actually did. Provide sufficient detail so someone could repeat the experiment exactly the way you did it. All procedures obtained from other sources (e.g., lab manuals or lab protocols) should be included as a permanent part of your notebook if they are used for the first time. It is acceptable to cross-reference previous experiments, but you should specify any changes or differences in the experimental design.

Results. Include the actual raw data in your notebook as well as any plots or calculations. Show any equations used for your calculations.

Discussion. Include a brief summary of the conclusions.

5. Errors should be crossed out with a single line so they remain readable. Do not tear pages out of your notebook. When an error is made, include a comment on what went wrong and whether the experiment was repeated. This will allow you to figure out what actually happened at a future date.
6. Tape or staple any attachments (e.g. print-outs) directly to the notebook. All attachments should include the date and details about how they were obtained (e.g. the wavelength of the spectrophotometer, etc.). Material that is too large to be attached to the notebook (e.g. sequencing autoradiograms) should be clearly marked with the date and page of the experiment in your laboratory notebook.
7. Have your laboratory notebook signed and dated by an independent witness on at least a weekly basis. The witness should be a fellow researcher who understands the research but preferably not someone who is within the same research group or who would have a claim as a co-inventor.
8. Store your laboratory notebook in a safe location.

NovaUCD 'Entrepreneurs Live!' Seminar Series

The 11th "Entrepreneurs Live!" seminar series, run by NovaUCD in association with Dún Laoghaire-Rathdown County Enterprise Board commenced on October 8th and will run each Wednesday lunch time until November 12th.

This series was launched by Dr Steve Collins, co-founder of Havok, a major player in the computer games industry which was bought in September 2007 by Intel for \$110 million.



Dr Steve Collins, co-founder, Havok



Seminar Details

Location: NovaUCD, Belfield,
Time: 1pm – 1:50 pm
(refreshments from 12:30 pm)

Upcoming Speakers:

- Sean Mitchell, Movidia
(15 October)
- Sean Fee, iFoods.tv
(22 October)
- TBC
(29 October)
- Michael Cullen, Beacon Medical
Group
(5 November)
- Declan Kearney,
Supplierforce.com
(20 November).

To register: Places at these seminars are limited so to avoid disappointment contact Sinead O’Sullivan, Project Manager, CPD, t: 716 3715, e: osullivan.sinead@ucd.ie.

At these seminars the guest entrepreneurs will talk about their experiences of setting up and running their own business, emphasising the highs and lows on their entrepreneurial journey, and highlighting the lessons they learnt along the way.

A total of 58 well known entrepreneurs have now participated on this very popular seminar series. The aim of the “Entrepreneurs Live!” seminar series is to promote a spirit of entrepreneurship among the academic, research and student population at UCD.

Companies at NovaUCD

Twenty-four innovative new ventures, occupying 37 incubation units, or nearly 90% of the available incubation space, are currently located in NovaUCD.

The latest companies to locate at NovaUCD are:

AER

AER is a leading Irish biofuels company which was founded by John Travers.

bioMérieux

bioMérieux develops and evaluates *in-vitro* diagnostic tests for use in food, pharmaceutical and veterinary microbiology laboratories.

Biosensia

Biosensia develops and supplies disposable diagnostic test chips for point-of-use analytical applications. Biosensia was co-founded by Gabriel Crean and Gareth Redmond.

Socowave

Socowave was established to provide superior antenna-line technology solutions to the Broadband Wireless Access Industry. Socowave was founded by Joe Moore.

Graduate Companies

In the last few months, Alltracel Healthcare Services, Madingley and Novus Financial and Management Solutions graduated from NovaUCD. A total of 12 companies have now graduated and moved on to new premises.

This continuous turnover of companies is an important element of NovaUCD’s strategy to continuously refresh our community of entrepreneurs and to have the capacity at all times to take on new projects.

NovaUCD continues to welcome proposals from the promoters of high-quality, knowledge-intensive ventures who are interested in locating in NovaUCD.

Contact: For further information contact Dr Ciara Leonard, Project Manager, Enterprise Development, tel: 01-716 3714, email: ciara.leonard@ucd.ie.

Companies in the News

ChangingWorlds

ChangingWorlds, the UCD School of Computer Science and Informatics spin-out has concluded major deals with Sprint, the third largest US mobile operator and Far East Tone, Taiwan for its ClixSmart Intelligent Portal Platform.



David Moran, CEO, ChangingWorlds

ChangingWorlds, the global expert in intelligent content discovery and subscriber intelligence for the Mobile Internet was co-founded by Professor Barry Smyth and Paul Cotter in 1999 to commercialise their research into personalisation and artificial intelligence technologies at UCD's Smart Media Institute.

Based on advanced artificial intelligence technology, the company's ClixSmart™ Intelligent Portal platform offers a personalised content discovery solution that enhances content relevance and optimises the user experience of the wireless internet, resulting in greater ARPU for the network operator.

ChangingWorlds has rolled out the ClixSmart™ Intelligent Mobile Portal platform to 50 mobile network operators worldwide, including Vodafone Global Group, O₂ Ireland and Germany, TeliaSonera, Celcom Malaysia and Hong Kong CSL.

The company now employs over 160 highly qualified staff including staff based in its Advanced Research Centre based at NovaUCD. The company is headquartered in Dublin with offices in the Far East and USA and a newly opened office in Brazil.

Duolog Technologies

Duolog Technologies, the NovaUCD-headquartered Collaborative Design Automation™ company is expanding internationally and has opened a new sales, marketing and support office in Los Gatos, California. The company also plans to establish a similar presence in Japan later this year.

With these expansions Duolog intends to accelerate sales and to grow its revenues by 50 percent to \$15 million during 2009.



Ray Bulger, co-founder & CEO, Duolog Technologies

Duolog, which develops software tools that enable chip design companies to design their products faster and with fewer bugs, also scooped three of the 'Best of DAC' awards' at the 45th annual Design Automation Conference (DAC).

DAC, which was held in Anaheim, California, is the premier event for the design of electronic circuits and systems, and for Electronic Design Automation (EDA) and silicon solutions. A diverse worldwide community representing more than 1,500 organisations attends each year, with approximately 8,500 attendees and 250 of the world's leading and emerging EDA and silicon providers exhibiting at the show.

Duolog was the overall winner of the 'Most Interesting First-time Exhibitor' award and won the Trendsetter award in the 'Best Overall New Product' category for its Spinner tool.

Using Spinner's Perfect By Construction™ methodology chip design companies can eliminate bugs, greatly simplify the integration effort and radically improve quality. Spinner has been used on over 17 chips to date, including the multimedia processor chip found in the new Nokia N95 Smartphone. Duolog also won a Trendsetter award for 'Best Demonstration on Exhibit Floor'.

Duolog Technologies currently employs more than 80 people at its headquarters at NovaUCD and at design centres in Galway and Budapest, Hungary.

Evolution

Evolution, the NovaUCD-based human resources software company has launched TempSheets.com.

TempSheets.com is an easy-to-use online



system designed for recruitment agencies that place temporary staff. TempSheets.com enables such firms to gain a competitive advantage by providing an easy and efficient way to record temporary staff timesheets, schedule staff availability and obtain client approval.



Alistair Thacker, Evolution

TempSheets.com, which is currently being rolled-out to a number of recruitment agencies in Ireland, eliminates the need for paper-based timesheets which are time consuming for agencies to process, by allowing temporary staff to complete and submit their timesheets online. These timesheets are then approved by the client company before being electronically submitted to the recruitment agency with all invoicing and payroll calculations already completed.

Evolution was founded in 2006 by Alistair Thacker who previously worked for SoftCo and Microsoft. Evolution intends to raise over €300,000 in first-round funding later this year and to launch TempSheets.com into the UK market.

HeyStaks

HeyStaks, a new UCD spin-out company is one of four new initiatives to share the Eircom €100,000 Web Innovation Fund. With this award, HeyStaks and the other winners enter into an agreement with Eircom to develop their concepts through to production and, if appropriate, initial launch on the eircom.net platform.



Professor Barry Smyth (centre) and Peter Briggs and Dr Maurice Coyle, co-founders of HeyStaks

HeyStaks is the first spin-out company to emerge from the CLARITY CSET. HeyStaks is a new approach to internet searching that helps people to share their search experiences with friends and colleagues has been developed by Professor Barry Smyth and colleagues from UCD's School of Computer Science and Informatics.

HeyStaks, which is a new web-browser plug-in, works with Google and provides users with the ability to create so-called "search staks" as a way of organising and sharing their searches.

For example, using the new technology a group of friends planning a holiday abroad might create and share a "Holiday 2008" search stak. As each person searches for travel, accommodation and entertainment options, their search selections will be automatically shared with the other group members during future searches as specially highlighted search results. In this way the group members benefit from each others' searches as they plan for the perfect holiday. Likewise, a group of students collaborating on a project might create a search stak to capture their individual searches and share what they have found with the group, leading to more productive research.

The patent-pending HeyStaks technology, developed by a team of researchers led by Professor Barry Smyth is being commercialised through NovaUCD.



Q-Validus

Q-Validus the NovaUCD-based international certification solutions provider has launched Spreadsheet Safe™. Spreadsheet Safe™ is an innovative training and certification programme designed to assist businesses in reducing the risks associated with poor spreadsheet design, use and control.



David Carpenter, CEO, Q-Validus

In response to the growing requirements of businesses to reduce the risks posed by unsafe spreadsheet practices, Q-Validus developed the Spreadsheet Safe™ training and certification programme. This programme has been developed in conjunction with BTL Learning and Assessment and BPP Learning Media, together with some of the world's leading experts in the area of spreadsheet design and control.

The programme is delivered in a one-day course during which candidates are given a total training solution including web-based e-learning, a training manual, a certification test and a certificate on successful completion of the test. The Spreadsheet Safe™ syllabus is designed to cover key practical concepts of using spreadsheets and it assists candidates in demonstrating their skill and awareness in working carefully and productively with spreadsheets.

Two authorised centres, the Institute of Public Administration (IPA) and the International Academy of Computer Training (IACT) are currently delivering the Spreadsheet Safe™ programme.

Links with Industry

ECK Industries

NovaUCD has announced that Eck Industries has purchased a non-exclusive licence for the CDC Process. The CDC Process (Cast-Decant-Cast) produces near-net shape components

from two dissimilar alloys or metals in a single multi-step casting operation.

The CDC process which was invented and developed by Dr David Browne and colleagues from UCD's School of Electrical, Electronic and Mechanical Engineering has been patented by UCD.

Rather than having a well-defined interface between the two alloys, the CDC Process produces a transition zone having a smooth gradient in concentration, microstructure and properties. Such a material is called a functionally gradient material. The CDC Process has been used to produce components joining a range of alloys, including two different Al-Si alloys, an aluminum alloy + an aluminum metal-matrix composite, and an aluminum alloy + a zinc alloy. The CDC Process should be capable of making castings from a range of dissimilar metals or alloys (magnesium alloys, copper alloys, steels, superalloys).

Eck Industries, located in Manitowoc, Wisconsin USA, is a leading caster of aluminum alloys and metal matrix composites.

NovaUCD LinkedIn Group

NovaUCD has recently established a NovaUCD LinkedIn Group.

The purpose of the NovaUCD LinkedIn Group is to connect together the NovaUCD community which includes entrepreneurs, innovators, researchers, staff, the NovaUCD network of professional contacts along with any individual who is based or has been based at NovaUCD or is otherwise linked with NovaUCD.

If you wish to become a member of this group please use the URL below or visit the LinkedIn website, www.linkedin.com, and search for 'NovaUCD' under 'Groups'.

<http://www.linkedin.com/e/gis/149865>

Contact: For further information contact Míceal Whelan, Project Manager, Communications, tel: 01-716 3712, email: miceal.whelan@ucd.ie.