

The magazine of the University of Dundee • December 09



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### from the principal...

Those of you who attended my presentations in late September/early October will have heard me speak of my vision for the future of the University, and of how this vision is underpinned by the three watchwords of Excellence, Focus and Impact. The University must strive for excellence in everything it does, whether teaching, research or the professionalism of its support staff and services. In order to achieve this, the University must focus investment and resource in those areas with the proven record or the potential to sustain excellence. By focusing on our strengths and by aspiring to be the best, the University will inevitably increase its impact, whether social, economic, scientific or intellectual.

November saw the publication of two significant documents affecting higher education in the UK. The first, Higher Ambitions, published on 3rd November to the fanfare of a speech by Lord Mandelson, sets out the UK Government's framework for sustaining the strength of higher education in an 'increasingly demanding and competitive environment'. The second, The impact of universities on the UK economy, was commissioned by Universities UK and presents the key benefits of higher education to the UK's economy.

It strikes me that our vision resonates with aspects of both of these documents. The Universities UK report emphasises and demonstrates conclusively the huge financial impact that the combined activities of the higher education sector have on the economy, generating over £59 billion of output and over 668,500 fte jobs in 2007-8. The purpose of the report is of course to provide evidence of the economic value of higher education (an interesting statistic is that HE is much more valuable to the UK than the pharmaceutical industry!) and hence to present universities as key engines to drive the recovery from recession. It is against this background that the impact of likely cuts in public spending on the higher education sector should be judged.

The proposals contained in Higher Ambitions address a number of issues across the breadth of HE activity, from access to research impact to teaching quality and relevance. As a product of the UK Government in a policy area devolved to the regional governments, the proposals have first and foremost a direct relevance to the English context. It would, however, be naïve to ignore what will almost certainly affect the thinking of both the Research Councils and the funding bodies in Wales, Northern Ireland and Scotland. The document makes it clear that, in a climate of reduced public funding, universities will have to focus on areas of excellence. In terms of research funding, the document seems to support the Russell Group calls for greater concentration of resource. It should be noted that Dundee has, however, successfully bucked the trend in the past as an exemplar of the principle that excellence should be supported wherever it is found.

In the face of both reports, it is clear that to succeed in a straitened public funding landscape the University has to embrace and propagate excellence if it is to secure a sustainable future for itself. Fortunately, the University already achieves great things across many of its disciplines. What I propose is a strengthening of these achievements, embedding a full understanding of the triangle of 'Excellence – Focus – Impact' to provide a firm foundation for the University's continuing success.

I wish one and all a very happy Christmas!

Professor Peter Downes • Principal and Vice-Chancellor

cover image: Brain Tumour Imaging

Dr Sam Eljamel, Centre for Neuroscience, Division of Medical Sciences, College of Medicine, Dentistry and Nursing

## Multi-million pound refurbishment for DJCAD



The Matthew and Crawford Buildings on the University campus, home to Duncan of Jordanstone College of Art & Design (DJCAD), the School of Architecture and the department of Town and Regional Planning, are to be extensively refurbished and remodelled.

The University Court, at its meeting held on the Fife campus in October, approved a capital plan which will transform the buildings over the next five years. £15million has been committed to the project through the University's Estates Strategy.

"This will breathe new life into the working of our buildings, invigorate our learning platform and build into our infrastructure our research profile, for which we have an unrivalled reputation in Scotland," said Professor Georgina Follett, Dean of DJCAD and Deputy Principal of the University.

"This project will provide us with a showcase building commensurate with the quality of work achieved by our staff and students throughout our history."

Both the Crawford and Matthew buildings have remained largely unchanged for over 30 years, and in that time teaching and research methodology has changed. The plan to refurbish and remodel the buildings will create a new learning and research landscape for users of the facilities.

Work on the remodelling of the buildings will start in 2010 and will be split into phased packages in order to reduce disruption as far as possible.

The plan to refurbish and remodel was the preferred option of the User Group who had carried out extensive consultation regarding the future needs of the departments housed in the buildings.



#### **DJCAD Unveils New Brand Identity**

Duncan of Jordanstone College of Art & Design unveiled their brand new logo just in time for their Open Days held at the beginning of November. The logo, which uses the acronym DJCAD, reflects recent changes within the college which saw 3 separate schools (Fine Art, Media Arts & Imaging and Design) being consolidated into a cohesive art college.

Over 30 designs, created by the university's Design • Print • Marketing team, were considered and the re-branding committee voted for the new identity which combines bold text with a pixelated background. The chosen logo emphasises the newly unified nature of the art college, reflecting DJCAD's position as an institution which punches way above its weight.

## SIPR Director granted rare honour

Professor Nick Fyfe, Director of the Scottish Institute for Policing Research (SIPR) within the College of Arts and Social Sciences, has been granted a rare honour in an invitation to become a Fellow of the Scottish Police College.

The award is only conferred on an "exclusive few" – including Commandants and Directors of the Scottish Police College and those of "the highest professional standing" who "have made a significant and sustained contribution to the education and training of police officers and staff."

Professor Fyfe will be honoured at an Award Dinner on 7 December at the Scottish Police College in Tulliallan, with a presentation from the current Director of the Scottish Police College, Mr John Geates. The College serves all eight police forces in Scotland, providing comprehensive training for Scotland's 16,500 officers.

Professor Fyfe said, "I am honoured and delighted to be invited to become a Fellow of the Scottish Police College.

"I have participated in the education and training of police officers in Scotland since the 1990s, most recently in developing with the College Scotland's first Graduate Programme in Policing, and creating opportunities for university staff to work with the police in the delivery of CPD.



"These are very exciting developments and will contribute significantly in developing the skills of the Scottish police service to meet future challenges."

SIPR, based within the University of Dundee, was set up in 2007, and is a strategic collaboration between thirteen of Scotland's universities and the Association of Chief Police Officers in Scotland, and engages in relevant policing research and a wide-ranging programme of knowledge exchange activities.



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## University's Eritrean graduation



The last Graduation ceremony of 2009 took place in October, when forty graduates of the University's distance learning courses were conferred with their degrees in Asmara, Eritrea, by Professor Margaret Smith, Dean of the School of Nursing and Midwifery.

Twenty-two students were awarded their Bachelor of Nursing and 18 received a BA in Professional Development in a special ceremony in the Eritrean capital at the ceremony, which was hosted by the Ministry of Health for the State of Eritrea, Mr Amina Nurhussein. The University has been working with students in Eritrea since 2003, with courses provided by the Distance Learning Centre in the School of Nursing and Midwifery, and by the School of Education, Social Work and Community Education.

The country is still recovering from the effects of a long and bloody war with neighbouring Ethiopia and education is vital, with well trained professionals much needed on the ground.

"There are now 100 Dundee graduates in Eritrea, a tremendous achievement and one with potential for advancing even greater change in the country," said Professor Smith.

## Prestigious EMBO membership

Professor Ron Hay, a Principal Investigator in the College of Life Sciences, has been elected as a member of one of the world's most prestigious scientific organisations.

The European Molecular Biology Organisation (EMBO) recognises excellence in molecular life sciences by annually electing leading scientists with proven excellence in research to become EMBO members.

Fifty EMBO members are recipients of the Nobel Prize, and Professor Hay is one of a select group of 66 scientists to be elected to membership in 2009. EMBO membership now comprises 1,420 of the world's foremost molecular biologists, and members contribute scientific expertise to the various programmes coordinated by the group. "The election once again puts a spotlight on the most outstanding representatives of the current generation of life scientists," said EMBO Director Hermann Bujard. "We look forward to the fresh impulses this exceptional group will bring to our organisation."

Professor Hay's expressed his delight at receiving such prestigious recognition from his peers, saying: "It is a great honour to be elected to EMBO and extremely gratifying to have the research carried out in my laboratory recognised in this fashion."

The work in Professor Hay's laboratory focuses on determining the function of modification in important biological processes, combining cell, molecular and structural biology. Recent work examining the treatment of leukaemia has led to new approaches to drug discovery being explored.

## Beauty of Botanics on show



The flora and fauna of the University's Botanic Garden as seen through the eyes of local photographers can now be viewed on a new photo gallery hosted on the Garden's website.

The Garden has this month re-launched its website at **www. dundeebotanicgarden.co.uk** and now includes the images produced by local photographers on a Flickr gallery.

"The Garden is full of beautiful and interesting spots and the local photographers who regularly visit have produced some stunning images," said Alasdair Hood from the Botanic Garden. "We want to show people far and wide just how beautiful the Garden is and these images certainly do that."

As well as the stunning images, the Garden's website now includes a virtual tour of the garden, as well as useful details of facilities, hosting corporate and social events, guided tours, exhibitions and events. The site also provides information on services which may be less usual – such as how to hire or buy floral decorations and displays, which have been used for University events such as Graduation.

Also available are a series of Mini Guides to print and take along with you – on the birds or insect-eating plants you may see during your visit, as well as the alien invaders, including the New Zealand flat worms which are currently munching their way through the Garden's native worm population! The Botanic Garden staff also care for campus green spaces, such as the Frankland Garden and the Geddes Quadrangle.

Also from the website or the Garden itself, you can buy the Botanic Garden 2010 Calendar – conveniently desk sized, the calendar features 12 stunning images of the garden through the year. Copies are available for only £3.50 from the Garden itself or from **www. dundee.ac.uk/botanic/buycalendar**. Delivery via the University internal mail is free, or add £1 for Royal Mail delivery.

Except for special events, University of Dundee staff and students gain free admission to the Garden on production of a valid staff or matriculation card.



## **RSA** honour for **DJCAD** Professor

Professor Murdo Macdonald, Chair of History of Scottish Art in Duncan of Jordanstone College of Art and Design, has been named an Honorary Member of the Royal Scottish Academy.

This prestigious nomination recognises Murdo Macdonald's contribution to the arts in Scotland and looks forward to calling on his knowledge and experience in helping to nurture and promote contemporary visual art in Scotland.

"This is a considerable honour for me on a personal level and it reflects well on the University, for it endorses the work that I have



been able to undertake as a result of my appointment to the Chair of History of Scottish Art in 1997," said Professor Macdonald.

Professor Macdonald is currently engaged as principal investigator in the major research project 'Window to the West: Towards a Redefinition of the Visual within Gaelic Scotland', exploring the inter-relationships of contemporary art, Gaelic language and culture, and art history. The five-year project, due to conclude in 2010, is funded by a £500,000 grant from the Arts and Humanities Research Council.

"This year I have disseminated work from that project through invited lectures not only at the National Library of Scotland but at the National Gallery of Finland and at Cape Breton University in Canada," said Professor Macdonald.

"There has also been further international dissemination through work published by the Royal Melbourne Institute of Technology (RMIT) Gallery in Australia.

"Such international contexts for Scottish art are fundamental to the history and present activities of the Royal Scottish Academy, and that leads me to value this honour all the more."

A smaller piece of his work is also seen by tens of thousands of visitors to Scotland every year – Professor Macdonald is quoted on a large display beside one of the moving walkways at Edinburgh Airport ("Edinburgh is a city which encourages you to think about what a city is") in the company of other notable Scots such as Robert Louis Stevenson.

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The changing face of the engineer from **Brunel to Wallace** and Gromit, the possible rewards of dishonesty, and the value of words and writing for young people. All of these and more will be explored in the 2010 Saturday Evening Lecture Series at the University, delivered by presenters who have journeyed into the Dragon's Den and to the North and South Poles.

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ISFRIFS

The **Saturday Evening Lecture Series** is moving into its 86th year with another programme of varied and stimulating events sure to provoke debate.

Economist, journalist and television presenter **Evan Davis** kicks things off on **Saturday January 16th** when he asks **The Truth About Dishonesty**, a question that is ever more pertinent in these days of economic crisis.

Evan's talk will ask the question 'When does it pay for those in the professional communications industries areas as diverse at journalism, politics and business - to be candid and when does it pay to be economical with the truth?' He argues that in the long term the truth usually emerges, and so the main consequence of not being honest is simply that no-one trusts you.

As the BBC's economics editor since 2001, Evan has reported first-hand on the highs and lows of world economics. He can currently be heard presenting BBC Radio 4's Today programme, and also appears regularly on our television screens as host of the venture-capitalist programme *Dragons' Den*.

On **Saturday February 13th**, the award-winning writer **William Fiennes** will explore '**The Importance of Words**'. William's latest book, *The Music Room*, a story of his childhood and family life growing up in a castle, has won massive acclaim. But the importance of writing, creating and reading stretches further than just his own work. He is a founder of First Story, a groundbreaking scheme to get young people writing. First Story places writers into challenging schools and works with the students to develop their writing skills and creativity, publish anthologies of their stories, and arrange events where the students read their work aloud.

At his SELS talk, William will discuss his own books, his work in schools and the lessons Dundee might learn from First Story.

Scenes from both ends of the earth will colour travel writer Sara Wheeler's lecture on March 6th, titled 'Tips About Icebergs: An Arctic Journey'.

Smashing through the Arctic Ocean with the crew of a Russian icebreaker, herding reindeer with Saami and shadowing the Trans-Alaskan pipeline with truckers, Sara made a sequence of east-west circumpolar journeys in the course of the research for her critically acclaimed book *The Magnetic North*.

In this powerful and funny lecture she will uncover the beautiful, brutal reality of the Arctic and ponder on its past as well as its future.

The common ground between Isambard Kingdom Brunel and animated heroes Wallace and Gromit has not often been explored, but **Sir Christopher Frayling** will show it is rich territory in his lecture on **April 24th**.

'From Brunel to Wallace and Gromit – the changing public image of the engineer' will follow changing public perceptions of engineers and designers from the 1930s to the present day. Starting with the "missionary" image in the 1930s, the "boffin" in the Second World War, the "teacher of the world" in the 1950s, the lecture moves on to discuss "Q" in the James Bond franchise ... and concludes with an eccentric pottingshed engineer and his plasticine dog. An epilogue looks at what is to be done and asks whether this kind of stereotyping really matters.

Sir Christopher was the Chairman of Arts Council England until 2007, Chairman of the Design Council, Chairman of the Royal Mint Advisory Committee, and a Trustee of the Victoria and Albert Museum. He was a governor of the British Film Institute in the 1980s and has written and presented a number of acclaimed television series. Saturday May 1st is marked by the D'Arcy Thompson Commemorative Lecture, recognising the huge contribution made to biological science by Dundee's first Chair of Biology.

Lewis Wolpert, Emeritus Professor of Biology as applied to Medicine in the Department of Anatomy and Developmental Biology at University College London, will look at the influence of Thompson's 1917 book, *Growth and Form*.

Professor Wolpert's lecture, 'The development of pattern and form' examines how Thompson's attempts to account for the variety of biological shapes in terms of physical principles continue to help shape our understanding of nature.

Scotland's transition throughout the 20th century is detailed in the last of the 2010 series, delivered by Professors Lynn Abrams and Callum Brown on Saturday 15th May.

The lecture, 'Troubled transition to modernity: Scottish everyday life in the 20th century', starts by looking at Scotland in 1900, when it was one of the least prosperous industrial zones in Europe. House overcrowding was the highest in the western world, religious culture was vigorous and, to many modern eyes, artless and oppressive, whilst sexual relations were surrounded with complex repressive etiquette and the masculinity of 'the hard man'.

By 2000, Scotland was transformed, with a liberal and mostly secular culture, spacious homes, the world's largest arts festival in Edinburgh, and a 'liberated' sexual culture defined by high illegitimacy rates and the idealisation of 'the new man'. In this lecture, Abrams and Brown present an illustrated account of this often traumatic transition in everyday life for Scots, most of it concentrated in the period since 1960. The lecture will mark the launch of their jointly-edited book from Edinburgh University Press - The History of Everyday Life in Twentieth Century Scotland (2010).

Lynn Abrams is the Professor of Gender History at the University of Glasgow, while Callum Brown is the Professor of Religious & Cultural History at the University of Dundee.

All the SELS lectures will take place in the Dalhousie Building and start at 6pm. Each lecture is followed by a drinks reception. Tickets for all lectures, which are free, will be available through the University's online store or by contacting the Events office on 01382 385564.

The **Saturday Evening Lecture Series** is supported by Apex Hotels and Borders bookstores.

## Counting the cost of fame



Being in the public eye can mean coming in for ad hominem online abuse, as Applied Computing graduate Kris Zutis has found out recently.

Kris unwittingly antagonised the gambling fraternity earlier this year when his final year project, a computer system which aims to make Blackjack fairer by detecting card counters and dealer errors, attracted worldwide attention.

He was accused of being a traitor, of cosying up to the enemy, of removing the one advantage that experienced gamblers enjoy against the house.

Branding the unassuming and immensely friendly 22-year-old, who currently works as a research assistant within the School of Computing, a "hypocrite", one website said they "can't imagine anyone liking a guy who sells out to the casino's side".

"I have to admit that I'm enjoying the abuse I'm getting and am having a good laugh at what they're saying about me," chuckled Kris. "Some people like what I've done, and some people hate it. Mostly, the ones who hate it don't know what they're talking about. Some sites keep saying that I'm an avid gambler with misplaced loyalties. I've never said I'm a big gambler, and I'm not!"

In fact, Kris's gambling career extends to little more than the occasional game of poker with friends. Originally, he had intended his project to be related to that game, but Kris and his supervisor Dr Jesse Hoey quickly realised that Blackjack was a more suitable subject for a study of card counting.

Card counting is a method of tracking the cards dealt in order to manipulate the player's odds of winning in their favour. While the strategy isn't illegal, casinos will move suspected card counters to a new table, where the counters are forced to start afresh, or eject them.

The system Kris developed uses a stereo camera placed above the Blackjack table to capture a live feed of the game. Complex software algorithms using methods such as contour analysis, template and feature matching are employed in order to recognise each card as it is dealt. The correlation between the player's betting patterns and the game card count is analysed to determine the likelihood that a player is card counting. The system devised also has the ability to detect errors by monitoring dealers' actions made during the game and ascertaining whether or not the correct action was taken.

"That's something some people don't realise," added Kris. "The system will also help the players by detecting mistakes made by the house. It's not all about stopping them winning. When it came to our final project, I started to think about combining what I was learning with something I was interested in and enjoyed. It turned out that blackjack was far more suited to a computer vision system than poker, and so I developed the system from there."

As well as adverse Internet coverage, the top-rated project featured in a rather more positive light in the prestigious New Scientist magazine. Kris also presented a research paper entitled "Who's Counting?: Real-Time Blackjack Monitoring for Card Counting Detection" at the International Conference on Computer Vision Systems (ICVS), in Liège in October.

The system shows considerable promise for commercialisation, and could become an invaluable asset for casinos. Other devices exist to try and combat card counting that use expensive RFID chips. Kris's method offers significant cost cutting opportunities for casinos while more effectively identifying card counters and detecting dealer errors.

He says the system could theoretically be adapted to track any casino game which uses cards or chips, such as roulette or three card poker, and offer better security for customers.

## Chessmen mysteries explored



Modern forensics techniques more commonly used to identify criminals by the Centre for Anatomy and Human Identification (CAHID) at the University have been applied to shed new light on one of Scotland's most historic treasures.

The iconic Lewis Chessmen is a set of crafted figures which were found on Lewis in 1831. They are believed to have been made in Scandinavia and to date to the late 12th century. The majority are in the collection of the British Museum and eleven are currently on display in the National Museum of Scotland.

Now a major study led by National Museums Scotland has cast new light on the story of the origins and uses of the iconic Lewis Chessmen, who it transpires may not be just chessmen after all.

Dr Caroline Wilkinson, Facial Anthropologist in CAHID, contributed forensic expertise to the study, which was the most comprehensive analysis of the chessmen carried out since their discovery. CAHID routinely carries out investigations on behalf of the police for current cases, but is also expert in contributing to historical analyses.

"The forensic techniques we used to analyse the faces of the chessmen were exactly the same as we would use in carrying out analysis on the face of a criminal," said Caroline. "I examined the 78 chessmen and charted their different features and dimensions.

"My conclusion was that the majority of the pieces could be divided into groups possibly representing the work of five different craftsmen. That is apparently very interesting from the historical point of view because it points to a group of craftspeople working on these." The research, led by Dr David Caldwell, Keeper of Scotland in Europe, National Museums Scotland, has now been published in the journal Medieval Archaeology. Mark Hall, of Perth Museum and Art Gallery, also contributed.

The study challenges the widely held view that the chessmen were part of a merchant's hoard when they were buried on Lewis, and suggests they may have been used for games other than chess. It also proposes they may have been buried in a different place in Lewis than previously thought.

Dr Caldwell said, "These are arguably the most famous treasures to come out of the ground in Scotland, and have worldwide recognition – so the danger is that we assume we know all there is to be known about them. We were keen to reassess the whole story of the pieces and their significance, to reignite interest in a little known period of our history.

"We found problems with the accepted version of where the chessmen were found, and would argue that they could have been owned by an important local person rather than abandoned by a travelling merchant. We also looked at the hoard from an entirely new perspective, examining their faces to check for similarities in their carving. We hope that this research proves it is always possible to cast new light on these fascinating pieces."

The research will feature in the major touring exhibition on the Lewis Chessmen, held in partnership with the British Museum and with funding from the Scottish Government, which will open in May 2010.



#### Friday 15 January • 10.30am – 5pm

D'Arcy Thompson Lecture Theatre (Tower Building)

2010 will be welcomed with the seventh annual Discovery Days event at the University, with thirteen of our newest professors giving a whirlwind guide to their area of academic expertise. The annual Discovery Days began in 2004, and since that time they have brought the work of 134 new professors at the University of Dundee to the attention of a wide non-specialist audience, including members of the public and academic and support staff from across the University.

At Discovery Day 2010, thirteen professors will talk on a breathtaking array of topics and issues from cancer research, imaging and medicine, through anatomy, life sciences and education, to economics, engineering, computing and the environment.

Each of the professors is given 15 minutes to talk on their chosen subject, with questions taken at the end of each session. With the day broken into three different sessions, it is an ideal opportunity to grab a bite-sized taste of some of the worldclass research being carried out at the University and to meet some of our newest staff.

"Discovery Day 2010 is a fantastic opportunity to hear about much of the fascinating research being pursued across the University," said Professor Pete Downes, Principal of the University.

"It promises to be a fascinating whirlwind tour through the outstanding achievements and future plans of our new chairs, and I hope very much that you will join me on what will be a voyage of discovery for us all."

Discovery Day 2010 takes place on Friday 15th January in the D'Arcy Thompson Lecture Theatre in the Tower Building. Admission is free and all are welcome to attend.



#### **SESSION I IIIITT – IZ.JOPTT** Chair – Professor Pete Downes, Principal & Vice-Chancellor



Presentations include: *The Jekyll and Hyde of DNA Repair* Kevin Hiom – Pat McPherson Chair of Cancer Biology



*Building on Sand* David Muir Wood – Chair of Geotechnical Engineering



*Time for a Good Argument* Chris Reed – Personal Chair of Computer Science and Philosophy



The Science of Anatomy – A Dying Art? by Roger Soames – Cox Chair of Anatomy

#### Session 2 I.30Pm-2.45Pm



Presentations include: Chris Spray – Chair of Water Science



Zooming in and Zooming out on Outsourcing Catia Montagna – Personal Chair of Economics



'Lone Scientist' or 'Empty Vessel'? How Do Children Learn? Yolande Muschamp – Personal Chair of Primary Education



Climate Change or Tropical Deforestation: will floods and land degradation increase? Mike Bonell – Personal Chair of Catchment Science

#### SESSION 3 3.ISPM-4.30PM

Chair – Professor Irene Leigh, Vice-Principal & Head of the College of Medicine, Dentistry & Nursing



Presentations include: How Does Modern Imaging Help Breast Cancer Patients? Andy Evans – Chair of Breast Imaging



So What Should Universities Be Teaching Students? David Coates – Personal Chair of Life Sciences



New Millennium Teaching for New Millennium Learning? Brian Hudson – Chair of Education



Anaesthesia at a Molecular Level Tim Hales – Chair of Anaesthesia



Aldosterone: a Key Cardiovascular Hormone from the Cradle to the Grave John Connell – Personal Chair of Endocrinology



## Taking art to the workplace



Emerging from a wheelie bin at a public refuse site in the pouring rain, Fraser MacDonald looks as far removed from the stereotypical image of an artist as possible. They say that all artists must suffer for their art, though, and doing his Oscar the Grouch impression at the official press launch of the "Nine Trades of Dundee" project, Fraser is no different.

"I think there might be shards of glass in there," Fraser says to the assembled photographers and camera crew who help get his 6'5" frame out of a vessel it was never designed to fit in. "At least it's empty, although it doesn't smell too nice."

For anyone reading on in bemusement, here's the deal: Nine Trades of Dundee seeks to take art directly to the workplace and challenge preconceptions about who is, and who isn't, an artist. Each project is run by an artist who is either working in a job that helps fund their artwork, or who has done so in the past. Fraser (23) is a Fine Art graduate of Duncan of Jordanstone College of Art and Design, as well as a former street sweeper in Perth. He was inspired to apply for the project by his experiences working at Friarton Recycling Centre in the Fair City.

Fraser's unique project will investigates the importance of work done by the employees of The Environment Service of Perth & Kinross Council. He has created an art movement which, in keeping with the themes of the workplace, will run as a mock trade union called "The Garbologists". Garbology is a term that refers to the study of refuse, and anyone who works for The Environment Service and who wants to be involved can become a Garbologist.

Fraser has built a shed at Friarton, which will serve as headquarters of the movement. Refuse collectors may not be the first people that you think of as artists, but Fraser explained that he wants turn people's preconceptions on their head and demonstrate that art isn't just an elitist activity enjoyed in art galleries and that we all have the capacity to be creative.

"The point is that everyone who wants to can be an artist," he said. "I've worked at the Centre on and off for four years. I thought my experiences there would make for an interesting study that fitted with the theme of the project.

"I get on really well with the guys, so hopefully they'll get behind what I'm doing and get involved with the project, which should be a lot of fun. It's all about the different crews and workers and the different happenings that occur on the lorries and on the site. I will be working with the other employees to record stories, take photographs and do a lot of filming.

"I want to investigate the importance of the job, both in terms of keeping the streets clean and recycling. All contributions from workers are welcome, as they are the artists in this movement. We'll also engaging with public to show them what's going on.

"In the spirit of the project I want everything to be as green as possible so I'll be travelling to Friarton on a bike that's been rescued from garbage. I'll be looking out for interesting items that the public have thrown away, and the furniture in the shed/office will be rescued from the skips as well.

"I hope to produce a union paper, which will feature a "Find of the fortnight" section, but really it's not so much about the rubbish as the jobs these guys are doing because it is such an important job and often one that is overlooked.

"I know from my own experiences how much hard work and humour is involved in the job, and I'm setting up the art movement as a way of showing this. Hope, this will make people think twice about what they might see as a dull, everyday job. The final outcome of the project will be the film I make, as well as a publication bringing the relevant documentation and photographs together. Hopefully, afterwards we'll leave the shed onsite and open to the public to visit."

Nine Trades was initiated by Exhibitions at Duncan of Jordanstone College of Art and Design. It was inspired by the 'The Nine Incorporated Trades of Dundee', an organisation that has been operating since the 1600's. Originally concerned with commerce and standards of the city it now functions as a charity and is involved in the preservation of heritage.

The project aims to increase arts access and encourage more participation for non-arts audiences by bringing art activity and creativity to the heart of the workplace. It is funded by The National Lottery through the Scottish Arts Council's Inspire Fund.

The outputs of the 'Nine Trades of Dundee' will include nine core collaborative commissions; a 'Nine Trades Final Gathering' event bringing together the artists, participants and wider audience in July 2010; and nine 'Nine Trades Apprenticeships' for Duncan of Jordanstone students.

The project will commission nine artists with second non-art trades to lead collaborative art projects with workers from that particular trade. Commissions will be developed to fit the individual artists practice and the working environment and the artist will receive curatorial and peer support as part of the larger 'Nine Trades of Dundee' project.

In addition to Fraser's Garbologists, a further two projects are currently underway.

Alan Grieve, who worked as a hairdresser for 25 years before graduating from DJCAD continued to cut hair throughout his studies. For his project, Alan works one day a week in Nori Hair Salon in Reform Street.

## The point is that everyone who wants to can be an artist.

His 'comment of the week' wall in the salon helps him to start a dialogue with colleagues and clients alike, offering a weekly insight into his thoughts in the form of drawings and illustrated texts. From this exchange he will create a magazine with his colleagues that will be distributed to salons throughout Dundee.

Ben Robinson, a customer service advisor at a call centre, aims to make 'art happen from what would previously be dismissed' by gathering the 'doodles' that many people draw during their time at work. Working with a group of colleagues he formed a printmaking group at DCA to turn the doodles into something 'more monumental'. The resulting works will be framed and hung in the working environment of the branch. This exhibition has since been exhibited in the Upper Foyer Gallery in DJCAD, and is available to tour to other locations - especially workplaces.

A further six projects, and the commissioned artists, will be announced shortly. More information is available by visiting **www. ninetrades.com.** 



## Visions of Discovery

The beauty of the scientific world is explored in the stunning Visions of Discovery exhibition, currently on show in the Dalhousie Building.

The exhibition is the result of a competition held among researchers across the College of Life Sciences and the College of Medicine, Dentistry and Nursing. Entrants were encouraged to submit images relating to their research, resulting in a dazzling array of entries reflecting work in subjects ranging from deadly parasites to cells of our immune system, from nerve cells to microtubules in the gut, and from dying cells to fruit fly embryos.

"The subject matter ranges from the large right down to the incredibly small, and from the clinically relevant through to images that illuminate our basic understanding of the cell," said Dr Paul Andrews, competition and exhibition co-organiser, and a senior scientist in the Drug Discovery Unit in the College of Life Sciences.

"It is worth remembering that while the images are visually quite beautiful and awe-inspiring they are not just pretty pictures - they reflect the cutting edge research taking place in Dundee, using some of the most advanced techniques in the world."

There was no better example of that than the 3-D brain scan submitted by Dr Sam Eljamel, from the Centre for Neuroscience in the School of Medicine.

Dr Eljamel's image of a malignant brain tumour was key in allowing the successful removal of the tumour through a surgical corridor without affecting the patient's speech, motor or sensory functions. The image shows the malignant brain tumour as a green ball, surrounded by white matter fibres, with motor fibres in red, sensory fibres in blue, connecting fibres in green and speech fibres in dark-green behind the tumour.

"Dr Eljamel's winning entry perfectly illustrates how a detailed image can aid understanding of the underlying medical or scientific issues," said Dr Jenny Woof, co-organiser of the exhibition and competition, and Reader in Immunology in the Division of Medical Sciences at the University's Medical School, Ninewells Hospital.

"It was a clear favourite among our panel of judges, who scored all the images not only on their aesthetic qualities, but also their originality, informational content, technical proficiency and visual impact. The judges brought a range of perspectives based on their expertise in public engagement, science communication, science publishing and image analysis."

Judges for the competition were Dr Ken Arnold, Head of Public Programmes, Wellcome Trust; Rose Taylor, Creative Director of the Science Photo Library; Dr Bernd Pulverer, Editor of Nature Cell Biology; and Professor Anne Anderson, Head of the College of Art, Science and Engineering at the University of Dundee.









top left • *Brain Tumour Imaging* **Dr Sam Eljamel**, Centre for Neuroscience, Division of Medical Sciences, College of Medicine, Dentistry and Nursing

centre left • Newborn Bone Architecture Craig Cunningham, Centre for Anatomy and Human Identification, College of Life Sciences

bottom left • *Human Chromosomes Illuminated* **Dr David Lleres**, Wellcome Trust Centre for Gene Regulation & Expression, College of Life Sciences

above • *Mouse Gut Microvilli* **Dr. Emma King**, Light Microscopy Facility, College of Life Sciences

right • *Mitochondrial Net* Ehsan Pourkarimi, Wellcome Trust Centre for Gene Regulation & Expression, College of Life Sciences



## Translating science into the language of health care



The first projects to be funded under an innovative national pilot scheme are now underway at the University, with the aim to rapidly translate basic research into applicable therapies for patients.

Over 40 translational research projects were proposed by University researchers and clinicians, and ten are now getting underway thanks to the funding. Dundee is one of five UK centres which earlier this year was given £2 million each by the Medical Research Council (MRC) to pilot a variety of research projects under the MRC's Developmental Pathway Funding Scheme.

Translational medicine is the progression of research developments from "bench to bedside" – from research into health care techniques, tools or drugs which will directly benefit patients. The initial projects include a surgical tool, a medicated cream, as well as the early development of possible drug treatments for a range of diseases and conditions.

Professor Mike Ferguson, Dean of Research in the College of Life Sciences, said, "This is a very exciting opportunity for The University of Dundee to show its true colours by translating some of its excellent science and technology towards real patient care.

"The scheme is not intended for academia to compete with the commercial sector, although in other areas, for example in neglected tropical diseases where there is no commercial partner, we can translate all the way through to drug candidates ready for clinical trials. Rather, in diseases such as cancer, diabetes, eczema and psoriasis and for medical devices we can carefully licence out to companies. "If you think of translational research as a pathway or pipeline, what these projects are about is de-risking innovation, getting ideas into a form our commercial partners are happy with and which we can successfully 'handshake' on. We are translating innovative ideas for them to take forward.

"In the area of drug discovery, the pharmaceutical industry is aware of the opportunities in accessing academic innovation and is looking for partnership with Universities. The Drug Discovery Unit at Dundee is pretty exceptional. We've created a fully integrated Unit which can translate our discoveries into a currency our industrial partners can understand. We're the only University in the UK really doing this.

"So far we have funded three projects – a 'super project' of eight drug discovery projects rolled into one, providing economies of scale, plus two other projects.

This is a very exciting opportunity for The University of Dundee to show its true colours by translating some of its excellent science and technology towards real patient care. "And a panel of nine of us here at Dundee met yesterday to discuss 16 further short project proposals, of which we are inviting six to submit full proposals for international peer-review. They are spread across three of the University's four Colleges – the Colleges of Medicine, Dentistry and Nursing, Life Sciences and Art Science and Engineering. Each successful project will receive average funding of around £100,000 to £150,000.

Professor Julie Frearson will be managing the 'super project' in the Drug Discovery Unit in the College of Life Sciences. The aim is to move eight individual molecular discoveries, made by Professors Daan van Aalten, Julian Blow, John Hayes, David Lane, Angus Lamond, Irwin Mclean, Tracy Palmer, Susann Schweiger and Roland Wolf towards new potential medicines for cancer, eczema, Huntington's disease, bacterial infections and type-2 diabetes.

Professor Frearson commented, "Each of these projects is backed by the top experts in their fields who work right here in Dundee. This is a unique and exciting opportunity to translate Dundee's excellent science towards therapeutic application."

Mike Ferguson explained: "Drug discovery has very high attrition rates – we have to develop more ideas as there is no certainty that you will end up with a bottle of therapeutic medicine at the end of it. But only 40% of the Fund is taken up by drug discovery projects; about 60% is going into medical devices and other therapeutic developments."

One such device is being developed by Dr Stuart Brown of the University's Institute for Medical Science and Technology (IMSaT), to develop a new surgical tool for use in keyhole surgery – a technique developed in Dundee by Sir Alfred Cuscheri and now in worldwide use. In recent years device development from IMSaT has led to the patenting of over fifty products and the development of fourteen new surgical instruments.

Professor Ferguson added: "The tethering device for use in laparoscopic surgery is a good example. In only 18 months we will know if the commercial partner is going to develop it, and it can then begin surgical trials.

"That's a fairly quick translation, going from a concept thought up by biomedical engineering experts, to a tool with the potential to become standard in operations around the world. The device means that the surgeon only has to make one tiny needle hole in the abdomen rather than three, which obviously would be a major patient benefit." The Drug Discovery Unit at Dundee is pretty exceptional. We've created a fully integrated Unit which can translate our discoveries into a currency our industrial partners can understand. We're the only University in the UK really doing this.

In therapeutic development, a project lead by Dr. John Foerster at the University's College of Medicine, is to develop a new medicated cream for the treatment of psoriasis.

"John Foerster's project is a classic example of taking basic research and turning it to practical use. John realised that a chemical tool he'd read about in another context in the published literature could be synthesised for use in a therapeutic cream, creating a potent radical treatment for psoriasis."

Dr Foerster added: "We have recently identified a cell signalling pathway central in the devastating skin disease psoriasis. This new funding scheme allows us to get on the fast track and take this discovery straight into the preclinical development of a new treatment. From the patients' point of view, this is exactly the kind of momentum needed to translate taxpayers' money into palpable improvements of therapy."

"It makes a lot of sense to let institutions that are well placed to perform translational medical research to manage it themselves – it makes for greater speed, flexibility, and innovation – meaning patients will benefit sooner from new discoveries," said Professor Ferguson.

He added: "This is a pilot scheme, and it's very important that we get this right. The MRC are checking on our progress every quarter, and are coming soon for a site visit. If successful, hopefully it will lead to further funding from them in the future."

## Shetland's tsunami



The huge series of waves it created would have been equivalent in size and effect to the Indian Ocean tsunami which we saw at the end of 2004...



7000 years ago, a vast submarine landslide caused an area the size of mainland Scotland to slide into the depths of the North Sea. The resulting tsunami swept across the North Atlantic at the speed of modern jet aircraft, ripping up the coast of Shetland and causing untold devastation to the population of Scotland at the time. This is the 'Storegga' tsunami, the result of one of the biggest landslides the world has ever known.

The earliest written accounts of tsunamis are from around 2,500 years ago in Greece, and the name comes from Japan, where almost 200 such events have been recorded. The giant waves are usually associated with earthquakes or volcanic eruptions, relatively common in the Pacific and Far East where tectonic plates meet. But the one which hit Shetland has been uncovered thanks to very modern techniques.

The scenario of a Scottish tsunami may seem unlikely – even implausible – and that's how many colleagues of Dr Sue Dawson, Lecturer in Geography, reacted when she and other experts first put forward the theory.

"A few years ago we used to get laughed at for proposing that a tsunami could have affected Scotland," said Dr Dawson. "It is not a characteristic area for these events because we are not sitting on a geological fault line, and therefore don't experience earthquakes which are the usual cause of tsunamis; but underwater landslides can happen anywhere."

Thanks to careful research and documentation of the evidence it's a theory which is now widely accepted. Unlike later historic tsunamis, there is obviously no written evidence, so Dr Dawson and her colleagues looked to the soil itself to tell the story of that devastating event, using radio carbon dating of plant and wood fragments extracted from the peat to date the tsunami.

Dr Dawson explained: "Shetland is a good place for tsunami evidence as we can clearly see a 30 cm layer of sand sandwiched between layers of peat, as well as balls of peat which have been ripped up by the wave. Elsewhere, much of the evidence is now under the sea, but the Shetland sediments are above sea level. At the time of the tsunami the sea level was at least 20 metres lower, so you can see there's been a sudden 25 - 30 metre wall of water travelling inland and bringing huge quantities of sand with it.

"The Storegga tsunami was caused by a vast submarine landslide off western Norway, north of Shetland. The huge series of waves it created would have been equivalent in size and effect to the Indian Ocean tsunami which we saw at the end of 2004, with waves going as far as Greenland, Shetland, Northumberland, and possibly further south into Belgium and the Netherlands.

"Bringing all the information together has been a bit like a jigsaw," said Dr Dawson. "We are piecing together lines of evidence which may seem circumstantial, but together with evidence from other affected sites, provide clear proof that a devastating tsunami did happen."

With Shetland's relatively flat landscape, and no warning, there would have been nowhere to run for the human population of the island.

"Undoubtedly the tsunami would have had a devastating impact on Mesolithic people, who tended to live on the coastline," said Dr Dawson. "It's difficult to provide clear evidence of this impact, but there are examples. In Inverness there is an archaeological site which shows evidence of Mesolithic settlement, covered by a layer of sand. "It's difficult to verify and investigate further with the knowledge and technology we now have, because the site is now covered by a supermarket.

"The time of the tsunami was a time of unprecedented geographical hazard. There was an ice sheet sitting over Scotland, and when that started to melt it led to a rapid rise in sea level."

The research into the historic Storegga landslide and tsunami could have great value for the future.

"Scientists and modellers in Norway are looking at landslides as possible causes for future tsunamis," said Dr Dawson. "There has only been one big event in 10,000 years, but theoretically it could happen again. There has been a lot more interest in tsunamis, and catastrophic events in general, since the devastating Indian Ocean tsunami." She is now studying sedimentation in the Maldives as a result of the 2004 event.

Dr Dawson has been studying historic tsunamis since the 1980s, looking at the geology and geoscience of coastal tsunami sediments at archaeological sites in Orkney and Shetland, collaborating with Dr Caroline Wickham-Jones, an archaeologist from the University of Aberdeen.

Now her work is set to feature on television – she was one of a select band of experts from around the North Sea basin invited to feature in a programme made by production company Wall-to-Wall – also responsible for the hit BBC1 programme *Who Do You Think You Are?* The 90 minute documentary, with a working title of *Stone Age Atlantis*, looks at the effects of historic tsunamis on Stone Age people, and will be shown next year on the National Geographic channel.

Dr Dawson was flown with a television crew to examine deposits at Maggie Kettle's Loch, next to the Sullom Voe oil terminal on the Shetland Islands for three days' filming in the summer.

"Television isn't as glamorous as it's made out to be!" she laughed. "There was just me, the camera man, sound man, producer and director, spending a whole day filming on the edge of the loch, just opposite Sullom Voe oil terminal, and having to redo everything every time a helicopter flew over and disturbed the soundman – which was often!

"I also didn't know I'd be presenting to the camera until we got there, but we got there in the end."

Although this was her first excursion in front of the cameras, Sue has previous television experience – she acted as a consultant to BBC's *Coast* programme.

#### court news

The October meeting of Court was held on the University's Kirkcaldy campus, which houses part of the School of Nursing & Midwifery. Court members welcomed the opportunity to familiarise themselves with a part of the University that a number had never before visited. The Dean of Nursing & Midwifery hosted the day, which included a tour of the site. The Dean, along with colleagues, gave a presentation to Court members which set out the achievements and priorities of the School as well as the challenges it faced in the future.

#### Governance

The meeting focussed on a number of governance issues, not least consideration of a final set of proposals from the Working Group established by Court at its April 2009 meeting to carry out a review of the effectiveness of Court and its committees. As part of the review, the working group had compiled a self-assessment questionnaire to collect comments from Court members on the way that Court conducts is business and on how it interacts and communicates with Senate and other University bodies as well as with staff and students. Draft proposals for change arising from the review were rigorously debated at the Court Retreat, as a result of which the working group revised the proposals for consideration at the October meeting.

Many of the proposals dealt with the mechanics of conducting business more effectively, including the presentation and distribution of papers, handling the conflicting issues of confidentiality and transparency, as well as revising the code of conduct and investigating better training and development for members. More controversially, however, a number of proposals dealt with the membership of Court. In particular it was proposed that the Rector should decide whether to act as a full Court member him or herself or whether to appoint an assessor. This would mean that either the Rector or the Rector's Assessor would sit as a full member of Court, but not both.

To compensate for this and to make the student-focused representation more directly accountable to students themselves, it was proposed that there should be an additional student member. After lengthy debate the Court approved all 38 proposals. Those proposals requiring changes to the Statutes or Ordinances will require Senate endorsement and, in the case of changes to Statutes, the approval of the Privy Council. The proposals can be viewed at: www.somis.dundee.ac.uk/court/notice/

#### **Nominations Committee**

The Court approved the recommendation from the Nominations Committee that it change its name to the Governance & Nominations Committee with an expanded remit for the ongoing consideration of all governance issues. It also agreed a set of revised procedures for the election of the Chairperson of Court.

Members also spent time considering how best to fill the two vacancies that currently existed on Court: the Chancellor's Assessor and a co-opted lay appointment. It was agreed that nominations would be sought from staff and students as well as from Court members themselves, in the hope that new members could be identified soon. Court agreed that in future it needed to take a more proactive approach to succession planning to make the replacement of members demitting office more seamless in future.

The Court approved the re-appointment of Mr Richard Burns as a co-opted lay member for a second term from 1 August 2010 to 31 July 2014.

#### DJCAD

The Court approved proposals to refurbish and remodel the Matthew and Crawford Buildings, following a detailed options appraisal and extensive discussions within Duncan of Jordanstone College of Art & Design. Court had originally expressed concern that refurbishment might not provide the enhancements required by DJCAD, but following discussion over the summer, Court was reassured that the plans had been revised to provide real improvements to the learning, teaching and research environment in both buildings and that they had the full backing of senior staff in DJCAD, including the Dean, Professor Georgina Follett.

#### Other News

The Court endorsed proposals from the Senate to award the titles of Principal Emeritus on Sir Alan Langlands and Librarian Emeritus on Mr John Bagnall. The Court agreed to proceed to open competition in the appointment of a new Vice-Principal & Head of the College of Life Sciences. The Court received progress reports on the Enhancement-Led Institutional Review and on the Tayside Academic Health Sciences Centre.

### appointments

#### Professor Kaj Hobér

Professor of International Law Centre for Energy, Petroleum and Mineral Law and Policy (CEPMLP)



An acclaimed international arbitration lawyer

has been appointed Professor of International Law at the University of Dundee. Professor Kaj Hobér, an expert in East European Law, will take up the post at the University's Centre for Energy, Petroleum and Mineral Law and Policy (CEPMLP) in January 2010.

Professor Hobér, whose impressive pedigree has been noted by Who's Who Legal, will join the CEPMLP on a full-time basis to teach and research in the field of international economic law and international dispute resolution. He is currently a partner at Mannheimer Swartling in Stockholm and is a prolific author on international arbitration, Russian and East European law, international investment, and trade law. Professor Hobér was previously the Professor of East European Commercial Law at Uppsala University in Sweden. Professor Graeme Houston SINAPSE Chair of Clinical Imaging

Graeme Houston has been a Consultant Radiologist at Ninewells Hospital and Medical School since 1995, focussing on developing and implementing services in magnetic resonance



imaging and interventional radiological techniques. He trained in medicine at Cambridge University and St Thomas's Hospital London, followed by early medical posts in radiology in Glasgow and Vancouver, Canada.

His major research interests are the improvement of noninvasive methods of assessing patient risk factors for disease, the development of new minimal invasive treatments, and the use of imaging techniques to improve the understanding of the pathophysiology of cardiovascular disease. As SINAPSE Chair of Clinical Imaging, future work will be further developing the clinical imaging research platform in the medical school and university.

SINAPSE (the Scottish Imaging Network – A Platform for Scientific Excellence) is a consortium of six Scottish universities (Aberdeen, Dundee, Edinburgh, Glasgow, St. Andrews, and Stirling), designed to create a dynamic network for research development in brain imaging.

Dr Patrick Pedrioli Programme Leader Scottish Institute for ceLL Signalling (SCILLS)

In December 2009 Dr Patrick Pedrioli joins the Scottish Institute for ceLL Signalling (SCILLS) from the Swiss Federal Institute of Technology (ETHZ), Zurich, where he worked as a postdoctoral fellow in the Institute of Biochemistry.

Dr Pedrioli was born and brought up in Switzerland and obtained his undergraduate and Masters degrees at the ETHZ. He then carried out research at the Institute for Systems Biology, Seattle, USA with Professor Ruedi Aebersold, which led to the award of his PhD degree in 2005.

Patrick's wife, **Dr Deena Leslie Pedrioli**, who is also a postdoctoral fellow at ETHZ, will be taking up a position as an Independent Investigator in the College of Life Sciences at the University of Dundee. Deena, who is Canadian, met Patrick when they were both PhD students in Seattle. The couple have a one year old daughter, Daniela.

#### Dr Lorraine van Blerk Senior Lecturer in Human Geography

Lorraine van Blerk took up the post of senior lecturer in human geography at the beginning of November. Prior to this Lorraine worked as a lecturer and researcher at the University of Reading and Brunel University since completing her PhD in 2001.

Lorraine has published widely on the geographies of children, youth and families. Her current research focuses on the identities, mobilities and exclusionary practices evident in the lives of young people in southern Africa and she is currently completing two ESRC-funded projects: the first exploring the family/community connections of young people living in street situations in South Africa and the other examining the rural livelihood strategies of young people affected by AIDS in Malawi and Lesotho (ESRC-DFID programme with colleagues at Brunel University).

## Dundee: Renaissance to Enlightenment

## Dundee's forgotten history as a power house of Scottish trading is examined in a new book by Dundee University Press.

Dundee, Renaissance to Enlightenment, edited by Charles McKean, Christopher A Whatley and Bob Harris, examines pre-Jute history, an area of Scottish history that has been forgotten until now. Here, in an exclusive extract from the introduction, Charles McKean explains why Dundee has been overlooked in history, despite its prominence during the years 1500 – 1820.

One challenge faced by those researching early Dundee is just how little the town appears to figure in recent Scottish historiography: indeed, in many respects, pre-jute Dundee has become invisible. Given the fact that between c. 1450 and 1650 the burgh had risen to be second in wealth only to Edinburgh (as judged by tax revenue), a significant player in the governance of the realm, a centre of both patronage and craftsmanship, and a major port, this invisibility is truly remarkable.

It may partly be explained by the fact that not only so very little of the fabric of this Renaissance burgh survived the century-long city improvement programme unleashed in 1871, but also because its original topography was obliterated. Dundee had developed in a long, linear manner squeezed between two small hills (the Corbie Hill and the Windmill Hill that lay immediately to the north, behind the market place and the Overgate) and the shore, with its market place at the centre.

The Dundee recorded in old drawings felt dense, dynamic and powerful because it was so tightly hemmed in between those hills and the sea to the south which ran along the foot of the raised beach. That town utterly vanished once both hills were quarried away. To the north, all is now flat, and space leaches away into the characterless and confusing former Meadow and Ward Lands. To the south, the sea has been distanced by over half a mile of serially reclaimed foreshore – originally docks, then railways and now roads. So, more than any other Scots town, Dundee has neither built heritage nor its setting to act as anchors for memory.

The void created by the absence of physical remains was filled by mythologies of different Dundees, exemplified by William Blain's 1946 historical novel *Witch's Blood*, which portrayed a burgh of witch burning, sacking by Cromwell, and industrial turmoil. Blain was only using materials that had been commonplace in Dundee ever since the later eighteenth century, by which time the earlier Dundee had already become obscured, as if by a gauze. So when the playwright/ architect Sinclair Gauldie wrote in 1984 that eighteenth century Dundee 'never experienced that expansion of a civilised middle class which ensured the success of Edinburgh's New Town... a modest burgh with a fairly typical social stratification whose tone was set by merchants and skilled artisans', he may have been reiterating an accepted truth; but it was not the entire historical reality.



Compare Gauldie's description to John Macky's description of the town in 1723: 'The inhabitants here... are very genteel and have more of the Air of Gentlemen than Merchants.' The reality of Dundee for most of the period covered in this volume resembled Macky's Dundee at least as much as Gauldie's.

This volume is the second in the University of Dundee's three-volume *History of Dundee* project, which was launched with the publication of *Victorian Dundee, Image and Realities* in 2000 (which likewise faced the problem of comparing the reality against Dundee's wellworn mythologies).

The final volume, *Dundee in the Twentieth Century*, is in preparation. The purpose of the series is to assess Dundee's changing role within the world and, particularly, within Scotland and Britain; its similarity or difference to other towns; and to identify any recurrent themes. This volume is divided into two sections. The first part addresses the role and nature of the port between the mid sixteenth and eighteenth centuries, approximately chronologically. The second part focuses upon Dundee between 1750 and 1820 by examining key themes, again approximately chronologically: its relationship with the empire, its port development, its material culture, and its reputation for radicalism and disorder. The volume ends where the next begins – with the liberation of the harbour from the town council into the more dynamic hands of the maritime interest.

In its trajectory from 1500 to 1820, Dundee had shown extraordinary resilience. Although it was, by European standards, a small and relatively weak community, with neither external resources nor patronage to fall back upon, it had survived four military attacks, three sackings, numerous plagues, tempests and a tidal wave. By virtue of its natives' maritime skill and mercantile acumen, it developed, then lost and then regained an international role founded essentially on seafaring.

Although it slipped from second to fourth rank amongst Scottish towns, it had ended the eighteenth century ready to evolve into the linen capital of Britain.

That, not the myths, is the history of this hitherto invisible port.

**Charles McKean** is Professor of Scottish Architectural History at the University of Dundee. **Christopher A. Whatley** is a Professor of Scottish History at the University of Dundee and a Vice Principal of the University.

Dundee: Renaissance to Enlightenment will be available from 1st December, priced £25, from www.dup.dundee. ac.uk, Amazon or good booksellers.

## New Law books from Dundee University Press



Scots Criminal Law: A Critical Analysis Professor Pamela Ferguson and Dr Claire McDiarmid Dundee University Press

Scots Criminal Law: A Critical Analysis not only provides a clear statement of the current law but also considers what types of behaviours are subject to criminal law sanction, and why. Given that 10 years have passed since devolution handed responsibility for the future development and reform of criminal law largely on the re-established Scottish Parliament, the book offers a timely re-assessment of the law.

Through this re-assessment, the authors attempt to determine whether Scots criminal law is meeting the needs of modern Scottish society, while also considering areas where future development is likely. By exploring the theoretical underpinnings of the current law, the book promotes a reflective approach to its study.

The book is a stimulating read for anyone with an interest in the future development of criminal law and provides a lasting resource tool for students and practitioners alike.

Pamela Fergusson is Professor of Law at the University of Dundee.

Scots Criminal Law

An Introduction to Scots Criminal Law (Second Edition) Dr Sarah Christie Dundee University Press

An Introduction to Scots Criminal Law is an invaluable text for students, whether on LLB or non-LLB courses. The book covers all the core aspects and principles of Scots criminal law in a clear and comprehensive manner, and also deals with the effect of devolution and the impact of the European Convention on Human Rights where applicable. The new edition also provides a full account of the provisions found in the Sexual Offences (Scotland) Act 2009.

The book's valuable content is enhanced by its ease of reading. Each chapter is structured to help the student navigate easily through the text, with clear sub-headings, flow diagrams, self-assessment questions and graded further reading. All in all, *An Introduction to Scots Criminal Law* is an extremely useful study tool.



## From Victorian schooldays to space age ideas



First man on the Moon Neil Armstrong is a famously private individual who eschews the fame that the Apollo 11 mission brought him. So when the great man takes the time to contact you personally, then it's rather unusual. However, School of Computing lecturer Dr Iain Murray almost forgets to mention this fact whilst discussing the reaction to his recent book, *Bouncing-Bomb Man: The Science of Sir Barnes Wallis.* "I got an email from Neil Armstrong this morning" is how he modestly introduces it into conversation.

Best known for his work in designing the bouncing bomb used in the famous Dambusters raid, Wallis was an engineering genius who designed airships, novel aircraft structures, special weapons and registered an extensive collection of patents. He was also one of the pioneers of long-range supersonic aircraft including "swingwing" aircraft.

"Before he became an astronaut, I knew that Armstrong had flown early swing-wing aeroplanes as a test pilot and so wrote to him asking if he had any recollections of his experiences," explained Dr Murray. "I expected a reply from his secretary but, to my surprise, he responded personally. When the book came out recently, I sent him a copy and he got in touch again to thank me, and to say that he looked forward to delving into this 'engineering treat'. That's obviously nice to hear from anyone, but when it comes from Neil Armstrong it's a bit special!" In his new book, Dr Murray describes the huge breadth of Sir Barnes' work, showing how his genius brought entirely new ideas into numerous fields, and reveals the science and engineering expertise that he deployed to make them work. In another link to Armstrong, the radio telescope which received the first TV footage of the moon landing was designed by Wallis.

Because many of his later aircraft designs were never built, Dr Murray has used his computing experience to construct them for the first time – as 3D computer-generated models. The result is a compelling glimpse inside the design portfolio of one of Britain's greatest ever engineering geniuses.

"My first exposure to Barnes Wallis came when I saw *The Dam Busters* film when I was young. A few years later I read his biography and I started to find out all the interesting things that he did other than planes and bombs. It was alweays in my mind that looking at the science of his work, as opposed to a biography of the man, would make for a good book."

Dr Murray chairs the Tayside & Fife branch of the British Science Association, and it was his involvement with this organisation that helped him massively when writing the book on Barnes Wallis.

"Just before Wallis died he donated the bulk of his scientific papers to the British Science Museum," he explained.

"The science museum is just a hundred yards from the Association's headquarters, so I'd spend the mornings before meetings in the archives, go to the meeting in the afternoon, and then finish off the day back at the museum."

As he read Wallis' scientific papers and other sources, Dr Murray began to form a more complete picture of the man and his work. He learned of his interest in arts and sciences, and his extensive contact list that enabled him to work in fields that were not his specialities.

In particular, Dr Murray became fascinated with Wallis' lesser-known post-war work, including ideas that were never fully developed and now, thanks to the author's computing expertise, feature in the Bouncing-Bomb Man book as they might have appeared.

"I discovered that there were lots of interesting things and projects that people didn't know about, particularly the work he did after the war," continued Dr Murray.

"His breadth of achivements is quite remarkable, and he held more than 140 patents. He was able to use his wide knowledge to bring old ideas into new areas - the key to innovation.

After the war, Wallis championed the use of tail-less 'swing wing' aircraft, and some of his ideas were eventually taken up in the Tornado. But what he really wanted to develop was a long-range supersonic airliner - if he had designed Concorde his way, it would have been able to reach Australia in about five hours! This later work is fascinating, and I was keen to write about it in the book."

"After a series of massive defence cuts, Wallis took his ideas for swingwing aircraft to America. They said "thanks, but no thanks" and then a few years later, the F1-11 was built, and was a lot closer to Wallis's work than what the Americans had been working on previously. It's generally accepted that the Americans stole some of his ideas, and this caused a bit of a stooshie in the British press particularly when the Government were at one point poised to buy these aeroplanes, which used technology that they had previously rejected and that was inspired by a great British engineering genius."



I sent him a copy and he got in touch to say that he looked forward to delving into this 'engineering treat'. When that comes from Neil Armstrong it's a bit special!

Dr Murray's book is the first to describe the entire life's work of Wallis, who lived between 1887 and 1979 in detail. The author asks where the inspiration for the technical achievements came from, what the contemporary alternatives were, and why his solutions were invariably better.

He describes how the designs performed and the results of their use – including airships, geodetic aircraft, the 'bouncing bombs', the 'earthquake bombs', supersonic aircraft designs, telescopes, cargo carriers and bridges, as well as his sports and medical projects. Dr Murray is acknowledged as an expert on the work of Sir Barnes Wallis, and several years ago, he acted as a consultant for an episode of the ITV drama series *Foyle's War*, which featured a fictitious group working on the 'bouncing bomb'.

*Bouncing-Bomb Man: The Science of Sir Barnes Wallis* is published by Haynes, and is available from Amazon and all good bookshops, priced £25.

## From the Archives

#### Mary Ann Baxter of Balgavies, 1801 - 1884

Women have arguably played a bigger role in the history of the University of Dundee than they have in any other Scottish University. This should not be surprising as the University owes its origin to Miss Mary Ann Baxter, the founder of University College, Dundee, who died 125 years ago this December.

Born in 1801, Mary Ann Baxter was the seventh of eight children born to William Baxter, who established the Baxter Brothers textile firm, and Elizabeth Gorell. Described by The Glasgow Herald as possessing "high intellectual gifts" and remarkably sound judgement, Miss Baxter was a well known philanthropist. She donated a substantial amount of money to missionary work and the Congregational Church. She also gave much money to local causes, such as the construction of the Sailors' Hall, and along with her brother Sir David Baxter and her sister Eleanor donated the splendid Baxter Park to Dundee in 1863.

Her biggest gift to Dundee was however University College. There had long been talk of creating an establishment to provide University education in Dundee, but the huge costs of founding such an institution from scratch made such a scheme seem unachievable. However in 1880 one of the scheme's champions Dr. John Boyd Baxter announced that his distant cousin and good friend Mary Ann Baxter was prepared to invest a considerable sum in the project.

The following year University College, Dundee was formally founded with Miss Baxter providing £130,000 (equivalent to about £13 million today) of the College's £140,000 endowment from her personal fortune, with the remaining £10,000 provided by Dr. Boyd Baxter. She later provided £10,000 to construct a purpose built chemistry department (now part of the Carnelley Building).

Miss Baxter had a strong vision of what University College was to be like. A progressive thinker, she ensured that the deed of endowment specified that he College was for "both sexes" making it a pioneer in the education of women. Moreover, probably in light of her own dissenting religious traditions, Miss Baxter decreed that no religious subject was ever to be taught at University College and no one involved with University College would ever have to declare their own religious beliefs. The College was formally opened in 1883, an event immortalised in typically appalling verse by William McGonagall which began:

Good people of Dundee, your voices raise, And to Miss Baxter give great praise; Rejoice and sing and dance with glee, Because she has founded a college in Bonnie Dundee.

Sadly, she was unable to attend this formal opening, owing to failing health. Her death, and that of her sister, the following year came as no great surprise. However, Baxter involvement in the College would continue via her great-nephew Sir George Washington Baxter, who served as both Chairman (1895-1925) and President (1925-1926) of UCD.

Mary Ann Baxter did much to shape the future of University College and the University of Dundee. The legacy of a strong female founder and her commitment to providing women with education cast a particularly long shadow. Within a few years of her death, Dundee had many notable female staff, graduates and students, including the brilliant Zoology lecturer Dr. Doris Mackinnon, and Annie Strachan who served as President of the Students Union in 1915-1916 and was later President of the Students Representative Council. It would no doubt also have pleased Miss Baxter that Dundee was to have Scotland's first female Professor in Margaret Fairlie, who was appointed in 1940.

## V. THE INAUGURAT COLL

By WILLIAM M'GON

PATRONISED BY HE

Goal people of Dundoo, your ruises raise, And to Miss Bacter give great pesies ( Bajoice and sing and funces with glue, Bennue the Inn familiel a College in Bannie Dundo

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Also, the Bight How W. R. BERDY was there on bolad And acknowledged has based of solid that else requested him to hand it over to the As an investive to others to beach the ignorant sames it

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> I hope Miss Bayt For the money 0 May God above And may all gen



AGALL, 19 Paton's Lane, Dundee, OF TEL-EL-KEBIR, &c.

R MAJESTY & LORD WOLSELEY: ROBILITY AND GENTRY.

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www.dundee.ac.uk/pressoffice

the ent the dundee dundee christmas erutcal lecture

## WHAT'S SO GOOD ABOUT

The future of the Western world's most cherished ideal – democracy – is the topic of this year's Dundee Christmas Lecture. John Keane, Professor of Politics at the University of Westminster and at the Wissenschaftszentrum Berlin (WZB), will be asking "What's so good about democracy?" when he delivers the lecture at the Dalhousie Building on Saturday, December 5th.

In the aftermath of a global recession, an expenses scandal starring our elected representatives, and the dismissal of independent scientific advisors, many people have disengaged with politics. Despite this, democracy is still widely regarded as the "least worst system". Wars are fought to defend it, and we pride ourselves on the superiority of our political system but, with a General Election around the corner, should we be asking fundamental questions about the nature of democracy itself?

Professor Keane has been described as one of the UK's leading political thinkers and one of Australia's great intellectual exports. He has published many influential books and seen his work translated into more than 25 languages. His entertaining, wide-ranging and controversial public lecture will argue that virtually all of the traditional arguments for democracy no longer ring true, and that we need to think about an old ideal in new and imaginative ways. Tickets for this free lecture are available from the University online store, Tower Building Reception, Borders Books (Dundee), 01382 385564 or events@dundee.ac.uk.



## what's on...

#### Until January 2010

#### Visions of Discovery Image Competition

Dalhousie Building, Old Hawkill. From Bacteria to Brain Tumours via Bach: from Cancer Cells to Chick Development via the Colon. Come and see an amazing showcase of fascinating images of bioscience research produced by University of Dundee researchers based in the Colleges of Life Sciences and Medicine, Dentistry and Nursing. For more information see http://vod.lifesci.dundee.ac.uk.

#### **30 November**

#### Untangling the Web: Making Computers more Accessible to Older Adults – Café Science

with Professor Vicki Hanson. 7pm, Borders Bookstore Dundee. Free entry. Come to Borders Starbucks Cafe to hear how research, and some great facilities, are making the internet and computers more accessible to older adults! For more information please visit www. cafesciencedundee.co.uk

#### 2 December Learning & Teaching Awards Lunch

Dalhousie Building Rooms 1G05(G) An opportunity to share good practice and hear some of the winners of the Teaching Awards 08-09

12.30pm: Allan Jones (Chancellor's Award for Lifetime Contribution to Teaching winner) 1pm: Nick Brewer and Margaret Adamson (Honorary Graduates' Award for Innovative Teaching winners)

1.30pm: Fraser Smith (Senate Award for Excellence in Teaching winner) Lunch will be provided for attendees, and places can be booked by contacting Julie Brennan at apd@dundee.ac.uk

#### **Lunchtime Concert Series**

All held in the University Chaplaincy, Cross Row from 1.20pm to 1.50pm. Open to all, free entry, and snack lunches will be available.

4 December: William Stevenson (organ) 11 December: Dundee University Choirs

#### **15 January**

**Discovery Day 2010** See feature pp12-13. www.dundee.ac.uk/principalsoffice/dd10.htm

#### **16 January**

Saturday Evening Lecture Series Evan Davis - 'Does Dishonesty Pay?' 6pm, Dalhousie Building.

#### 22 January

#### **Jasper Fforde**

Reading from his new book, *Shades of Grey* 6pm, Dalhousie Building. www.literarydundee.co.uk/theothers.htm

#### 13 February:

#### Saturday Evening Lecture Series

William Fiennes - 'The Importance of Words' 6pm, Dalhousie Building. www.dundee.ac.uk/externalrelations/ events/sels/2010/sels2010.html SEAFOOD | STEAKS | PIZZA | PASTA | MEZES

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# sense of hievement

#### Pioneer: Dr Thomas J Maclagan 1838 - 1903

Maclagan, a doctor and pharmacologist, carried out research into the effect of Salicin, an extract from willow bark, a known anti-rheumatic treatment. This led to the development of acetyl-salicylic acid - more commonly known as aspirin.



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