EPSRC £600k funding success to accelerate Brunel automotive research

Brunel University has successfully secured an EPSRC Impact Acceleration Account (IAA) of £600k worth of funding over the next three years. The flexible award will enable and enhance the activities by which the University can accelerate and maximise the impact of EPSRC funded research, initially within the automotive sector, before being more widely extended.

The funding comes as a result of a recent EPSRC (Engineering and Physical Sciences Research Council) review of its schemes to support impact activities in universities, particularly where opportunities arise during and after an awarded grant. The aim of the investment is to enable the EPSRC to better understand how to maximise its portfolio and give universities the resources to “narrow the gap” in terms of exploitation.

“This award will be pivotal in enabling us to accelerate take up of the university’s research by the UK automotive sector at a time when the industry is facing unprecedented competition in a global marketplace”, commented Brunel’s Pro Vice-Chancellor, Research, Geoff Rodgers.

“Our success in securing the IAA reflects recognition of Brunel’s research excellence in automotive innovation. The funding will accelerate impacts of the pioneering achievements by our research teams in addressing environmental imperatives and product and manufacturing efficiency. R&D is a core element of the UK automotive sector, with some £1.5bn invested annually – through the EPSRC funding initiative, Brunel aims to take a key role in ensuring we play an integral part in supporting innovation across the automotive industry.”

Advisory Group

The appointment of an Advisory Group with representation from industry, commercial organisations, established networks, and RTOs will play a critical role in the successful roll-out of the funding scheme. The panel, including brand-leading car manufacturers Jaguar Land Rover and Lotus Engineering, will meet every six months to discuss and recommend emerging impact and knowledge transfer opportunities in the automotive sector. The Group will also facilitate collaborative activities in participation with other leading academic groups working in the automotive sector.

Neville Jackson, Group Technology Director for Ricardo, is a key technical advisor on the Panel. As Vice Chairman of the European Automotive Research Partners Association (EARPA) based in Brussels, a member of the European Council for Automotive Research (EUCAR) programme review board, a board member of the UK Low Carbon Vehicle Partnership (LowCVP), a director of the UK Centre of Excellence for Low Carbon Vehicles (CENEX) and a member of the DTI Foresight Vehicle External Advisory Board, he brings valuable experience and knowledge of the issues affecting the sector.

Commenting on the company’s interests in participating in the Advisory Group, Jackson said:

“As a world-leader in automotive engineering,
Welcome to Leading Edge

Many of you are involved, in one way or another, in our preparations for the Research Excellence Framework (REF), which is now just less than 12 months away. Though 12 months is not long in academic publishing terms, there is still time to improve the outputs we submit, and I know a number of people are still awaiting the publication of a final research output to further strengthen their contribution.

We have also begun to prepare statements about the vitality and sustainability of our research environment, and also to prepare the impact case studies. We will be preparing over 80 impact case studies for the REF, which, combined with the environment statements, will make up 35% of the total assessment. As this is the first time that impact has been included in the assessment, the academic norms for the assessment are not well established. This makes the task of preparing a case study particularly difficult, so I am very grateful to the colleagues, of whom there are over 100, who have taken on this onerous task. The hard work we are putting in now will repay us in both the outcomes of the assessment, our enhanced institutional profile, and the stories it tells about our research successes.

In this edition of Leading Edge there are numerous examples of new research grants we have secured, from a wide range of Schools and SRIs. These include some strategically important awards that support the dissemination and commercialisation of our research or support the globalisation of our research networks. This edition also includes profiles of internationally leading researchers we have been able to attract to join our faculty and work with us here at Brunel. The piece on the 10th anniversary of BCAST clearly illustrates the world leading contribution we are making in metallurgy and materials research.

Lastly, more good news – Brunel has been awarded three major grants with a combined total value of approximately £76m. The recent successes include £15m from HEFCE as part of a £60m National Structural Integrity Research Centre (NSIRC); a £12m Centre for Sustainable Energy Use in Food Chains; and a £4m Future ICT-enabled Manufacturing research project. Further details will appear in the next issue of Leading Edge.

As we continue to improve our research culture, we will receive further external recognition of our progress.

With best wishes to you all,
Professor Geoff Rodgers
PVC (Research)
EPSRC £600k funding success to accelerate Brunel automotive research

Ricardo is dedicated to innovation in automotive design and development. This association with Brunel University and its industry partners represents an important collaboration between academia and industry, enabling research excellence to move swiftly into the automotive supply chain. Ricardo is well placed to help maximise the impacts of the IAA funding and we look forward to a stimulating and productive three years ahead.”

Funding growth
Over the last four years, the University has received 93 EPSRC grants totalling £15.9M. Some 40% of these projects are directly linked to the automotive industry, with its supply chain and associated manufacturing technologies. The EPSRC-funded automotive research portfolio is also complemented by £580K TSB funding (5 projects), £360K KTP funding (3 projects), and over £1.5M from other funding agencies and industry. European funding in the sector totals a further £1.2M from Framework Programme 7.

The IAA funding will replace EPSRC’s Knowledge Transfer Accounts (KTA) and Knowledge Transfer Secondments (KTS) and will include funding previously available through EPSRC’s Follow-on-Funding scheme. Existing KTA and KTS have generated significant amounts of leveraging from business, particularly when partnering in follow-on activity. This is something EPSRC would expect to be a feature of the IAAs.

Whilst the key benefits of KTA/KTS will be retained, a new and renewed focus will be on secondments and proof of concept. EPSRC see that IAAs will sit alongside HEIF funding and will complement this in a similar way to the main dual support mechanism, with IAAs being used specifically to accelerate impact from the University’s EPSRC research and training portfolio.

Teresa Waller, the University’s Director of Research Support and Development (RSDO) headed up the award submission: “Winning this competitive funding bid is a clear reflection of Brunel’s reputation for research that is both high quality and relevant to the long-term challenges of the automotive industry,” she said.

“Brunel is strongly committed to increasing the socio-economic impact of its research. The IAA award will go a long way to cementing valuable commercial links which will accelerate the impacts of research to eventual industrial realisation and lead to a new strategic level of cooperation and collaboration with the UK automotive value chain.”

Key objectives
In successfully securing the IAA award, the core aim of the University is to promote and accelerate the impact of EPSRC funded research targeted at the automotive sector. This requires effort at both ends of the exploitation pipeline. At the user end, awareness and clarity of potential opportunities are key requisites whilst at the research end, a realistic understanding of industry’s needs and the potential impacts of implementation – economic, social or environmental – is essential to success.

The IAA application is built around a model of end user engagement from research conception, through optimisation for market readiness and ultimately to realisation in industry.

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<th>Research</th>
<th>Readiness</th>
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<td>projects are conceived with the end-user</td>
<td>projects are optimised to facilitate industrial take-up</td>
<td>results are implemented in industry and documented as impact case studies</td>
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The Brunel IAA Model

The road ahead
A proactive and flexible programme of activities providing opportunities for all researchers involved – from staff to students – is planned. These will be rolled out over the coming weeks and will include:

- Two-way secondments of between two weeks and two months to enable industry secondees to understand the facilities, expertise and knowledge base within Brunel, to enable researchers to gain a fuller appreciation of the needs of automotive companies and to jointly formulate future research collaborations;
- Funding for proof-of-concept projects, technology evaluations and demonstrators, business case development, market research and evaluation and technology brief preparation to translate research results into industrial opportunity;
- A series of sector-based show-casing events, seminars and road mapping sessions with national and international partners to widen awareness of Brunel’s automotive research capabilities;
- Creation of an ‘Impact Academy’ to support the personal development of early career researchers through training, mentoring and access to funding to develop the impact of their research.

Wellcome Trust Large Arts Award for Professor Christopher Fox to compose a new musical work
Do you have trouble holding a conversation at a party? Do you get distracted by other threads of conversations, by lots of other people talking? Most of us would say ‘yes’ to all of these; it’s ‘the cocktail party problem’ and it’s something which speech scientists, neuroscientists and psychologists have been studying for years. Now Christopher Fox, Professor of Music in the School of Arts, is working on the problem, together with a team of musicians and scientists from Cambridge and Nottingham Universities, and their project has been awarded £48,000 from the Wellcome Trust.

The project grew out of Fox’s collaboration with the vocal ensemble, The Clerks, who have sung and recorded a number of his compositions. Most of their repertoire is made up of polyphonic music from the Middle Ages and their director, Dr Edward Wickham of St Catharine’s College, Cambridge, was interested in finding out more about how audiences make sense of this often complex music. “It’s also a problem in contemporary music,” explains Professor Fox. “As a composer I have no clear idea about how much, or how little, audiences hear the words in my music – this project will help us find out.”

Building on the success of his composition Roter go to yellow three… which also explores this problem, Fox is writing a new work for The Clerks based around a series of ‘cocktail party problems’ in collaboration with the speech scientists Professor Sarah Hawkins (Cambridge University) and Dr Antje Heinrich (Nottingham University). The new work will receive its first performance in Cambridge in April before going on to Glasgow, York, the Cheltenham Festival and the Royal Academy of Music. For further details, please see The Clerks website at www.theclerks.co.uk.

christopher.fox@brunel.ac.uk
Brunel leads UK-China energy research collaboration

Starting in March 2013, Brunel will lead a £690k multidisciplinary collaborative research project with institutions from both the UK and China.

The Engineering and Physical Sciences Research Council (EPSRC) funded project will bring together scientists from both countries to develop green technology that will revolutionise the way electricity is transmitted and distributed via interconnected national power grids. The three year funded project titled ‘Developing Scalable Smart Grid Infrastructure to Enable Secure Transmission System Control’ is part of a bigger investment in smart grids under the Energy Programme. With over £4 million funded by EPSRC and matched-resource funding from the National Natural Science Foundation of China (NSFC), it is hoped the research findings will help both countries reduce their carbon footprint and improve their sustainable energy output. It is also expected that this initial funding will further develop into a long-term UK-China research collaboration stretching into 2023 and beyond.

Principal Investigator Dr. Gareth Taylor (School of Engineering and Design) will co-ordinate the project alongside Brunel Co-Investigator Dr. Maozhen Li (School of Engineering and Design) and Professor Hafeng Wang (School of Engineering and Design formerly Queen’s University of Belfast). Dr. Taylor commented:

“The proposed collaborative interdisciplinary smart grids research will investigate and develop scalable tools on secure high performance computing platforms that support large-scale, interoperable near to real-time data processing and data mining methods. This is a really exciting opportunity to explore the impact of digital technologies on aspects of community life, cultural experiences, future society, and the economy. If we can develop credible, effective and useful technology solutions. New forms of digital connectivity give rise to opportunities in doing financial transactions in different ways and with radically different business models that offer the possibility of transforming the marketplace. One area in the digital economy that has had such an effect is in the ways that users access and use digital banking and payment services. This move can be seen in the suggestion that highly digitally connected societies might even abandon the use of cash (e.g. Sweden), but has also resulted in the emergence of wholly mobile currencies (e.g. M-Pesa), mixed media currencies (e.g. Bristol and Brixton Pounds), and peer-to-peer moneylending (e.g. Zopa, prosper.com). These financial services dealing with money transfers bypass the traditional banking sector, and new players acting as financial intermediaries have begun to provide financial exchange services without directly acting as banks, i.e. as ‘financial holding services’. A variety of different models to achieve this have emerged, often to meet the particularities of different market conditions and sectors. Understandably, these different services and the different platforms they are built on may be perceived by their users as offering different kinds of risk and utility to their traditional counterparts. The socio-digital systems that underlie these services form the focus of our research.

In the UK, National Grid has established the ‘Gone Green’ scenario, which results in 35% of UK electricity being sourced from renewable energy sources by 2020, such as intermittent and highly variable wind power for example, compared with about 6-7% today. Therefore, in the UK National Grid will face significant operational challenges over the next decade and beyond. Similarly in the Guangzhou province of China there now already exists one of the most technologically advanced and operationally complex transmission systems in the world. From 2005 onwards China Southern Power Grid has already experienced operationally complex challenges due to the impact of large-scale renewable energy source deployment on the transmission system.

David Willets, the Minister for Universities commented: “Science plays an increasingly important role in the transition to a low carbon economy. This international collaboration will bring together leading researchers from the UK and China to help develop the vital underpinning technology that both our nations need for a greener future.”

Project and proposal details are available for Brunel staff on the RSDO Intranet: http://intranet.brunel.ac.uk/research/rsdo/researchsupport/proposals/templates.shtml

For further information contact: gareth.taylor@brunel.ac.uk

EPSRC funds research into digital infrastructures for alternative financial systems

Senior Lecturer Dr Mark Perry from the School Information Systems, Computing and Mathematics (SISCM) has been successful in obtaining an EPSRC research grant to the value of £257,941. The funding is part of EPSRC’s Research in the Wild 2012 programme which enables research in the digital economy to explore the impact of digital technologies on aspects of community life, cultural experiences, future society, and the economy.

The research team, led by Dr. Perry, includes Co-Investigators Professor Sriram Subramanian (University of Bristol) and Professor Michael Hulme (Lancaster University). The project titled ‘3rd Party Dematerialisation and Rematerialisation of Capital’ has also attracted outside investment through two project partners – Zopa Ltd and Bristol Pound Community Interest Company – contributing an additional £35K of in-kind funding.

The 18 month project will evaluate the effects of technology infrastructure on the patterns of use of financial services provided by digital intermediaries, and working with stakeholders to develop credible, effective and useful technology solutions. New forms of digital connectivity give rise to opportunities in doing financial transactions in different ways and with radically different business models that offer the possibility of transforming the marketplace. One area in the digital economy that has had such an effect is in the ways that users access and use digital banking and payment services. This move can be seen in the suggestion that highly digitally connected societies might even abandon the use of cash (e.g. Sweden), but has also resulted in the emergence of wholly mobile currencies (e.g. M-Pesa), mixed media currencies (e.g. Bristol and Brixton Pounds), and peer-to-peer moneylending (e.g. Zopa, prosper.com). These financial services dealing with money transfers bypass the traditional banking sector, and new players acting as financial intermediaries have begun to provide financial exchange services without directly acting as banks, i.e. as ‘financial holding services’. A variety of different models to achieve this have emerged, often to meet the particularities of different market conditions and sectors. Understandably, these different services and the different platforms they are built on may be perceived by their users as offering different kinds of risk and utility to their traditional counterparts. The socio-digital systems that underlie these services form the focus of our enquiry.

It is envisaged that the research could have several beneficiaries including: developers of commercial and not-for-profit financial systems and content, financial intermediaries themselves (e.g. Zopa and the Brixton Pound), market regulators and governments. Dr Perry commented:

This is a really exciting opportunity to explore and design how emerging networked, pervasive and tangible technologies support different and personal forms of lending, borrowing and buying directly between people – without directly involving the banks. This research is hugely relevant against the backdrop of the recent crisis in the banking and financial sector, and offers new ways to build and support sustainable economic growth in the UK.

For further information contact: mark.perry@brunel.ac.uk
ESRC funding to research loneliness in later life

Professor Christina Victor from the School of Health Sciences has been awarded a research grant from the ESRC to the value of £155,214. The Brunel led research project is an eighteen month long collaboration between Brunel University and the University of Southampton (Professor Ann Bowling). The research project titled ‘Loneliness in later life: a longitudinal analysis using the English Longitudinal Study of Ageing’ will explore changes in loneliness over time for people aged 50 and over using a large existing data set (the English Longitudinal Study of Ageing) which has followed people up from 2002 to 2010 longitudinally.

Previous research conducted shows the consequences of loneliness for older people are significant. There are 3.2 million individuals aged 65+ in England who experience loneliness. Death rates are 50% higher and emergency hospital admission rates are a third (30%) higher for those who are lonely compared with those who are not. Those who are lonely consult their GP, on average, 10 times a year compared with three times for those who are not lonely.

Reducing loneliness and its consequences is a long term goal, however it is expected that this research will have social impact resultant from the study contributing towards: evidence based policy-making; shaping and enhancing the effectiveness of public services; helping to transform evidenced based policy into practice and influencing professionals and practitioners working in related fields. There is also further potential for high academic impact as it extends knowledge and understanding of loneliness in later life making an original contribution to current knowledge and understanding of quality of life in old age.

The research will be conducted based upon a strong partnership with a key third sector organisation, the Campaign to End Loneliness, which means that the findings will be effectively and promptly disseminated to key opinion leaders, practitioners and policy makers and have the potential to generate significant impact.

This recent funding success comes at an important time as it is highly topical in policy terms resonating with the coalition Government’s interests in measuring, developing our understanding of and improving general wellbeing.

For further information contact christina.victor@brunel.ac.uk

Beauty isn’t all a matter of looking glamorous

Dr Rachel Ritchie, an Associate Research Fellow in the School of Social Sciences, has been awarded the 2012 Clare Evans National Academic Prize for the best new essay in the field of women’s history/gender and history. Her piece was entitled “Beauty isn’t all a matter of looking glamorous”: attitudes to glamour in the Women’s Institute and Women’s Cooperative Guild magazines during the 1950s and explored what the heterogeneous and at times contradictory attitudes to glamour in the two publications reveal about gender and socio-cultural change in post-war Britain. She faced stiff competition, with two other submissions being highly commended.

The judges commented that it was ‘a lively and original essay, building on feminist scholarship on glamour and with important insights into women in the 1950s’. It will be published in Women’s History Review, a major international journal, once the usual refereeing procedure has taken place. The prize is awarded in memory of Dr Clare Evans, who died of cervical cancer in 1997 aged 37.

Dr Catherine Meads | HERG

Catherine Meads joined HERG at Brunel University as a Reader in Health Technology Assessment (HTA) in September 2012.

She completed her Medical Degree in 1983, Masters’ Degree in Information Technology for Management in 1994, PhD in Psychology in 2006 (on emotional disclosure in health) and Masters’ Degree in Public Health in 2010. Before coming to Brunel she held roles as Senior Lecturer in HTA at the Centre for Primary Care and Public Health, Barts and The London School of Medicine and Dentistry, and previously at The Unit of Public Health, Epidemiology and Biostatistics, University of Birmingham. When at Birmingham, she ran the West Midlands Health Technology Assessment Collaboration, producing systematic reviews and HTAs for the National Institute for Health and Clinical Excellence (NICE) Technology Assessment Programme and other customers such as the National Institute for Health Research and the DVLA.

Systematic reviews are academically rigorous projects that answer specific questions on healthcare or other topics, using published or unpublished evidence. Typical topics could be quantifying the effectiveness of a drug in a specific condition, the harms of a pesticide or the usefulness of a diagnostic test. HTAs combine systematic reviews with cost effectiveness analyses in order to provide policy-makers with sufficient evidence to determine policy.

Currently she manages the Brunel part of the University of Birmingham / Brunel University External Assessment Centre (EAC) who work with the NICE Medical Technologies Evaluation Programme. This identifies, evaluates and encourages adoption of new or novel medical devices and diagnostic technologies with potential to improve the experience and outcomes of patients in the NHS and/or to drive efficiencies in the use of health service resources.

Catherine has published systematic reviews and HTAs in a wide variety of health topics including photodynamic therapy in age-related macular degeneration, new drugs for Crohn’s disease, structural neuroimaging in psychosis and lesbian, gay, bisexual and transgender (LGBT) health.

She has been conducting research into LGBT health since 1992. This is an area where there are profound health issues but little research and underuse of available evidence to drive health policy. Her work in this area includes publications, lectures to undergraduate medical students, an award-winning elearning package for GPs and input to steering committees for LGBT health conferences. One of her systematic reviews was instrumental in obtaining funding for a specialist LGBT health centre currently being set up in Birmingham.

Her research goals are to attract new funding for systematic reviews and HTAs in any topics appropriate to the work of HERG and to manage the NICE EAC collaboration.

For further information contact catherine.meads@brunel.ac.uk
Contracts Awarded Quarter 4 (1st May – 31st July 2012) £5,464,584

BCAST

Prof Dmitry ESKIN (PI) Dr Hari-Babu NAENDLALA (Co-I) Prof Zhongyun FAN (Co-I):
European Commission – ExoMet – Physical processing of molten light alloys under the influence of external fields ‘RTD/Innovation’ account, £744,800

Prof Zhongyun FAN (PI) Dr Geoff SCAMANS (Co-I) Dr Hari-Babu NAENDLALA (Co-I) Dr Brian MCKAY (Co-I):
EPSRC (Additional Funds) – Centre for Innovative Manufacturing in Liquid Metal Engineering (LIME), £599,236

Dr Brian MCKAY (PI) Prof Zhongyun FAN (Co-I):
Korea Institute of Industrial Technology (Additional Funds) – Characterization & processing of High Thermal Conducting Al-MMCs, £36,865

Brunel Business School

Dr Francesco MOSCONE (PI) Prof Keith DICKSON (Co-I) Dr Elisa TOSETTI (Co-I):
European Commission – BIOPOOL – Services associated to digitalised contents of tissues in biobanks across Europe (‘RTD/Innovation’ account), £152,715

Prof Susan JOBLING (PI) Dr Allan TUCKER (Co-I):
DEFRA – Development of a practical in-vivo TIE method for testing and evaluating mixtures of endocrine disrupting chemicals, £104,959

Dr Susan JOBLING:
UK Water Industry Research (UKWIR) – Catalytic oxidation of pharmaceutical compounds in wastewater effluents, £40,535

Prof Andreas KORTENKAMP:

Brunel Institute of Bioengineering

Dr Svetlana IGNAOTOVA (PI) Prof Ian SUTHERLAND (Co-I) Prof Derek FISHER (Co-I):
GlaxoSmithKline – Expanding the use of Counter Current Chromatography within BITE (Biopharm Innovation & Technology Excellence), £45,000

Dr Quan LONG:
Get A-Head Charitable Trust – Simulation of Nasal Airway, £10,000

Health Economics Research Group

Prof Julia FOX-RUSHBY (PI) Dr Louise LONGWORTH (Co-I) Dr Joanne LORD (Co-I):
National Institute for Health and Clinical Excellence (NICE) – NICE – EAC: The evaluation pathway for medical technologies and related NICE technology evaluation programmes, £454,276

Dr Joanne LORD:
National Institute for Health Research (NIHR) – Cost-effectiveness of genetic markers for antibiotic resistance in tuberculosis, £23,167

Institute for the Environment

Prof Tat-Hean GAN:
UK Water Industry Research (UKWIR) – Adapted Composite Repair Tooling for in-situ wind turbine blades structural rehabilitation, £206,832

Prof Tat-Hean GAN:
European Commission – DIGIGLASSES – Development of 3D digital glasses for enhancing mobility of visually impaired people to open strategic product lines for participant SMEs, £235,454

Prof Tat-Hean GAN:
European Commission – Cleanship – Prevention and detection of fouling on ship hulls, £417,600

Prof David HARRISON (PI) Dr Yanmeng XU (Co-I):
European Commission – POWERWEAVE – development of textiles for electrical energy generation and storage ‘RTD/Innovation’ account, £345,975

School of Arts

Prof James KNOWLES (PI) Dr Elizabeth EVENDEN (Co-I):

Prof Philip TEW (PI) Dr Nick HUBBLE (Co-I):
ESRC – Fiction and the Cultural Mediation of Ageing (FCMAP): New narratives of everyday ageing in contemporary Britain: An anthology, £97,371

School of Engineering and Design

Dr Mark ATHERTON:
Autism Speaks (Additional Funds) – Tuning Anxiety out: Exploring the potential of Noise Cancellation in ASD Sound Sensitivity, £7,164

Miscellany

Dr Rosa SCOBLE (PI) Ms Lorna MITCHELL (Co-I):
Joint Information Systems Committee (JISC) – UKRISS – UK Research Information Shared Service, Research Info Management, £31,925
Prof Peter HOBSON:
Science & Technology Facilities Council (STFC, now ssc.rcuk) (Additional Funds) – Doctoral Training Grants 2011/12 Allocation, £6,404

Dr Tatiana KALGANOVA:
Caterpillar Logistics Inc – Caterpillar Demand Strategy Project and Competition Conference, Illinois, USA, £1,800

Prof Maria KOLOKOTRONI (PI)
Dr Zahir DEHOUCHE (Co-I):
European Commission – The application of solar-powered polymer electrolyte membrane (PEM) electrolysers for the sustainable production of hydrogen gas as fuel for domestic cooking, £49,831

Prof Thanos MEGARITIS (PI)
Dr Lionel GANIPPA (Co-I)
Dr Jun XIA (Co-I):
EPSRC – Micro-explosion of Fuel Blends in Low Carbon Diesel Engines: Experimental and modelling study, £522,050

Dr Parneet PAUL (PI)
Dr Olinkha GUSTAFSON-PEARCE (Co-I):
British Council – Action learning in environmental engineering to develop employability skills and experience, £10,000

Dr Harjit SINGH:
Evonik Industries AG – Optimisation of Microporous Insulation Material in Vacuum Insulation Panels, £9,979

Prof Savvas TASSOU:
Research Promotion Foundation of Cyprus – Investigation and determination of the geothermal parameters of lithologies in Cyprus, for the compilation of the geothermal map of the island, £19,261

School of Health Sciences and Social Care

Dr Joanna BRIDGER (PI)
Dr Ian KILL (Co-I)
Dr Christopher ESKIW (Co-I):
SPARKS – Testing the effects of drugs used in the clinic on the genomic health of cells from children suffering with the premature ageing disease Hutchinson-Gilford Progeria Syndrome, £119,134

Dr Wendy BRYANT:
College of Occupational Therapists (COT) – Participatory action research using photovoice to explore user experiences of recovery in acute mental health occupational therapy facilities, £9,129

Dr Thomas HÖFKEN:
DFG – Deutsche Forschungsgemeinschaft – Regulation of cell polarity by control of Sut1-mediated gene expression via the Cdc42 effectors Ste20, Cla4 and Skm1, £10,532

Prof Christina VICTOR (PI)
Prof Julia FOX-RUSHBY (Co-I):
National Institute for Health Research (NIHR) – PACE-UP trial – Pedometer And Consultation Evaluation-Up, £94,535

School of Sport and Education

Dr Carl HULSTON:
Society for Endocrinology – Summer Studentship – Metabolic and endocrine responses to short-term overfeeding in humans: a pilot study, £2,830

Dr Heath MENDICK:
ESRC – The role of celebrity in young people’s classed and gendered aspirations, £169,819

School of Information Systems, Computing and Maths

Dr Shengxiang YANG:
EPSRC – ECDONE – Evolutionary Computation for Dynamic Optimisation in Network Environments, £441,110

Prof Terry YOUNG (PI)
Dr Joanne LORD (Co-I):
Southern Health NHS Foundation Trust – Preparation of a collaborative bid for funding a project on mapping PbR clusters to MH pathways, £30,000

Dr Keming YU:
Optirisk Systems – News analytics toolkit and stochastic programming solution algorithms, £18,000

School of Social Sciences

Dr Varun UBEROI:
Foreign Affairs and International Trade Canada – Understanding Canada – Nation-Building Through Multiculturalism, £2,580

Dr Daniel RHIND:
International Tennis Federation (ITF) – Understanding player well-being and the impact on performance in elite junior tennis, £5,442

Wolfson Centre

Prof Paul SERMON:
(Confidential) (Additional Funds) – Small World – Sponsored studentship, £25,000

Dr Karnik TARVERDI:
The Benlian Trust – Armenian post-grad student visit, £2,000
The Future of Media Regulation

The newly formed Centre for Culture Media and Regulation (CCMR) successfully hosted a colloquium – The Future of Media Regulation: Issues and Challenges in July 2012. Organised by Dr Lesley Henderson and Professor Julian Petley, the event drew together a key group of academics, campaigners and activists including keynote speakers: Professor Sylvia Harvey FRSA (University of Leeds, LSE); Dr Des Freedman (Reader, Goldsmiths College); Dr Jonathan Hardy (Reader, University East of London) and Professor Graham Murdock (Loughborough University).

The event was fully booked within hours and was very well attended

Dr Henderson who is Co-Director of CCMR and member of the Associate All Parliamentary Media Literacy Group explained: “When we first discussed developing a research centre that spanned our broad interests in media and communications we could never have predicted just how timely it would be to include ‘regulation’.” The event was fully booked within hours and was very well attended by academics, public campaigners and media professionals.

For further information contact: lesley.henderson@brunel.ac.uk

BCAST celebrates 10 years of research, technology and innovation

The Brunel Centre for Advanced Solidification Technology (BCAST) recently marked its 10th anniversary with a celebratory dinner attended by staff and students (past and present), industry colleagues and supporters. The anniversary celebration highlighted BCAST is recent major achievements, including: hosting the EPSRC Centre for Innovative Manufacturing in Liquid Metals Engineering (EPSRC Centre – LiME); and leading the £4.5M EPSRC-funded TARG-LCV (low-carbon vehicles) programme. BCAST has recently become one of the eight members of the Global Light Metals Alliance, and has been chosen to host major international conferences in 2013 and 2014.

For further information visit: http://www.brunel.ac.uk/bcast/news-and-events

Treating Autism Conference

The annual conference of the charity, Treating Autism, took place here at Brunel on the 8th/9th September 2012. The 450 attendees were an egalitarian mix of parents of autistic children, health and other professionals, and researchers, including many from Brunel. The first day of the conference focussed on behavioural therapies used with autism and the second day focussed on biomedical aspects (i.e. the evidence for autism as a physical, whole body, illness affecting neuro-development) and the consequent avenues for treatment. The highlight of the conference was a presentation by Prof Luc Montagnier, Nobel Laureate, who has been investigating the role of chronic bacterial and viral infections in autism, and who reported his successful early trials of treatment.

For further information contact: geraldine.barrett@brunel.ac.uk

Brunel hosts power engineering conference

Brunel Institute of Power Systems (BIPS) in the School of Engineering and Design hosted the 47th International Universities’ Power Engineering Conference (UPEC 2012) in London from 4-7 September. UPEC is a long established conference, which is very popular with young researchers, PhD students and engineers from the power industry. The conference allowed participants to exchange experiences and discuss the most up-to-date topics in power engineering and provided delegates with important insights into the newest projects, developments and research that are driving the move towards competitive, sustainable and secure energy throughout Europe. A total of 220 delegates were in attendance from 30 countries including the UK and 204 papers were presented.

A total of 220 delegates were in attendance from 30 countries

Further information and event pictures available at: http://upec2012.com/
For further information contact: gareth.taylor@brunel.ac.uk
Mark Williams

Mark Williams joined Brunel as Professor and Subject Leader for Sports Science in September 2012. He moved to Brunel from Liverpool John Moores University, where he was Professor of Motor Behaviour. He has previously worked at the University of Liverpool, Florida State University and the University of Sydney, where he was Head of Discipline Exercise and Sports Science and Associate Dean for Research and Innovation in the Faculty of Health Sciences.

Mark’s research and teaching interests focus on the psychology of expertise and its acquisition across domains. His interests focus on identifying what differentiates experts and novices and how skill learning can be facilitated through appropriate practice and instruction. He is particularly interested in how people make decisions under pressure in sport and other time-constrained domains such as law enforcement, military combat and in emergency medical care and how the skills underpinning superior performance may be enhanced through simulation-based training.

His work is multi-disciplinary in nature and he has published almost 300 papers in highly-rated outlets in sports science, experimental psychology, behavioural neuroscience, education, medicine and human factors. He has published thirteen books, with his more recent efforts focusing on ‘Skill Acquisition in Sport’ (Routledge, 2012), ‘Sport Psychology Contemporary Themes’ (Palgrave MacMillan, 2012) and ‘Science and Soccer: Developing Elite Performers’ (Routledge, 2013). His work has been cited in recent best-selling, popular science books such as Matthew Syed’s ‘Bounce’ and Daniel Coyle’s ‘Talent Code’.

He is passionate about postgraduate research training and supervision and has supervised successfully almost 40 doctoral students in the UK, as well as in Australia, Belgium, Canada, France, Portugal and the United States. He sits on several editorial and advisory boards, is a Fellow of the European College of Sports Science and a Chartered Psychologist and Scientist.

His research work has been supported by Research Councils such as the Australian Research Council, Biotechnology and Biological Sciences Research Council, Economic and Social Research Council and British Academy, commercial companies such as Nike and Umbro, as well as sport associations such as the FA, UEFA, FIFA, the English Cricket Board and UK Sport. He is actively involved in policy making for international associations, national governing bodies and professional sports and has advised the United States Academy of Science on issues related to training in the military.

In his new role at Brunel, Mark is keen to develop a strong multi-disciplinary focus on expertise and human performance in an effort to improve scientific understanding of how people learn and practice effectively to ensure that they have the skills needed to be competitive in the global marketplace.

For further information contact: mark.williams@brunel.ac.uk

Occupational therapists win majority of the profession’s research funding for 2012-2015

Three of the six grants from the UK Occupational Therapy Research Foundation (UKOTRF) were awarded to the Occupational Therapy Division in the School of Health Sciences and Social Care.

Dr Priscilla Harries was awarded £80,000 for the ‘Development of a web-based decision aid to assist occupational therapists to make optimal fitness-to-drive decisions for disabled and older drivers’. This is a collaborative research project with Professor Carolyn Unsworth at La Trobe University, Victoria, Australia where assessment for fitness-to-drive has been legally moved from doctors to occupational therapists since 1986. The project will statistically model the decision-making policies of expert occupational therapist driving assessors and use them to develop an online clinical decision aid. This decision aid will be tested with a randomised controlled trial before being launched for free international use.

Dr Georgia Spiliotopoulou was awarded £80,000 to develop “National guidance for measuring home furniture and fittings to enable user self-assessment and successful fit of minor assistive devices”. Together with co-investigators, Dr Anita Atwal, Anne McIntyre and Shirley Anne Russell, the team will be working with the Disabled Living Foundation (DLF), the British Polio Fellowship and service users. The project aims to meet the needs of the government’s personalisation agenda by enabling health care professionals and service users to accurately assess / measure for minor assistive devices in order to ensure their successful fit. The ultimate goal is to integrate this guidance with the DLF AskSARA (Self-Assessment Rapid Access) website to facilitate the provision of assistive devices.

Dr Wendy Bryant was awarded £10,000 for “Participatory action research using photovoice to explore user experiences of recovery in acute mental health occupational therapy facilities”. This study has been developed in collaboration with occupational therapy colleagues based at the Riverside Centre, Hillingdon Hospital, building on previous research, which indicated the value of occupational therapy. People in the unit highlighted the importance of being able to leave the wards to use the occupational therapy facilities as part of their recovery. The scholarship funding will enable a more detailed investigation of the facilities from their perspective, using visual methods.

For more information contact priscilla.harries@brunel.ac.uk
PhD Student wins prestigious IFESS Vodovnic Award

Robin Gibbons, PhD student in exercise physiology, was awarded the $500 1st prize in the recent International Functional Electrical Stimulation Society’s (IFESS) prestigious Vodovnic Award scheme. Robin’s paper and poster focused on cardiovascular health following a programme of functional electrical stimulation (FES) rowing, a novel form of high intensity exercise designed to mediate the risk of cardiovascular disease in persons with spinal cord injury. This year’s IFESS Conference was held in the Banff Conference Centre in the Canadian Rockies.

Brunel Innovation Centre (BIC) continues with major EC projects

Since its launch in 2009, BIC (Brunel Innovation Centre) has been busy. Having recently submitted 25 FP7 applications, BIC has also managed to establish successful partnerships through a number of European funded projects. BIC has now expanded its activities and is running confidently with a number of innovative collaborative projects, particularly across the EC platform. BIC is running over ten major EC projects – cumulatively worth over €15M – and is the coordinator of two of them: UltraCleanPipe and iCARUS. As a result, BIC has earned over €4M in 2 years. A number of initiatives are already underway for 2012 and beyond. BIC is currently working on new project applications across several platforms both national and international; TSB, EPSRC and EC to develop novel products and successful partnerships.

For more information visit: www.brunel.ac.uk/bic

Publications

Laser Diagnostics and Optical Measurement Technique

Professor Hua Zhao was pleased to see the publication of his new book titled ‘Laser Diagnostics and Optical Measurement Technique’. The increasing concern about CO, emissions and energy prices has led to new CO, emission and fuel economy legislation being introduced in world regions served by the automotive industry. In response, automotive manufacturers and Tier-1 suppliers are developing a new generation of internal combustion engines with ultra-low emissions and high fuel efficiency.

This book focuses on laser-based optical techniques for combustion flows and in-cylinder measurements. Intended for new and experienced engineers, researchers, academics and students, this book provides an introduction to experimental techniques that are best suited for in-cylinder engine combustion measurements. In addition to the fundamentals and theories, this book provides practical guidance on the application of such techniques through case studies performed at the author’s laboratory at Brunel University.

Community, Self and Identity: educating South African university students for citizenship

Dr Lindsey Nichols, School of Health Sciences, has been working with a transdisciplinary team on a teaching project in Cape Town, South Africa (2004-2008). This combined final year social work, psychology and occupational therapy students from two universities, which had very different social political histories, in a learning module called eCommunity, Self and Identity. A book has been published exploring different aspects of this work; from the use of participatory action learning (PAL) to how the collusive unconscious denial of black and white students from the apartheid past prevented them interrogating their tacit knowledge. Academics who run inter-professional modules and consider at how issues of diversity affect the transmission of knowledge will enjoy the discussion within this book.

The book is published by HSRC and can be accessed through the website (www.hsrc.ac.za)

For further information contact: lindsey.nicholls@brunel.ac.uk

The Royal Navy and the German Threat 1901-1914

Dr. Matthew S Seligmann (School of Social Sciences) was pleased to see the publication of this new book titled The Royal Navy and the German Threat 1901-1914. It has just been published by Oxford University Press. The overseas research in the German naval archive was paid for by a British Academy grant; the writing was enabled by an eight month AHRC Fellowship. Dr Seligmann is to follow it up with a Navy Records Society (NRS) volume covering the Anglo-German naval race that will be published in 2014 as the NRS’s contribution to marking the centenary of the outbreak of the First World War. The project is being undertaken in collaboration with the Militaergeschichtliches Forschungsamt (the German Bundeswehr’s military history research office).

Dr Seligmann is a well-known historian of the pre-First World War era and has written numerous works on international conflicts of this period. These include Rivalry in Southern Africa, 1893-99 (Macmillan, 1998), Spies in Uniform (Oxford University Press, 2006), Naval Intelligence from Germany (Navy Records Society, 2007) and The Royal Navy and the German Threat 1901-1914 (Oxford University Press, 2012). He has also written articles for such journals as BBC History Magazine, The English Historical Review, German History, Historical Research, The International History Review and The Journal of Strategic Studies. One of these, an essay entitled ‘A Prelude to the Reforms of Sir John Fisher’, won the 2007 Julian Corbett Prize, Britain’s premier award for naval history. Another of his works (written in collaboration with Professor Matthew Hughes), Does Peace Lead to War? Peace Settlements and Conflict in the Modern Age (Sutton, 2002), was selected by ALA’s Choice magazine as one of its Outstanding Academic Titles for 2003.

Dr Seligmann is to follow it up with a Navy Records Society volume covering the Anglo-German naval race.
Managing Your Research Data

Since the Research Councils UK (RCUK) position statement on Open Access in 2006, the expectation that publicly funded research will be made more widely available has gathered momentum. The Government has stated that it is committed to ensuring that all publicly funded research is publicly available, and the UK Research Councils have now issued common data policy principles (http://www.rcuk.ac.uk/research/Pages/DataPolicy.aspx). In March 2011, the Economic and Physical Sciences Research Council (EPSRC) approved a new Policy Framework on Research Data, which was implemented in May 2011.

This set the following expectations of organisations in receipt of EPSRC research funding:

- internal promotion of the principles and expectations to research staff and students;
- inclusion in research papers of the details to access supporting data;
- specific policies and processes to maintain internal awareness of data holdings and third party data requests;
- policies to allow sharing of non-digital data;
- policies and processes for publishing metadata;
- policies relating to restricted access for confidential data;
- policies to ensure the storage of data for a minimum of 10 years from the last point of access;
- policies relating to effective data curation;
- policies relating to funding of data curation.

Whilst this was published by the EPSRC, it has set the tone for the expectations of all the research councils. The exact details of what they each require in terms of data management can be found either on the Library’s web pages (http://www.brunel.ac.uk/services/library/research/rdm) or directly at http://www.dcc.ac.uk/resources/policy-and-legal/overview-funders-data-policies. 

Brunel has responded to this by setting up a working group under the leadership of Professor Geoff Rodgers to consider the policies and systems required to support research data management (RDM). A vision statement for RDM was approved by Senate on 15th November 2011 and states that “the University views effective research data management as an essential ingredient of a high quality research culture.”

By managing your data you will:

- Meet funding body grant requirements.
- Ensure research integrity and replication.
- Ensure research data and records are accurate, complete, authentic and reliable.
- Increase your research efficiency.
- Save time and resources in the long term.
- Enhance data security and minimise the risk of data loss.
- Prevent duplication of effort by enabling others to use your data.

So what is meant by research data management? The vision goes on to state that RDM “is the planning, capture, review, publication, storage, preservation and re-use of data produced by research, irrespective of format”.

Research data can include data that is observational, experimental, simulation, derived or compiled, reference or canonical. It can be text, numerical, multimedia, models, software, discipline specific or instrument specific. It can include documents, spreadsheets, notebooks, diaries, questionnaires, transcripts, audio/videotapes, photographs, films, test responses, slides, artefacts, samples, data files, database contents, models, scripts, contents of an application, methodologies, operating procedures etc. Research records such as correspondence, applications, reports, consent forms and project files may also be important to manage during and beyond the life of a project.

The first step towards successful research data management is to produce a data management plan. The best time to do this is at the start of the research project as the decisions you make at this stage will influence what data you decide to capture and how you go about capturing it. A data management plan is a document which describes:

- What research data will be created
- What policies (funding, institutional, and legal) apply to the data
- What data management practices (backups, storage, access control, archiving) will be used
- What facilities and equipment will be required (hard-disk space, backup server, repository)
- Who will own and have access to the data
- Who will be responsible for each aspect of the plan
- How its reuse will be enabled and long-term preservation ensured after the original research is completed

If all this is feeling slightly overwhelming then don’t worry, help is at hand! The Library and RSDO have been working together to produce template data management plans that we can work through with you to help you in this process. Please contact either Ann Cummings (67498 or ann.cummings@brunel.ac.uk) or Alicen Nickson (65730 or alicen.nickson@brunel.ac.uk). There is also further advice and guidance available on the Library web pages at: http://www.brunel.ac.uk/services/library/research/rdm.

Ann Cummings (Library) / Alicen Nickson (RSDO)
The latest member of staff to join the Research Support and Development Office (RSDO), Adam Bell spoke to Leading Edge about his new role at Brunel University.

When did you join RSDO?
I joined RSDO about a month ago on the 11th September.

What is your role?
My role within RSDO is to head up the Contracts and IP team.

What does your team do?
We provide legal advice on contractual and intellectual property matters where the University is working with an outside body to exchange University expertise, knowledge and intellectual property to bring benefit to the University. Typically this involves drafting a variety of agreements from non-disclosure and consultancy agreements to collaboration contracts with external bodies, such as other universities or industry partners.

Can you tell us a little bit about your background?
I have joined Brunel from Reading University, where I worked for the last 4 ½ years in a similar role. Before that I worked for a small legal consultancy that provided legal advice to IT contractors.

What experiences do you bring to Brunel?
Having worked in the sector for a number of years I am experienced in working in a research environment with academics to put in place appropriate terms and conditions with both major public & industrial sponsors, across a variety of sectors and jurisdictions.

What aspect of working at Brunel do you most look forward to?
I am looking forward to working with academic colleagues across the University to ensure that contractual negotiations and legal matters are conducted in a smooth and efficient manner allowing them to focus on their projects and/or collaborations. It is also good to be joining a University, that has been shortlisted for the prestigious University of the Year award at the Times Higher Education Awards 2012.

How can you be contacted?
I can be contacted by phone on: 01895 267840 or by email on: a.bell@brunel.ac.uk

Could your work benefit from charitable funding?
Leanne Moseley has recently joined the DARO team as a Development Officer focusing particularly on securing philanthropic funding from trusts and foundations, a role which she hopes will be of benefit to researchers across the University. Leanne says: “I am really excited to have joined such a dynamic University and I have already been amazed by the vast range of cutting-edge research being undertaken at Brunel”.

If you would like to meet with Leanne to discuss how charitable funding might help to further your work, please do not hesitate to get in touch at leanne.moseley@brunel.ac.uk or on 67631.

To find out more about the Development and Alumni Relations Office, please visit: www.brunel.ac.uk/alumni