



Patient needs driving health research

Springboard
for rising
research stars

Research into
radicalisation

...a rising star among research-intensive institutions

TIMES HIGHER EDUCATION

Welcome to Research News

The past six months have seen major announcements bringing good news for research at the University of Exeter.

The results of the 2008 Research Assessment Exercise (RAE) confirm Exeter's position as one of the leading research-intensive universities in the UK. Nearly 90% of Exeter's research was rated as being at internationally recognised levels. Every subject across the University was assessed as including world-leading 4* research.

The impact of this achievement was clear in March with the news that the University of Exeter will receive one of the biggest rises in the country in our annual government grant for research and teaching. Research funding has increased by 26% - the third largest increase among leading UK research universities. The increase is the reward for improvements in research quality and quantity.

This *Research News* gives some great examples of discoveries and ongoing work in health, the environment, the armed forces and theology. So our research makes a real difference to people.

And our people make a difference – Exeter submitted 95% of staff to the RAE – 636 in total – a much higher proportion than most other universities. When the results are adjusted for the number of staff submitted, the University is ranked 15th in the UK for research.

So we are building on our strengths - recruitment is underway for 29 new academic posts to support our £80 million investment in science. The University has made 182 new academic appointments in the last two years, including 38 new professors.

This issue turns the spotlight on key academic staff in medicine, politics, engineering and more, as well as some excellent examples of postgraduate work, which is set to be boosted by a £7 million investment in the next three years.

Read on and, I hope, be inspired.



Professor Roger Kain CBE, FBA

Deputy Vice-Chancellor – Research and Knowledge Transfer, University of Exeter

Buying local isn't always better for the environment

A University of Exeter team has compared trips to a local farm shop with deliveries made by companies that distribute organic vegetable boxes to their customers. The study also took into account the carbon emissions produced by cold storage, packing and the transportation of goods to a regional 'hub'. By bringing this data together, the researchers were able to calculate the total carbon emission.

The study found that if the average car journey made to a farm shop is a round-trip of

more than 6.7km, then home delivery was a better option even if the competing farm shop used no lighting, heating or chilling. While a delivery van will travel up to 360km to deliver an organic vegetable box, this trip will cover a large number of addresses so the carbon emissions per customer will be surprisingly low.

David Coley from the Centre for Energy and the Environment at the University of Exeter, lead author on the study, said: "People are becoming familiar with the phrase 'food miles',

but don't have a very clear understanding of what it means. We need to look more thoroughly at the many factors that lie behind putting food on our tables, before we can say what is better or worse for the environment."

The study acknowledges that there are many other factors in addition to 'food miles' that concern consumers. For example, issues around local economics and the environmental impact of different food production methods.



Fish guts explain marine carbon cycle mystery

A study by a team of scientists from the UK, US and Canada and published in *Science*, provides new insights into the marine carbon cycle, which is undergoing rapid change as a result of global CO₂ emissions.

Until now, scientists have believed that the oceans' calcium carbonate, which dissolves to make seawater alkaline, came from the external 'skeletons' of microscopic marine plankton. This study estimates that three to 15 per cent of marine calcium carbonate is in fact produced by fish in their intestines and then excreted. This is a conservative estimate and the team believes it has the potential to be three times higher.

Calcium carbonate helps control the delicate acidity balance, or pH, of sea water. pH balance is vital for the health of marine ecosystems, and important in controlling how easily the ocean will absorb future increases in atmospheric CO₂.

Lead author Dr Rod Wilson of the University of Exeter's School of Biosciences said: "Because of the impact of global climate change, fish are likely to have an even bigger influence on the chemistry of our oceans in future. So, it is vitally important that we build on this research to help fully understand these processes and how this will affect some of our most precious marine ecosystems."

Dr Wilson's research was supported by the Biotechnology and Biological Sciences Research Council.

Frugal eating as recession bites

As the recession bites, people are looking to cut back on household spending including food bills. Theologians at the University of Exeter have been researching Christian traditions of feasting and fasting to show their relevance to modern diets like vegetarianism, and have made links with current trends.

The Arts and Humanities Research Council funded

project shows that everyday decisions about food and eating possess deep spiritual, social and economic significance.

Fasting was closely linked to the seasonal food cycle. However, in today's bleak economy a thrifty approach to food, such as buying seasonal fruit and vegetables, helps ensure a smaller grocery bill and healthier diet.

Fasting had other social and political motivations, such as ensuring the poor had sufficient food through lean seasons and requiring even well-off people to experience a meagre diet.

Dr David Grumett, a theologian at the University of Exeter, says: "By taking another look at food, we focus on how our individual choices affect our society, environment, spirituality and relationships with other people."



New style war obituaries for Helmand Province soldiers

New research by the University of Exeter has revealed a marked change in the way the soldier is perceived in the public imagination.

The research shows that in acts of remembrance today, the soldier is personalised and domesticated, remembered as a father, husband, son or wife. In the past, the war dead were portrayed primarily as soldiers and commemorated for their strategic role within the war fulfilling their act of duty. Now they are remembered as personalities.

Professor of Sociology, Anthony King explains, "The publication of the casualty's name, rank and regiment is now deemed insufficient and announcements have become elaborate cultural artefacts. They tend to be accompanied by a biography, a testimony usually by the soldier's Commanding Officer, a photograph and sometimes commentary from family members."

For the last two years, British forces have been fighting in Helmand Province, in Afghanistan and 152 British soldiers have been killed.



New treatment hope for people with recurring depression

Research shows for the first time that a group-based psychological treatment, Mindfulness Based Cognitive Therapy (MBCT), could be a viable alternative to prescription drugs for people suffering from long-term depression.

MBCT focuses on targeting negative thinking and aims to help people who are very vulnerable to recurring depression by stopping depressed moods from spiralling out of control.

In the University of Exeter-led study, MBCT proved as effective as maintenance anti-depressants in preventing a relapse and more effective in enhancing peoples' quality of life.

The randomised control trial involved 123 people from urban and rural locations who had suffered repeat depressions and were referred to the trial by their GPs. The participants were split randomly into two groups. Half continued their on-going anti-depressant drug treatment

and the rest participated in an MBCT course and were given the option of coming off anti-depressants.

Over the 15 months after the trial, 47% of the group following the MBCT course experienced a relapse compared with 60% of those continuing their normal treatment, including anti-depressant drugs. In addition, the group on the MBCT programme reported a higher quality of life, in terms of their overall enjoyment of daily living and physical well-being.

Lead researcher Professor Willem Kuyken said: "Our results suggest MBCT may be a viable alternative for some of the 3.5 million people in the UK known to be suffering from this debilitating condition. People who suffer depression have long asked for psychological approaches to help them recover in the long-term and MBCT is a very promising approach."

The study was funded by the Medical Research Council.



THE HERALD, PLYMOUTH

First brain study reveals benefits of exercise on quitting smoking

Research reveals for the first time that changes in brain activity, triggered by physical exercise, may help reduce cigarette cravings. Published in the journal *Psychopharmacology*, the study shows how exercise changes the way the brain processes information among smokers, thereby reducing their cravings for nicotine. For the first time, researchers used functional Magnetic Resonance Imaging (fMRI) to investigate how the brain processes images of cigarettes after exercise.

Kate Janse Van Rensburg, a PhD student with the University of Exeter's Schools of Sport and Health Sciences and Psychology, was lead author on the paper. She said: "Our findings add to a growing body of evidence suggesting that exercise can help people give up smoking. This strengthens the argument that moderate exercise could be a viable alternative to many of the pharmaceutical products, such as nicotine patches, for people who want to give up smoking."

New study links virus to cause of type 1 diabetes

Research by the Peninsula Medical School, the University of Brighton and the Department of Pathology at Glasgow Royal Infirmary, has found that a common family of viruses may play an important role in triggering the development of diabetes, particularly in children.

The research was carried out at Peninsula Medical School and funded by Juvenile Diabetes Research Foundation. It involved the detailed study of a unique collection of pancreases from 72 young people who died less than a year after the diagnosis of type 1 diabetes.

More than 60 per cent of the organs contained evidence of enteroviral infection of the beta cells.



Type 1 diabetes usually starts in young people and results from the destruction of the insulin-producing beta cells in the pancreas. Patients who develop type 1 diabetes have to take multiple daily injections of insulin for the rest of their lives, and the condition affects around 300,000 people in the UK, including 20,000 children under the age of 15.

There are up to 100 different strains of enterovirus and more research will be needed to identify which are associated with the development of diabetes, and whether vaccines could be developed to prevent their spread.

Archaeologists find earliest known domestic horses

An international team of archaeologists has uncovered the earliest known evidence of horses being domesticated by humans. The findings could point to the very beginnings of horse domestication and the origins of the horse breeds we know today. Led by the Universities of Exeter and Bristol the research was published in leading academic journal *Science*.

The researchers traced the origins of horse domestication to the Botai Culture of Kazakhstan circa 5,500 years ago. This is about 1,000 years earlier than thought and about 2,000 years earlier than domestic horses are known to have been in Europe. Their findings strongly suggest that horses were originally domesticated,

not just for riding, but also to provide food, including milk.

The team used a new technique to reveal 'bit damage' caused by horses being harnessed or bridled. Using a novel method of lipid residue analysis, the researchers also analysed Botai pottery and found traces of fats from horse milk.

This study was carried out by the Universities of Exeter, Bristol and Winchester (UK), Carnegie Museum of Natural History (Pittsburgh, USA), and Kokshetau University (Kazakhstan) and was supported by the Natural Environment Research Council, British Academy and National Science Foundation of America.



ALAN OUTRAM

Work in progress

Sustainable travel between resorts in the South West is the subject of a research project uniting Dr Stewart Barr (Geography) and Professor Gareth Shaw (Business School). Working with industry partner the National Social Marketing Centre, this research explores the relationships between tourism, sustainability and behaviour change. This is part of a £1.5 million Economic and Social Research Council funded Capacity Building Cluster in Sport, Leisure and Tourism.

Experts in energy policy, supply chains, international relations and engineering met at the Royal Society on 2 April to launch a major new research cluster focused on energy security. The three-year project will address issues like: Is Britain's energy supply under threat from global political insecurities? How will the world-wide recession affect our capacity to source energy? How vulnerable is Britain to losing the energy supplies we take for granted? The cluster is led by the University of Exeter, with the University of Sussex, and is funded by the Engineering and Physical Sciences Research Council and the Economic and Social Research Council.

The 30th anniversary of the revolution in Iran was marked with the creation of a Centre that formally brings together the extensive range of expertise in Persian and Iranian studies currently based at the University.

The University of Exeter's Centre for Persian and Iranian Studies, based within the Institute of Arab and Islamic Studies, brings together extensive knowledge of Iran's religious, political and intellectual culture that shaped events at this time of change. Director of the Centre is Michael Axworthy, former Head of Iran Section in the Foreign and Commonwealth Office.

Patient needs driving

On an average day in the quiet Devon town of Crediton you might stumble on a tai chi class for the over 70s. You may find social workers, physiotherapists, GPs and other health professionals drinking tea together, sharing news about older members of their community. In themselves, these things may not be unusual, but together they have substantially improved the lives of local older people. Since 2004, in Crediton, the number of femur breakages as a result of older people having falls has gone down by more than two thirds. GP Dr Ann Homer is the woman behind this impressive statistic.

Dr Homer is now working with academic and clinical colleagues to try to replicate this work across Devon and Cornwall, with the potential of significantly reducing the number of falls and fractures and the associated NHS costs. Dr Margaret Somerville from the Peninsula Medical School is leading the project. She says: “Ann has done a tremendous amount of work, which, as well as reducing falls and their consequences for the NHS, has improved the quality of life for older people, giving them the confidence to maintain a more active life. This was mostly the result of simple, straightforward initiatives. We are now exploring how we can make these changes in other practices across the region.”

Thanks to a new research collaboration, health practitioners, academic researchers and the public are working together to tackle some of the key health problems facing the South West.

The Peninsula Collaboration for Leadership in Applied Health Research and Care (PenCLAHRC) is a partnership between the Peninsula Medical School, NHS South West, the NHS throughout Devon and Cornwall and the Universities of Exeter and Plymouth. PenCLAHRC focuses on delivering high-quality applied health research into major conditions including heart disease, diabetes, mental illness, childhood disability and age related conditions, and putting the results into practice. The University of Exeter has invested over £1 million as part of the translational medicine, personalised healthcare and public health theme of its science strategy.

The origins of PenCLARHC lie in a 2006 report by Sir David Cooksey, which called for the “rapid translation of research findings into health and economic benefit.” Two years later, the partnership behind PenCLAHRC won a £10 million Government grant and then raised £10 million in matched funding to establish one of nine new research centres pursuing this agenda.

Director of PenCLAHRC, Professor Stuart Logan, has personal and professional reasons for seeking to break down barriers between academic research and practical healthcare. As a junior paediatrician in the 1980s Stuart and his fellow doctors encouraged mothers to put their babies to sleep on their front. Later it became clear that this practice hugely increased the risk of sudden infant death syndrome. Professor Logan reflects on this: “The advice we were giving was based on misinterpreted post-mortem data. Sadly it took a long time for us to find out that we were wrong.”

“At PenCLAHRC a large part of what we’re doing is accelerating the process of getting research evidence. We know that there can be an enormous lag between research outputs and changes in clinical practice.”

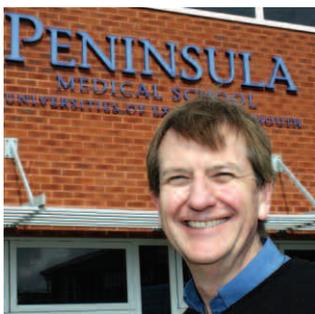
PenCLAHRC gives the collaboration an opportunity to bridge that gap and ensure research activity focuses on answering the questions that are important to clinicians and patients.

So, how can Professor Logan and his colleagues find the right research questions? The answer lies in close collaboration with clinicians, health service managers and the public in all stages of the research process from design to implementation. Organisations like Cerebra are already involved with PenCLAHRC research projects. For example, a number of families with disabled children have helped to design and steer a large randomised controlled trial in children with cerebral palsy.

The researchers are also committed to using online media to reach out to communities and individuals. Dr Peter Aitken, Director of Research and Development at Devon NHS Partnership Trust and PenCLAHRC’s Lead for Improvement, is spearheading PenCLAHRC’s online strategy. Dr Aitken aims to connect conversations, for

“
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”

Director of PenCLAHRC,
Professor Stuart Logan



health research

by Sarah Hoyle

example by linking online discussions about diabetes between GPs with similar conversations between specialists on another part of the web. He also sees the internet as a way of gathering “ideas from the bedside”, to help researchers identify the questions that are pertinent to patients. A website has now been set up to serve this purpose: <http://community.clahrc.net>

Professor Stuart Logan admits that the group faces “a huge challenge” in getting academics, clinicians and patients to work together to achieve practical benefits. However, collaborating within the healthcare profession is not new. The NHS and the Universities of Exeter and Plymouth already have a close working relationship through the Peninsula College of Medicine and Dentistry and many other projects. Professor Logan says: “We’ve got a long history of patient involvement and have been doing this stuff for a long time. But PenCLAHRC allows us to really develop this work.” He sees the Government’s £10 million grant as “a springboard” and the group is busy applying to other sources for funding for specific projects.

While Professor Logan is aware of the complexity of PenCLAHRC’s remit, he sums up the philosophy very simply: “Researchers don’t always address the questions that make a difference. We have to make sure that the questions we are asking as academics answer the information needs of clinicians and patients.”

“We have to make sure that the questions we are asking as academics answer the information needs of clinicians and patients”



KAREN TAYLOR

Postgraduate study springboard for rising research stars

Postgraduate research is rising at Exeter, with a 43% increase in applications over the last three years. Numbers will be boosted further still as the University is set to invest £7 million to create 180 new opportunities for postgraduate study. Some 119 postgraduate awards will be supported by £4.2 million from the Arts and Humanities Research Council. 1,200 people are currently carrying out postgraduate research on our campuses and in the field, and here Research News profiles some of their work.

Cutting edge techniques

Natalie Garrett, 26, has been working for over three years on her Biomedical Physics PhD. Natalie's work involves cutting-edge techniques using laser light interacting with nano-metallic particles to both image and selectively kill cells. Nano-shells have received a lot of attention in recent years, and have been hailed by some as a cancer miracle cure. Natalie's research focuses on trying to understand exactly how they affect cells at the molecular level and is funded by the Engineering and Physical Sciences Research Council.

She says: "I'm passionate about physics and I love finding novel ways of using physics to solve biological problems. We know so little about how biological systems actually work and until we delve deeper, we cannot hope to understand disease. I always wanted to make a positive difference to society - my project allows me to investigate cancer cells and develop methods for studying and killing them while using sophisticated biomedical physics techniques and I find this very rewarding."

Natalie is also passionate about communicating her work, and science more generally. Earlier this year she presented at the House of Commons to a group of MPs and scientists. Her career highlight so far was the publication of her first paper in the *Journal of Biomedical Optics*. However, this could be topped with the news that as *Research News* went to press, she has been shortlisted for the Institute of Physics Very Early Career Award by the Women in Physics Group.

Science and belief

Dr Nasser Mansour shares Natalie's passion for science communication, although his focus is on the classroom. His PhD looks at science teachers' beliefs, particularly Islam, and

examines the challenges for Islamic cultures in providing a religious and science education that may be at odds with each other. Controversial issues like evolution, cloning and abortion can pose problems for teaching science if personal religious beliefs influence teaching.

Nasser, 38, is Egyptian and lectured in science education at Tanta University prior to moving to England for postgraduate study.

He says: "My background is based on studying natural sciences, and I did not think about the relationship between science and religion on science education until I came to Exeter. It made me question the difference between studying science here, in a multi-faith society, or in an Arab-Islamic context."

Nasser's career changing epiphany came while interviewing Egyptian science teachers to collect data: "Their personal religious views hit me and challenged my previous thoughts about how controversial issues could be delivered. As most studies of belief and science are carried out in Western cultures my work sheds important light on science education in an Islamic culture."

The European Educational and Research Association (EERA) awarded the Best Paper Award to Nasser. He recently completed his PhD and has stayed at the University to continue his career as a Research Fellow in the School of Education and Lifelong Learning, and hopes to encourage more young people towards science careers.

Global ocean environment

A dream science career is certainly what Dr Matthew Witt is enjoying. The 32 year old's PhD work involved "long days sitting on a beach on the equator – though it was 35 degrees and horribly humid with no shade".

Matthew was funded by the Natural Environment Research Council for his work on marine megavertebrates and their environment, focusing on leatherback turtles. Under the supervision of Dr Brendan Godley and Dr Annete Broderick he tracked leatherbacks from Gabon, detailing their movements into the South Atlantic and investigating their likely interactions with fisheries.

Much of this work involves the integration of animal movement data with satellite derived information on the global ocean environment. Matthew continues to work at the Centre for Ecology and Conservation on the University's Cornwall Campus, now as the PRIMaRE Post-Doctoral Research Fellow assessing the potential impacts of the Wave Hub, a proposed energy-from-wave development off the North Cornwall coast, on sea birds and larger marine animals.

This career progression is exactly what is envisaged by the University in their investment in postgraduate numbers. Professor Robert Van de Noort, Dean of the Faculty of Graduate Research at the University of Exeter, says: "We are striving to become one of the UK's top ten universities and recognise that to achieve this aim we must play a major role in delivering the next generation of academic researchers."



Natalie Garrett



Dr Nasser Mansour



Dr Matthew Witt

Research into radicalisation

by Dr Jonathan Githens-Mazer



The term radicalisation was synonymous with Exeter as the trial of local restaurant bomber Mohammad Saeed Alim (formerly Nicky Reilly) examined his motives. Senior politics lecturer Dr Jonathan Githens-Mazer closely followed the Old Bailey trial and appeared on Channel 4 News and in other media to discuss it. Research News asked Jonathan to give us some background on his work on radicalisation.

“Radicalisation, counter-radicalisation: what does any of it mean? In recent policy reviews and academic debates, arguments have raged over ideologies and identities, while concerns remain over real threats about terrorist attacks and violence. Read any number of academic works and thinktank documents, and you’ll be presented by a confusing array of vocabulary – extremist, violent extremist, Islamist, neo-Salafi, neo-Wahabbi, Salafi-Jihadist, or Islamofascist. A confusing array of ideas purport to explain political violence in the name of Islam, ranging from the ideological, to issues of psychological vulnerability, deprivation, a search for identity, a clash of civilisations, and psycho-pathology. Differing terms, ideas and actions have led to confused policy.

I, along with others at the University of Exeter, have sought to re-centre these debates on radicalisation by ensuring that this field becomes increasingly about evidence-based analysis, through research funded by bodies such as the Economic and Social Research Council, the Arts and Humanities Research Council, the Leverhulme Trust and the British Academy.

In part, the problem stems from a lack of context. To understand radicalisation, to understand how it relates to violence, and to understand if and how it constitutes a threat to British society let alone the international system requires intellectual precision and careful empirical observation – two aspects which Exeter has well covered. In my own research, my team and I have felt it necessary to go back to basics, to work on a definition of radicalisation through historical examples and contemporary events. We derived a definition

for radicalisation: a collectively defined, individually-felt moral obligation to participate in direct action, often textually inspired. This definition, however, contains no reference whatsoever to violence or Islam – and this is key for our understanding of this concept

Modern Britain is full of examples of radicalisation, whether Islamically inspired or not, where individuals exposed to an injustice or challenging situation feel it necessary to do something about it. Examples range from the mundane to the profound: someone deciding to run for local council after deciding they have to react to changes in rubbish collection, to the need to participate in the Stop the War Coalition, or peaceful demonstrations against events in Gaza. Equally, when examining the statements of individuals such as Mohammed Siddique Khan, the 7/7 bomber, it is clear that this need to do something about what he viewed as the injustice of the War in Iraq led him to commit an abhorrent terrorist act.

So is it radicalisation that’s the problem, or terrorism? How do we separate the two? It could be that radicalisation itself may not actually be problematic or a threat: we live in a time when political engagement should be encouraged and celebrated, not discouraged and feared. How do community members themselves define radicalisation and differentiate from violent radicalisation? Maybe the cause of radicalisation in the British context will be different from other contexts – i.e. from high levels of unemployment and disenfranchisement in French banlieues and from experiences of detention and even torture in other areas around the world. What are the effects of new media, such as the internet and satellite TV, on radicalisation and violent radicalisation?

This is a case where research begets more questions rather than answers, but recognising and dealing with this lack of knowledge and confusion is crucial. These kinds of very basic questions have massive implications for policy making and effectiveness – and until we unpack them completely, they may be subject to abuse and confusion.”



Police released picture of Nicky Reilly, Exeter restaurant bomber.

People



Sean Fielding has been appointed to the new role of Director of Research and Knowledge Transfer at the University of Exeter. Sean will be responsible for leading the drive to

increase research income and improve the impact of our research on society. Sean has been at the University for 12 years, latterly as Director of Communication and Partnership. He has significant experience of research and knowledge transfer initiatives and led the £14m GWR project and the Innovation Centre complex, where he will be based.



Professor Chris Turney, Professor of Physical Geography, received one of 27 prestigious Philip Leverhulme Prizes. He has been awarded £70,000 to fund his research on historic

climate change over the next three years.



In March, the Met Office Chair in Climate System Dynamics, **Professor Peter Cox**, addressed the world's leading climate researchers in Copenhagen.



Dr Matt Lobley from the Centre for Rural Policy Research has been recruited to the Scientific Advisory Committee of PrioNet Canada, a Network of Centres of Excellence

funded by the Canadian Federal government. Matt will provide guidance on PrioNet research proposals concerning social aspects of prion disease, including impact on farm families and rural economies.



Professor Helen Taylor has been appointed as Arts and Culture Development Fellow for the University, based in the School of Arts, Languages and Literatures.

Professor Michael Winter, Director of the Centre for Rural Policy Research has been appointed to Defra's Scientific Advisory Council.

Professor Des Walling, Reardon Smith Professor of Geography, has been awarded the prestigious Hydrologic Sciences Award of the American Geophysical Union. This is the senior award given by the 7,000 member Hydrology Section of the AGU, and is Professor Walling's fourth international honour in under two years.

Developing research staff

An innovative scheme at the University of Exeter is developing the potential of research staff. Research Fellows are finding themselves the subject of an intense day of observed activity – a 'Development Centre'. Participants undertake exercises and activities to assess core competencies such as the ability to communicate, manage other people, analyse information and make decisions, and perform under difficult circumstances. This results in a bespoke report showing where to focus development to help researchers move their career forward, and even consider a move outside academia or into industry. 20 staff took part in pilot Development Centres, with 4 sessions a year planned thanks to funding by the Research Councils' Roberts money.

For more information contact Dr Claire Lambert on C.Lambert@exeter.ac.uk or see <http://tinyurl.com/exeterdc>



Interview by email

What has been the most rewarding moment of your career so far? *Helping to establish the Centre for Water Systems in 1998 with Prof Godfrey Walters was probably the most rewarding moment. Nowadays, under the shared leadership of Prof David Butler and myself, the Centre has 8 academics and more than 30 researchers who are studying challenging topics on urban water and hydroinformatics. I have also enjoyed working with colleagues to build up the reputation of Exeter as a major player in the urban water engineering field. What I enjoy most is helping young and upcoming researchers to develop their research and pursue their chosen career in academia and industry.*

What has been your major academic achievement? *Being awarded the Advanced Research Fellowship in 2001 allowed me to devote myself to personal research and build links with the international research community. This 5-year fellowship resulted in new methodologies, which led to further awards of research funding and found application in the water industry worldwide. I feel privileged to have contributed to the optimisation work that saved 50 million dollars on a water network design in the Region of York (Canada). Another example is the high-speed sewer network simulator, which was developed with the Ewan Group (now part of Mouchel), that won the CIWEM Ken Roberts award for technical innovation in the water industry and the top*

prize in the business intelligence category of the Information Management Awards in 2006.

What do you hope to achieve at Exeter? *I'd like to keep my own research going and enable the Centre to continue to flourish both in the UK and on the international scene. This also involves helping others in the Centre to achieve their full potential.*

If you had not been an academic, what would you have been? *I always wanted to be an engineer but didn't consider academia as a possible profession until 10 years into my professional career. I used to be a water consultant both in my native Serbia and later in Canada and judging by that, and how much I enjoy working with water industry partners, I would say I got the best from both worlds.*

What do you like to do in your spare time? *I like running or cycling either with a group of friends or on my own. Very few things could beat the feeling on a sunny morning while jogging along the Exe and looking down to Topsham on the left and Powderham Castle on the right, or the sight of hundreds of butterflies when we end up in Ashclyst forest.*

What do you like best about living in the South West? *Through my running and cycling I've discovered hidden treasures. I also find people approachable and enjoy raising my family here without worries of crime and problems associated with large cities.*

Name: Prof Dragan Savic

Age: 49

Job: Chair in Hydroinformatics and Co-Director of the Centre for Water Systems

Based in: School of Engineering, Computing and Mathematics

Education: University of Belgrade, Dipl. Ing. (Civil Engineering) and MSc (Water Engineering), University of Manitoba, PhD in Water Engineering

Research Briefs

Professor Claudio Radaelli from the Department of Politics has been awarded €950,000 by the European Commission FP7 European Research Council Advanced Grant to address the question 'what has been learned through the use of better regulation?'. This is a flagship policy on the Lisbon agenda for growth and jobs, which aims to provide new governance architectures for lawmaking, to increase the competitiveness of the regulatory environment, and to secure wide social legitimacy for multi-level systems of rules. The project will start in September 2009 and run for four years.

£3.2 million has been awarded by the Engineering and Physical Sciences Research Council (EPSRC) to work with **QinetiQ's Applied Technologies Division** exploiting latent Intellectual property (IP) in the area of Functional Materials to provide Tailored Electromagnetic Solutions. The team will work with an experienced entrepreneur employed to drive market-facing research, develop business plans and secure funding for up to three spin-out companies, or licensed activity with 3rd parties, as appropriate. The award covers three years, and starts in October 2009.

A team led by **Professor Dave Newman** of the School of Engineering, Computing and Mathematics has received a US\$100,000 Grand Challenges Explorations grant from the Bill & Melinda Gates Foundation. The grant will support an innovative global health research project to develop a small, portable device to diagnose malaria.

Professor Irene Ng of the Business School is part of a consortium, led by the University of Cambridge, which has been awarded a total of £2.6 million by the EPSRC for research into service science and support by generating new insights, ideas and approaches to this complex subject. This area has not been researched in the past as it has not been well developed by either the industrial or the public sectors. The second stage of the project will focus on the development and delivery of a suite of tools from the research outputs. The value of the grant to Exeter is £275,000.

Dr Sarah Hamilton from the School of Humanities and Social Sciences has won £40,822 from the Arts and Humanity Research Council (AHRC) Research Networks for work Interpreting Medieval Liturgy, c. 500 - c. 1500 AD: Text and Performance. The network will bring together international scholars from history, musicology, theology, English literature, theatre studies, art and architectural history to break down the barriers which currently exist to the interdisciplinary study of these medieval liturgical rites. The research findings will be published in an edited book and on an interactive website.

A new project seeks to make Cornwall's telecommunications history more visible. **Dr Richard Noakes** from the Department of History (Cornwall Campus) has been awarded an AHRC Museums Archives and Libraries Research Grant of £288,537 for a project entitled 'Connecting Cornwall: Telecommunications, Locality and Work in West Britain 1870-1918.' At its core is a major new exhibition for the Porthcurno Telegraph Museum. The work started in February and runs until October 2010.

An AHRC Science and Heritage Research Cluster of £24,206 goes to **Dr Linda Hurcombe** from the School of Geography, Archaeology and Earth Resources. The overall aim of the cluster is to develop an improved understanding of the potential for virtual handling of archaeological textiles, leading to one or more major research proposals to develop and implement these techniques and is a twelve month project.

Dr Mark Wilson, School of Sport and Health Sciences, has been awarded funding through the Economic and Social Research Council (ESRC) and Research Grants Council, Hong Kong, to conduct a two-year project with Professor Richard Masters at the University of Hong Kong. The project is entitled 'Gaze strategies of laparoscopy surgeons: Observational learning, implicit knowledge and performance in demanding conditions'.

The Business School's **Professor John Maloney** has been awarded £35,817 from the Leverhulme Trust to investigate voting behaviour, party strategy and economic voting. Professor Maloney will try to shed some light on the highly topical issue of whether recession affects the way that the electorate and political parties behave.

Professor Andrew Hattersley from the Peninsula Medical School (PMS) is part of a European consortium which has been awarded a total grant of €3M by the European Commission for a collaborative effort resulting in the development of diabetes diagnostics. The PMS proportion of the grant equates to €575,000.

A Marie Curie Initial Training Network on Electoral Democracy is being coordinated by **Professor Susan Banducci**, Head of Politics. The network, funded by the EU's 7th Framework Programme, brings together 14 partners from both higher education and industry and will hire 18 researchers to undertake research and research training on elections, electoral behavior, media and political parties. The network, to start in October 2009, will run for four years.

Dr David Roesner from the Department of Drama has won an AHRC Research Workshops grant of £10,338 to look into the processes of devising composed theatre. The workshop series aims to bring together practitioners and scholars that work in this particular field of contemporary experimental music-theatre.

Dr Keith Hyams from the Department of Politics has won an AHRC Research Grant of £129,278. The project aims to promote the use of the research in real-world policy making decisions. The project will lead to academic articles and articles for publications with more general readerships such as *The Economist* and *The New Statesman*. The team will also hold annual workshops and a large final-year conference involving participants from academia and beyond, including policy makers, think tanks and civil-society organisations. The project ends in September 2011.

Dr Sharon Dixon from the School of Sport and Health Sciences has been awarded funding of £225,000 from the EPSRC to undertake a project entitled 'Understanding traction for sports shoe and surface combinations.'