

Centres of research excellence

Research at Kingston University



Front cover: Gridcore. A strong, lightweight honeycomb board manufactured from 100% recycled cardboard. Manufactured at low temperatures using recycled materials and completely biodegradable. This is one of the many sustainable materials held in the 'Rematerialise' database and library, developed from the AHRC-funded 'Creative Resource' project. For further details see page 23. Photo: Rematerialise Team

esearch at Kingston University has flourished in recent years to become, alongside our teaching and enterprise activities, a key element of our overall mission. Without ongoing research and scholarship, we believe the other two activities are compromised and lack the necessary knowledge and energy to move them forward.

The University supports research as a central activity for our academic staff and it is a priority when we are making new appointments. We focus on areas of research strength, developing structures to support new and emerging researchers, and to provide a community for our growing numbers of research students.

Research is not just encouraged for its own sake at Kingston, nor simply to tick the boxes for funding (although we were delighted when our funding trebled following the 2008 Research Assessment Exercise). Rather, as the following pages demonstrate, there is a particular ethos of research at Kingston University that influences our identity. That ethos is threefold, encompassing an aspiration for excellence; a desire to engage with the outside world, especially in areas where our research can make a difference; and a will to break down disciplinary barriers to focus on, and contribute to, areas of social, cultural and economic change in a global setting.

The University embraces this ethos through academic diversity and a commitment to

breadth, or comprehensiveness. Research excellence is apparent across our creative and performing arts, our humanities, our social sciences and our sciences. Most importantly, that diversity and breadth is rooted in strong, single disciplinary strengths – be they sociology and criminology, business studies, engineering, computing, geography, life science, art and design, history or drama. We also embrace the possibilities offered by working across disciplines, and we have multidisciplinary teams addressing broad themes such as identities, the environment, public security and health and wellbeing.

This publication presents just the tip of an iceberg. The case studies we have selected are presented in four sections, illustrating a cross-section of our research. The first explains the work of six of our research centres; the second describes some of the partnerships and collaborations through which our research engages with the world; the third section outlines three examples of synergies that exist across different areas and disciplines; and the fourth includes information about Kingston University staff and some particularly noteworthy research awards.

Professor Penny Sparke

I hope it makes good reading!

Pro Vice-Chancellor Research and Enterprise

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Centres of research excellence

Kingston University has consolidated its research strengths through the formation of a number of centres of research excellence. They provide a stimulating and supportive environment that nurtures the highest quality research. Each centre acts as a hub for researchers, from students to professors, ensuring a dynamic, sustainable research base and active knowledge sharing. The activities of six of the University's centres of research excellence are outlined in the following pages. A complete list of research centres can be found on page 47.

Tackling child abuse

The Centre for Abuse and Trauma Studies

he Centre for Abuse and Trauma Studies (CATS) is at the forefront of research in its field, creating new knowledge directed at helping to combat the exploitation of some of society's most vulnerable individuals.

Run with Royal Holloway, University of London, and co-directed by Professor Julia Davidson at Kingston University, CATS provides a hub for researchers in the areas of psychology, criminology, social work, policing and law. They work with professional, voluntary and government organisations to share knowledge, influence policy and shape service delivery.

Current funders include the Home Office, the Child Exploitation and Online Protection Centre (CEOP), the Metropolitan Police and the Social Services. The Centre has also received large grants from the European Commission and government departments such as the National Audit Office. The knowledge generated by the Centre is helping to train frontline staff and influence key decision-makers.



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An area of growing concern for society as a whole is the abuse of young people via the internet. Recent, high-profile cases have demonstrated an urgent need to engage in research in this area and to find ways to protect them.

he Centre for Abuse and Trauma Studies (CATS), in collaboration with the National Centre for Social Research, is being funded by the European Commission Safer Internet Programme to investigate the online grooming behaviours of sexual offenders. The research project, run with partners in Italy, Belgium and Norway, is attracting interest worldwide and is expected to inform internet safety legislation and policy across Europe, as well as influence law enforcement agencies and providers of treatment services for sexual offenders.

Working with police and prison services throughout Europe, the project explores motivation and victim selection practices

among internet sexual offenders. The breadth of expertise within CATS allows its researchers to cross traditional disciplinary boundaries when working with victims and perpetrators.

In the project's first phase, which began in 2009, they found similarities in the behaviour of sexual offenders, regardless of their country of origin.

Previous research by the University of Central Lancashire's Cyberspace Research Unit (O'Connell, 2004) had revealed that abusers earn the trust of their victims through a variety of socialisation processes that often lasted several months. CATS researchers have shown that abusers are increasingly competent with new

"There has never been a more important time for the academic community to step forward and provide their perspective on the challenging world of child abuse. Professionals are so immersed in addressing the symptoms and manifestations of abuse, they rarely have the time or resources to analyse the issues and tailor their response accordingly."

Commander Peter Spindler, Metropolitan Police

technologies, fast-tracking the grooming process through social networking sites such as Facebook. They work rapidly through lists of hundreds of youngsters

until someone agrees to meet with them.

Researchers believe that, by talking to convicted offenders about how they selected and prepared their victims, they will be better able to warn of the potential dangers. In addition, by talking to young people, parents and teachers, they aim to identify the most effective ways of promoting safer internet practices. CATS will also work with social networking sites to improve internet safety, and is currently collaborating with Facebook to disseminate preliminary findings.

Another crucial outcome from CATS' research will be to communicate its findings to professionals, agencies and policymakers. Findings from the first phase were shared at the second of a series of successful seminars organised by CATS at the House of Lords. Introduced by Baroness Thornton and chaired by the Secretary of the Children's Charities' Coalition on Internet Safety, the event

brought together representatives from the police, CEOP, social and health services, NGOs, children charities and social networking sites.

The project is funded by the European Commission Safer Internet Programme (€425,000 – with €75,217 to Kingston), and will end in 2012. ◆

Further work

In another project relating to internet safety, the CATS team evaluated the CEOP 'ThinkUKnow' Internet Safety Programme, exploring young people's knowledge of internet safety and risktaking behaviours through an online survey of nearly 2,000 11-16 year olds. Findings reported that a substantial proportion of young people had engaged in high-risk behaviour online, including sharing sensitive information and personal photographs. The research also indicated that interaction with strangers, particularly through social networking sites, is becoming an accepted behaviour and is not perceived as risk-taking. The project was funded by

the National Audit Office and the CEOP (£25,000). ♦

A recent project funded by the Metropolitan Police (£26,924) examined the experiences of young victims during investigations into child abuse.

Researchers found that, in most cases, police officers used guidelines that did not allow for differences in age and trauma. Following the study, CATS proposed training and guidance for officers that addressed the needs of individual victims. CATS is now preparing a continuing professional development training programme, to be implemented by the Metropolitan Police in late 2010.

Supporting small businesses

The Small Business Research Centre

he Small Business Research Centre (SBRC), led by Professor Robert Blackburn, is home to a long-established, highly respected team of researchers working in the field of small business and entrepreneurship.

Researchers in SBRC have a wide variety of clients and sponsors, including the Department of Business, Innovation and Skills, the London Development Agency, Royal Mail, the British Academy, Workspace Group plc, the International Federation of Accountants, the New Zealand Government, and the Organisation for Economic Co-operation and Development. This range ensures that much of SBRC's research is applied and feeds directly into the work of public and private organisations.

The SBRC has a strong track record in undertaking research on small and medium-sized enterprises (SMEs) and regulations. Recent projects include a report on individual employment rights and SMEs for the former Department of Trade and Industry; a study of environmental practices and SMEs for the Economic and Social Research Council; and research for the Environment Agency on how better to reach SMEs with their initiatives.



Director: Professor Rob Blackburn +44 (0)20 8417 5354 r.blackburn@kingston.ac.uk www.kingston.ac.uk/business/sbrc The Small Business Research Centre (SBRC) was commissioned by the former Department for Business, **Enterprise and Regulatory Reform to examine the** impact of regulation on small enterprises in England. Regulation is widely regarded as having an adverse impact upon small business activities and performance, with consequences for entrepreneurship and the UK economy as a whole. Yet the UK performs well in international tables that rank the ease of doing business in different countries. The resulting report is now part of a growing evidence base that informs sound policy decisions.

esearchers in SBRC found that many previous studies of the relationship between regulations on businesses and their

approach to studying the impact of face-to-face interviews with 124 SME

owners, arguing that this was the best way to explore fully the contradictory effects of

these tendencies operate both directly, through requiring adaptation by ownermanagers; and indirectly, through changing the behaviour of stakeholders whose actions affect small business owners, such as customers, competitors, suppliers, employees, infrastructure providers and regulatory authorities. Third, regulation does not have a uniform effect on small business performance. The effect depends on the broader contexts within which businesses operate. How business owners choose to adapt to regulation has a crucial influence upon their performance outcomes.

Professor Robert Blackburn explained: "Those wanting to understand how regulation contributes to small business performance must take into account a wide range of possible mechanisms through

which regulation produces outcomes. Simplistic arguments that regulation impedes performance, or that deregulation necessarily enhances performance, must be rejected."

By broadening an understanding of how regulation affects small business performance, SBRC research provides valuable knowledge for business owners, researchers and policy-makers. The findings will be of particular interest to those using the Department for Business, Innovation and Skills' Small Firms Impact Test to consider the impact of proposed regulation. The results have also been cited by other stakeholders seeking to understand the relationship between

regulation and business performance, such as the Association of Chartered Certified Accountants (ACCA) in its policy briefing paper 'Better Regulation: what it really means' (2009). They have also fed into the National Audit Office's 'Business Perceptions of Regulation' survey.

The report, The Impact of Regulation on Small Business Performance, was funded by the Department for Business, Enterprise and Regulatory Reform (£240,795). •



Predicting danger

The Centre for Fire and Explosion Studies

he Centre for Fire and Explosion Studies (CFES), led by Professor Jennifer Wen, is recognised globally for its work in the development and application of advanced computational fluid dynamics models for fire and explosion studies. It receives substantial funding from the EU and UK funding bodies, as well as from industrial partners. In 2010, the Centre won four major funding awards from the EU and industry

Research activities range from traditional fire and explosion modelling, to advanced study of fire and explosion safety related to the emerging hydrogen economy. The Centre is investigating the production, transportation and utilisation of new energy such as hydrogen and liquefied natural gas.

In addition to the 'COOLTRANS' project (see right), the Centre receives EU funding under the following initiatives: Marie Curie International Incoming Fellowships (€240k) to deliver modelling for predicting flame acceleration and transition to detonation in very large vapour cloud explosions; and Intra-European Fellowships for Career Development (€240k) to examine the combustion characteristics of alternative fuels, such as syngas, which is synthesis gas from organic waste. ◆



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Technology has moved fire and explosion studies into an era of computer-run modelling systems and provided an unprecedented ability to predict danger and improve safety.

he explosion and fire on the
Deepwater Horizon oil rig off the
Louisiana coast in the US provided
a sharp reminder of the dangers
surrounding the world's insatiable demand
for energy

Predicting when volatile substances such as CO₂ or fuels are likely to become dangerously unstable, so that they can be transported and used safely, lies at the heart of the work of the Centre for Fire and Explosion Studies (CFES).

CFES is currently responding to the worldwide interest in mitigating global warming through carbon capture and storage. Although there have been several demonstration projects involving the transport of CO₂, and injection underground into oil wells, this is a relatively new area of research, and long-term safety will be of paramount importance.

CFES is part of a multi-million-pound consortium funded by the international electricity and gas company, National Grid, to look at these issues. National Grid is funding the Centre to deliver integrated numerical simulations that will show how pressurised CO₂ behaves in different circumstances during transportation by pipeline.

Professor Jennifer Wen explained: "We will be undertaking detailed studies into the effect of solid or liquid state CO₂ being accidentally released into the environment. Each part of this work is at the cutting edge."

CFES's research into safety issues around CO₂ transportation is funded for £300,000 as part of the 'Dense (liquid) Phase CO₂ Pipeline Transportation' ('COOLTRANS') project. The three-year project began in 2010. ◆

Partnership to improve glass safety in fires

Predicting how glass behaves in various fire scenarios is the Holy Grail of fire and glazing studies because there are so many variables in the design of buildings and types of glass. However, a model jointly developed by two world-class research centres – one specialising in fire modelling and the other in the fracture mechanics of glass – has been particularly successful.

Pilkington Glass and CFES have advanced understanding by providing a prediction of the initial cracking of glass. To achieve this, the Centre developed a model that links varying glass temperatures with data on edge-strength probability provided by Pilkington Research and Development.

The CFES model takes into account the variation in glass properties by using wavelengths, and calculates heat transfer within the body of the glass by using three-dimensional, rather than one-dimensional, data – something no other approach has achieved. At present the model is essentially a research tool to evaluate different potential fire scenarios, but the aim is to develop it as a design tool for fire engineers.

CFES would like to build on this work with a new project to examine the behaviour of glazing in realistic fire scenarios in buildings. The aim will be to formulate recommendations for industry.

The project was funded by Pilkington Glass (£40,500). ◆



Making CCTV see, hear and speak for itself

The Digital Imaging Research Centre

he Digital Imaging Research
Centre (DIRC), led by Professor
Sergio Velastin, is one of the
largest computer vision groups
in the UK, with internationally recognised
expertise in visual surveillance, medical
imaging and intelligent environments.

DIRC leads in the UK in the area of intelligent visual surveillance research, focusing on the development of robust 'plug and play' surveillance components, integrated wide-area multi-camera systems and behavioural analysis, with an emphasis on public transport. DIRC works with the police, security end-users, and transport operators across Europe. DIRC also has worked closely with the Home Office Scientific Development Branch, for example through the EPSRC-funded ViTAB (Video-based Threat Assessment and Biometrics) Network to promote video-interpretation technologies. These technologies aim to reduce crime in sensitive sites such as town centres and on public transport.

DIRC organises major international conferences, including the 10th International Workshop on Visual Surveillance, Medical Image Understanding and Analysis 2009, and the third International Conference on Imaging for Crime Detection and Prevention, which was organised with the Institution of Engineering and Technology.



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Britain has the highest density of CCTV cameras in the world. After the July 2005 terrorist attacks in London, visual surveillance became an important element of security initiatives. But the growth in CCTV goes beyond security. Scientists at the Digital Imaging Research Centre (DIRC) are working with industry and users to develop 'intelligent' CCTV that can see, hear and speak for itself in ways that might, one day, also assist people in their homes.

ail operators are particularly interested in tracking individuals, but previously this was only possible if passengers wore a radio-frequency identification. With EU funding, DIRC has been working in the Rome metro, extracting and evaluating information from large networks of cameras and microphones, and investigating current and new technologies.

Through the 'CARETAKER (Content Analysis and Retrieval Technologies to Apply Knowledge Extraction to massive Recording) Tag-n-Track' project, the team has made a significant advance in CCTV tracking. Operators can now simply click on the image of any individual to initiate the tracking process. The system alerts the operator to situations that need attention, such as left luggage, overcrowding or an altercation. It also stores information for later retrieval.

'CARETAKER' highlights the power of state-of-the-art video analysis but also its limitations. The project has raised awareness of the need to develop novel methods for tag-and-track under crowded conditions.

'CARETAKER's' EU partners were Thales Communications and INRIA (France), Multitel (Belgium), IDIAP Research Institute (Switzerland), ATAC (Rome Public Transport Authority), SOLID Information Technology (Finland) and Brno University of Technology (Czech Republic). The three-year project was funded by the EU (£2.138 million, with £235,000 to Kingston University).

'CARETAKER' led to a second, ninemonth project aimed at making the technology sufficiently robust for real-life deployment, such as in the centre of Kingston upon Thames. This work was sponsored in 2010 by BAE Systems and Ipsotek (£110,000) in collaboration with the Royal Borough of Kingston upon Thames. ◆



Extracting CCTV data

Extracting useful information from CCTV coverage is labour-intensive and expensive. In partnership with BAE Systems, DIRC is initiating work on developing a search box that will allow users to search video content in the same way that search engines find web content.

'SieVe' (Surveillance Video Data Mining) will run from 2010–2013, funded by the EPSRC's Industrial CASE (Collaborative Awards in Science and Engineering) programme (£65,294), which enables a company to employ the services of a postgraduate trainee and benefit from the University's research expertise and facilities.

Crowd simulations

Our highly urbanised world brings crowds of people together on public transport and in large venues, posing problems for urban planners who have to cater for large numbers of people while avoiding congestion and danger. Crowd simulation systems enable them to trial different architectural configurations while balancing safety and cost.

Legion Ltd, a leading supplier of simulation systems, worked with DIRC to examine how computer vision can capture and characterise crowd flow and behaviour to create realistic models. The research has made significant progress towards automating the labour-intensive process of manually analysing hours of video recordings.

The project was funded by the Knowledge Transfer Partnership (KTP) scheme (£110,000). ◆

Distinguishing road users

Transport for London (TfL) funded a doctoral research project that looked at how the use of TfL's network of street cameras could be extended so that computer vision systems can automatically locate and distinguish different kinds of road users, such as pedestrians and cyclists and the drivers of cars, vans and buses.

The study's results will inform traffic management systems and improve traffic flow. DIRC is investigating how to convert these advances into operational systems.

The project was funded by TfL (£56,000). ◆

The world's resources under a microscope

The Centre for Earth and Environmental Science Research

he Centre for Earth and Environmental Science Research (CEESR), directed by Professor Martyn Waller, brings together experts in three research areas: geodynamics and crustal processes; environmental change; and agriculture, people and place. CEESR's researchers work closely with industry, particularly in the fields of mineral deposits and petroleum exploration and exploitation. Knowledge generated by the expertise of the Centre's members has been applied by numerous industry professionals concerned with mineral and hydrocarbon exploration, and gemmology.

Substantial funding, both for research projects and for PhD and MSc research studentships, has been provided by international organisations such as BG Group plc, PDVSA, Randgold Resources, and Statoil. CEESR also provides tailored continuing professional development courses for industry.



+44 (0)20 8417 2511 m.waller@kingston.ac.uk www.kingston.ac.uk/science/ceesr Industrial links in the earth and environmental sciences prosper at the University, where research facilities provide vital support for companies in the fields of mining and exploration.

Gold

The Centre for Earth and Environmental Science Research (CEESR) works closely with several mining companies, and has built a particularly fruitful partnership with Randgold Resources, a FTSE100-listed exploration and mining company focused in Africa. Collaborative work with Randgold is aimed at generating a new understanding of orogenic gold deposits (deposits formed by movement of the Earth's crust). This recently recognised class of high-grade, high-tonnage deposits accounts for more than a quarter of total historic gold

Using world-class analytical instruments, senior scientists Professor Peter Treloar and Emeritus Professor Andrew Rankin contribute to the debate on the fluid and metal sources of orogenic gold deposits and the precipitation mechanisms involved in forming large gold deposits. The structural analysis provides Randgold with key data for finding the ore and informs strategies for exploration. CEESR's electron microscopy provides data on the smallscale distribution of gold and associated minerals, which are critical for metallurgists involved in gold extraction.

Randgold Resources has funded CEESR for more than £300,000 over the last three years, including support for three current doctoral students. Four of Randgold's staff have been given Business and Honorary Research Fellowships and MSc by Research opportunities, and CEESR also delivers CPD courses to their junior staff. Rankin and Treloar are using this successful model to develop similar links with other companies. •

Hydrocarbons

Oil and gas are two of the world's most important energy resources, yet new hydrocarbon deposits are becoming increasingly difficult to find. There is an urgent need to maintain supplies while alternative energy sources are developed.

CEESR's Professor Ian Jarvis is a leading figure in the field of chemostratigraphy the study of the variation of chemistry within sedimentary sequences. He has pioneered methods that use variation in elemental and stable-isotope geochemistry for the characterisation and correlation of rocks on local, regional and global scales. When combined with traditional biostratigraphic methods (using fossils to correlate and date rocks), it offers a powerful tool for dating strata. This is essential for geologists to locate and assess hydrocarbon deposits.

Chemostratigraphy is also used in palaeoenvironmental studies on all time scales, from decades to hundreds of millions of years. It can identify climate change that may have been responsible for increased organic matter preservation in the oceans, leading to petroleum-source rock formation. One of Jarvis's former PhD students. Dr Tim Pearce went on to set up a successful UK company, Chemostrat. Other organisations have also been keen to take advantage of the Centre's expertise and there are several industry-sponsored students based at the University. Staff from Petróleos de Venezuela S.A. (PDVSA) successfully completed research degrees at the University in 2009. Other industry sponsors benefiting from CEESR's expertise include BG Group plc and Statoil.



Gems

EESR holds the latest technology for gem research. New facilities include purpose-built mineralogy and petrology laboratories, and analytical instrumentation, including scanning and transmission electron microscopes.

stones', which may be sold to fund arms;

and synthetic or doped stones, which

have been chemically treated to change

their characteristics. These stones need

development of the non-destructive analysis

to be identified, and much of CEESR's

of gemstones. The analysis does more

than identify the stone, however; it also

uses trace element or inclusion signatures

to identify its source. As part of this work

organisations, such as the Gemmological

Association of Great Britain, to develop

the use of hand-held portable analytical

Fluorescence and FT-IR spectroscopy.

instruments, including laser Raman, X-ray

CEESR is working with external

gemmological work addresses the

underpinning public credibility in the gem and jewellery industry, which is worth billions of pounds to the UK economy. CEESR has developed and run five international CPD courses for Key issues facing the industry are 'conflict gemmologists working in international

These analytical protocols are key to

gem-testing laboratories. In association with the Gemmological Association of Great Britain, this work has underpinned the development of Kingston University's unique degree course in Gemmology and Applied Mineralogy. CEESR's short course programme demonstrates advanced systems available to professional gemmologists. •

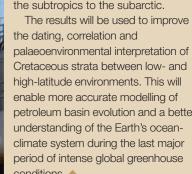
The prehistory of climate change

inoflagellates are unicellular algae that possess two flagella that propel them through the water. They have a variety of lifestyles. Most are planktonic, living in the surface of the oceans where they are an important part of the food chain. After death, many species form a resting cyst (dinocyst) that is composed of highly resistant organic material.

Doctoral student Kate Olde is funded by the University for a three-year study of fossil dinoflagellate cysts from the mid-Cretaceous period, 88-100 million years ago. Statoil is providing £64,900 for research costs.

The project aims to develop models that quantify sea-level, water-depth and palaeoclimate change based on spatial and temporal trends in dinocyst assemblages. It also aims to evaluate the response of dinocysts to major palaeoceanographic events in widely different climate regimes, ranging from the subtropics to the subarctic.

the dating, correlation and palaeoenvironmental interpretation of Cretaceous strata between low- and high-latitude environments. This will enable more accurate modelling of petroleum basin evolution and a better understanding of the Earth's oceanclimate system during the last major period of intense global greenhouse conditions. •



We are where we live, work and play

The Modern Interiors Research Centre

he Modern Interiors Research Centre (MIRC), led by Professor Penny Sparke and deputy director Professor Anne Massey, focuses on research relating to the design and meaning of interiors in the period 1870 to the present.

MIRC's research, which has manifested itself in a significant number of scholarly and extensively cited monographs, journal articles and edited collections of essays, seeks to analyse the modern interior within a broad historical and theoretical context, and to rescue it from marginalisation.

The Centre is committed to interdisciplinary research, working across design history, architectural history, and visual, material and spatial culture, and collaborating with researchers in disciplines including cultural studies, cultural geography and literary studies. It brings together researchers and doctoral students, and currently sustains AHRCfunded collaborative doctoral research projects with Historic Royal Palaces and the National Maritime Museum in Greenwich, as well as providing consultancy work to business and industry. Through its annual conference, which has been in place for more than a decade, MIRC actively engages with an international research network.



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Interiors are a fundamental part of modern life. They shape, and are shaped by, the people who live, work and play in them. Researchers in the Modern Interiors Research Centre examine the ways in which identities, including those formed by class, gender, sexuality and nationality, have been and are reflected in and informed by our interior environments.

n 2010, MIRC convened its first overseas MIRC's international collaborative network symposium, 'Looking into the Modern continues to spread, with new links to Interior: History, Theory and Discipline international communities, such as a in Education and Practice', in partnership research group at the Politecnico di Milano with Marymount University, Virginia, at the in Italy through participation in its *Interiors* annual conference of the American Interior Worlds conference (autumn 2010). MIRC Design Educators' Council (IDEC). It is also developing twinned conferences in London and Brisbane for 2011 and attracted delegates from North America, Europe, Australia and New Zealand. Since 2012 with the Australian Interior Design/Interior Architecture then, MIRC has been working with IDEC and the Victoria and Albert (V&A) Museum **Educators Association** in London to develop two linked symposia to take place in 2012 in conjunction with

IDEC's 50th anniversary conference and the

V&A's exhibition, British Design 1948–2012.

In July 2010, MIRC further strengthened

scholars with the launch of a new journal,

Interiors: Design, Architecture, Culture,

its relationship with North American

co-edited by Professor

Anne Massey and John Turpin from

Washington State

University.

Sharing research with the public

n 2009, the University's Dorich House Museum, led by MIRC's Brenda Martin, the museum's curator, secured funding to develop a programme of public activity on the theme Home Stories within the context of the London: World City Cultural Olympiad project. The museum is the ex-home and studio of the Estonian sculptor, Dora Gordine.

This followed on from the success of an earlier joint research project undertaken between the University's Visual and Material Culture Research Centre (VMCRC) and MIRC, which culminated in the publication of Dora Gordine: Sculptor, Artist, Designer, co-written by VMCRC's Dr Jonathan Black and Professor Fran

Brenda Martin and Professor Penny Sparke. This led to the first major retrospective of Dora Gordine's work, held in Kingston in 2009, which was accompanied by a programme of talks, seminars, workshops and community events. Funded by a Heritage Lottery Grant (£46,000) and the Paul Mellon Centre for British Art Research (£996), the exhibition attracted 5,600 visitors over three months.

MIRC's research also reaches audiences worldwide through public lectures, popular publications and television and radio broadcasts. These have recently included contributions to the BBC4 season, The Age of Glamour, and the book that accompanied the five-part series, The Genius of Design, broadcast on BBC2.

Sharing knowledge with industry

In 2008, Artex Ltd - a company specialising in the production of decorative plaster approached MIRC for help in re-launching its range of historically inspired decorative plaster cove and ceiling roses.

MIRC worked with Artex to date its original moulds and to identify the periods and styles that informed its designs. Artex then used this research to develop new, consumer-oriented packaging for its heritage range and to train its sales force, giving them the knowledge necessary to be able to advise consumers.

MIRC's director has also collaborated with Sony Europe, leading a discussion about the past and future of the living room in relation to the role played within it by television sets and its deputy director has



orations and practice Collaborations

Applying research: partnerships and collaborations, practice-based and profession-oriented research

Kingston University is involved in strategic partnerships and collaborations that support and enhance its research and knowledge exchange activities. Researchers share their expertise in innovative ways, ensuring that the knowledge they create is relevant. Often involving multidisciplinary research teams, the University provides new resources and insights, which, in turn, inform teaching and training activities and offer commercial opportunities. Some recent and ongoing collaborations and examples of the ways in which the University's experts are drawing from, and influencing, practice and the professions are outlined in the following pages.

The Rose Theatre

he opening of the Rose Theatre in Kingston upon Thames in 2008 provided a major boost for the potential for research at Kingston University. The University supported the project to build the theatre, both financially and through staff involvement, and has since continued to collaborate with the Rose.

The internationally renowned theatre director Sir Peter Hall, who is Director Emeritus of the Rose, is also Chancellor of the University, and the theatre's Artistic Director Stephen Unwin is a visiting professor at the University.

Our research collaborations in drama, dance and performance with the Rose have already generated enormous benefit to the University, the theatre and the local community, in terms of both cultural policy and quality of life. An advisory body is exploring the possibility of setting up a performance research centre based at the theatre, and discussions continue about forming a West London theatre hub. This will include the Rose, Orange Tree and Richmond, Wimbledon, Lyric and Hammersmith theatres, as well as Tara Studio, Battersea Arts Centre and other venues. The hub will be based at the Rose.

The theatre offers a formidable research facility, with two studios alongside a main space based on the late 17th century Rose Theatre. One studio is a dedicated postgraduate space, used by the Drama Department for its masters courses in Classical Theatre, Playwriting and Devising for Performance. Students from the MA Classical Theatre took part in a recent Rose production of Miss Julie and will appear in the Rose production of A Midsummer Night's Dream. The other studio hosts an expanding programme of regular research seminars and workshops for internal and external audiences.

Within the Drama Department, Croatian academic and dramaturge Marin Blazevic recently spent ten days working on an intensive research development project with researchers Jackie Smart and Dr Alex Mermikides. The project builds on Mermikides and Smart's research into roles and interrelationships in devising processes.



Students on the MA Playwriting participated in the project, which culminated in a public presentation.

Also in the Drama Department, Adam Ainsworth and Trish Reid are organising a symposium on pantomime at the theatre, in discussion with Suzie McKenna, director of pantomimes at the Hackney Empire. The workshop will culminate in a showing in the Rose at a gathering of the Theatre and Performance Research Association.

Lives conference

The University's Centre for Life Narratives held its international conference, 'Performing Lives' (2009) at the Rose. A highlight of the conference was the launch of the University's Sheridan Morley Archive, which preserves the books and papers of the influential theatre critic for research.



Kingston University has undertaken a number of successful collaborative projects with Historic Royal Palaces, a charity responsible for the Tower of London, the Banqueting House, Kensington Palace,

Kew Palace and also Hampton Court Palace, which

is located close to Kingston upon Thames.

Royal connections

Recently, researchers helped to update Hampton Court's presentations on King Henry VIII as part of the celebrations of the 500th anniversary of his accession to the throne in 1509. Their work helped to increase the numbers of visitors to the Palace and consequently its income.

n 2006, Kingston University was awarded funding for a three-year Knowledge Transfer Partnership (KTP) by the Arts and Humanities Research Council (AHRC) to employ KTP Associate Susannah Lipscombe as a research curator based at Hampton Court Palace. Susannah's research drew on literary historian Professor Thomas Betteridge's research on the Tudor court, and was supervised by Senior Lecturer in English Literature Erica Longfellow, both of whom have worked closely with the Palace.

The KTP project aimed to redesign the way that visitors experience the Tudor sections of Hampton Court. The new interpretation was titled 'Henry VIII: Heads and Hearts'. Lipscombe wrote text for a range of media to immerse visitors in

publications, audio guides, a website and a Twitter feed, 'I am Henry VIII'. She also designed new visitor costumes and Tudorinspired warders' uniforms, and briefed staff and volunteers on the latest research findings. For example, she explained how the Privy Council worked, who was present and what they discussed, which enabled the Council Chamber to be opened to the public (for the first time) with an innovative multimedia display that immerses visitors in key debates of the time.

Henry's world, and included displays,

In addition, Lipscombe implemented a strategy to build links with the research community. She set up an interdisciplinary Research Advisory Panel and organised a successful conference on Henry VIII, cosponsored by the University, and a series of public talks. She published a book, 1536: The year that changed Henry VIII; is coediting Henry VIII and the Tudor Court with Betteridge, and wrote a paper on her experience of bringing history to the public for The Public Historian.

These initiatives contributed to a significant increase in Hampton Court's income. Between April and September 2009, there were an additional 115,287 visitors to the palace, up 43 per cent on the same period in the previous year, compared with a 12.8 per cent increase in visitors to other comparable attractions. Importantly. the number of domestic visitors increased sharply; local and domestic repeat visitors are considered crucial for community engagement and stabilising income

Dr Lucy Worsley, Chief Curator for Historic Royal Palaces, said the innovative KTP with Kingston University, and the resulting exhibition, had been "...a huge success economically and culturally. It has helped to boost our visitor numbers to the highest level for a decade, and that income is crucial to ensuring Hampton Court Palace is looked after and kept open for people all over the world to visit."

The project was funded by the AHRC for £170,502. ◆

r Julia Parker recently completed an AHRC-funded collaborative

doctoral research project which revealed the fascinating history of Hampton Court Palace's first 100 years as a visitor attraction.

From 1838–1938, Hampton Court Palace was transformed from a building in which to present the paintings of the royal collection into a historic environment in its own right. Parker's thesis, 'Reinvention and continuity in the making of an historic visitor attraction: control, access and display at Hampton Court Palace. 1838–1938', enhanced understanding not just of the Palace, but also of historical and contemporary discourses of heritage, architectural conservation, preservation, display and museology.

This research has enabled Hampton Court to become more aware of its curatorial practice and to determine how best to present the Palace as visitors' needs change. The project also strengthened the University's partnership with Hampton Court, increased staff expertise, and provided a model for future collaborative doctoral projects.

Parker was attached to the curatorial team at Hampton Court and supervised by Dr Trevor Keeble, an associate director of the Modern Interiors Research Centre (MIRC): Professor Fran Lloyd, Director of the Visual and Material Culture Research Centre (VMCRC); and Dr Lucy Worsley, Chief Curator of Historic Royal Palaces.

The project was funded by the AHRC (£57,489). ◆

Behind the scenes at the Natural History Museum

Museum staff build up a personal body of information during the course of their work. Their knowledge of collection development, methodologies, history, exhibitions and staffing constitute an important cultural resource. Over a period of five years, 24 staff are retiring from the Natural History Museum, taking with them 775 years of experience. Many of these staff are world leaders in their scientific fields. Their knowledge is of huge importance to many disciplines yet the Museum had no sustained programme to capture their knowledge and experience. The 'Museum Lives' collaboration aims to rectify this.



Professor Brian Cathcart, principal investigate

n a three-year partnership with the Museum, a team from Kingston University's Faculty of Arts and Social Sciences, led by Professor Brian Cathcart, is recording the memories and experiences of curators, collectors and other specialists. It will produce a detailed historical record and create multimedia resources for the Museum's exhibitions and education work, which will add new dimensions to the collections and help attract fresh audiences.

The project is creating filmed records relating to 50 Museum staff, as well as short films suitable for educational and exhibition use. The resource will be available on the Museum website and may also be used in public exhibitions, learning programmes and marketing. The material will be available to school and college students, artists, filmmakers, broadcasters, writers and poets.

The Museum's Director of Science
Professor Richard Lane said: "Many of our senior researchers and curators have decades of experience in managing and engaging the public with the national collection of 70 million natural history specimens. This oral history project gives us additional tools with which to preserve this knowledge and share it with a much wider audience. Visitors and the wider public will get a new insight into the life and work of the Natural History Museum in a way they have never been able to before."

The long-term aim is to embed the programme in the Museum's work so that

preservation of knowledge becomes routine. Volunteer oral historians are being trained, staff will receive help in recording their memories and the project will stimulate the recovery of fading knowledge through 'witness seminars'.

'Museum Lives' grew out of the AHRC-funded 'New Perspectives' project which examined ways of encouraging academics in the arts and humanities to make better use of the Museum's resources. Kingston University's Faculty of Arts and Social Sciences and the Faculty of Health and Social Care Sciences had undertaken previous research in oral history methodologies in a project called 'Nurses' Voices' and already had the necessary expertise.

'Museum Lives' is funded by the AHRC (£262,763). •

Giving nurses a voice

Lurses' Voices' captures the history of St George's Hospital in London from the perspective of its nurses. More than 130 interviews and 1,000 hours of recordings were generated for the project, featuring nurses and midwives who trained or worked at St George's from around 1930 to the present day.

The project was run by the Faculty of Health and Social Care Sciences. By asking



pertinent questions and recording personal experiences, it captures a richness of personal experience that cannot be gained from written records. Interviewees were asked questions such as: How did it feel to work in healthcare at the introduction of the National Health Service? Which clinical practices were undertaken before the

general availability of antibiotics, in the early days of cardiac surgery and pacemakers, and as the brain scanner was being developed at Atkinson Morley's Hospital? What were the people like to work with?

The original team was subsequently commissioned to work with the Florence Nightingale Museum to create 'Hospital

Voices', an oral history archive of the memories and experiences of nurses and patients at London's Guy's and St Thomas' Hospital from 1930. The team have also worked with the League of St Bartholomew's Nurses to create an oral history archive from which a celebratory DVD of the nurses' memories has been created.

The Dorich House Group

The Dorich House Group of European Universities was established in 2008, following an initiative by Kingston University to encourage researchers with similar interests to develop joint projects, maximise international research activity and share expertise.

The consortium of seven universities includes Carl von Ossietzky Universität in Oldenburg, Istanbul Bilgi University, Mykolas Romeris University in Vilnius, Universidad de Cádiz, Université Jean Moulin Lyon 3, Université Lumière Lyon 2, and Kingston University.

The initiative is already seeing significant activity. In 2009, three groups began collaborative multidisciplinary research in three fields: the ageing population, sustainable development, and migration and transculturalism. The last led to a joint bid for European funding, and the other two are moving in that direction.

The same partners are also collaborating on a European Science Networking Programme, 'Islam and Nationalism in Europe and the Muslim World', funded for €672,000. ◆

London Remade

ondon Remade advocates recycling as a catalyst for economic, environmental and social regeneration. Kingston University doctoral student Rosie Hornbuckle collaborated with the company on a project entitled 'Design and the Material Cycle: an investigation of secondary material use in design practice'. This was supervised by Dr Paul Micklethwaite, Senior Research Fellow in the Design Research Centre (DRC). Funded by an AHRC Collaborative Doctoral Award (£57,500), the aim was to create new models for utilising surplus and waste resources in the design of manufactured products.

The project built on two earlier collaborations with London Remade, which resulted in a programme called 'Inspired Recycling', which supported the design and development of innovative products using recycled materials. The project was led by Micklethwaite and

Professor Mukesh Limbachiya of the Sustainable Technology Research Centre (STRC) was also funded by London Remade to work on two technical reports: Construction and Demolition Waste (£130,000) and Feasibility of Using Lightweight Insulation Aggregate-Hasopor; Produced from Waste Glass (£10,250). •

Dynamic mechanical performance of polymer foams

The University's Materials Research Centre is working with Zotefoams plc, a world leader in the manufacture of speciality foam materials, to develop a



clearer understanding of the dynamic performance of cellular polymeric foams.

Zotefoams' products are used in markets ranging from sports and leisure, to

> packaging, transport, healthcare, toys, buildings, the marine industry and the military. The company has developed a unique process using nitrogen gas as a physical blowing agent which is dissolved into the polymer at high pressure and temperature. This minimises properties and performance.

Evolving from a previous collaboration, the latest project involves three

members of staff – Dr Homayoun Hadavinia, Valerie Morris and Professor Peter Foot – supervising PhD student Vanessa Izzard's work on experimental and numerical modelling to characterise the dynamic performance of these newly developed foams.

'Dynamic Mechanical Performance of Polymer Foams' is funded jointly by the Engineering and Physical Sciences Research Council (£60,864) and Zotefoams (£24.000) over three years. The project's findings will be used by Zotefoams to improve their products, to impurities while maximising its widen industrial applications of these foams, and for academic research. Making the most efficient and effective use possible of the materials will also have an economic impact. •

Practice-based and profession-oriented research

Kingston University is committed to breaking down the barriers between researchers and practitioners. Our researchers work closely with practitioners and professional organisations to develop and share knowledge, and to see the practical results of their research. Many researchers are also practitioners in their own right, which enables them to stay at the forefront of their field and opens up further opportunities for engagement with outside organisations.

Practice-based research in the creative industries

Design

The recycling of materials attracts everincreasing interest from research and business. 'Creative Resource' is a practicebased research project developed by the University's Design Research Centre (DRC) which is providing essential information to the industry. Led by Jakki Dehn, a Reader in the Centre and an internationally recognised specialist in recycled and sustainable materials, 'Creative Resource' provides an opportunity for designers and others to work with ecologically sound materials.

The project initially received AHRC funding (£230,000) and has evolved into an international travelling exhibition, which offers a single point of reference for professional designers, material specifiers and the general public. In 2009, the exhibition was shown at ECOBUILD, the world's largest exhibition for sustainable design, construction and the built environment. •

Shanghai's famous Caoyang Square was built at the beginning of Chinese communism as a utopian vision of urban communal living. In April 2009, it became the focus of a unique public art collaboration between Kingston's Contemporary Art Research Centre (CARC) and Shanghai University.

The initiative evolved from previous work between the Chinese university and Louis Nixon, Head of Kingston's School of Fine

Art and member of CARC. As part of the Shanghai Expo 2010, staff and students from both universities worked with local people and businesses to revive the square through performance, documentary, sculpture and cinema through a project titled 'Come On'. The project concluded with a conference at Shanghai's renowned M50 complex, exploring community significance in urban development and public art development in the UK.



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Music

The University's composers have generated performances of their work at prestigious venues including the South Bank Centre; Huddersfield Contemporary Music Festival; RADAR festival, Mexico, and the Cannes Film Festival.

Music researcher Dr Paul Archbold's compositions feature acoustic instruments and live electronics, and have been performed by leading contemporary musicians and broadcast around the world. A recent audio-video research documentary, *Multiphonics and the Oboe*, has been published on the new 'Practice-as-Research in Music Online' (PRIMO) resource hosted by the Institute of Musical Research, University of London. Archbold has also received a commission for a new string quartet from the Arditti Quartet for 2011.

The University has strong relationships with the music profession through its visiting professor, the soprano Dr Jane Manning

OBE, and the world-famous record producer Youth (Martin Glover). It also has important collaborations with artists such as the Arditti Quartet, Delta Sax Quartet, Light Surgeons, Fibonacci Sequence, and 10/10.

Within music, intermedia research is an area of growing interest, particularly through collaborations between electro-acoustic composition and film and dance, and these partnerships will be central to the University's developing research group in contemporary creative practice.

Creative writing

Academy Award-nominated filmmaker
Hanif Kureishi CBE made his name as a
playwright, screenwriter and novelist,
achieving international recognition for
work including the screenplay for the film
My Beautiful Launderette and the novel
The Buddha of Suburbia. He is a research
associate and writer-in-residence at
Kingston's Centre for Life Narratives (CLN).

The Centre focuses on life writing and is a multidisciplinary hub for researchers in the fields of English, life sciences, history, media and cultural studies, journalism and sociology. Its connections with industry and heritage, including theatres, museums, filmmakers and human rights organisations, offer unique opportunities for the development of interdisciplinary projects.

Informing professional practice

Surveying

Professor Sarah Sayce is the Director of the Real Estate Research Centre (RERC) and a qualified chartered surveyor. Her experience in commercial practice and contact with the profession keeps the work of RERC in touch with professional practice.

Recently, Sayce has focused on the impact of the new sustainability agenda on commercial property valuation and management. In 2009, she led a project funded by the Department of Communities and Local Government (£34,000) that investigated the use of back gardens for housing development – a practice known as 'garden grabbing'. The research provided the government with data and analysis with which to review its local and national planning policies. •



Health and social care

Much of the research undertaken in the joint (Kingston University/St George's, University of London) Faculty of Health and Social Care Sciences addresses the understanding and practice of health professions, with a particular interest in professionalism and professional ethics.

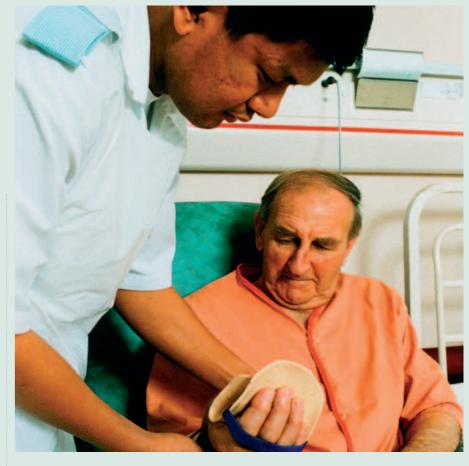
The late Professor Paul Wainwright and Dr Ann Gallagher have carried out extensive work on the concept of dignity and how it can be undermined and enhanced in professional practice.

As part of the Royal College of Nursing's (RCN) Dignity Campaign, the researchers (with Dr Lesley Baillie of South Bank University) investigated RCN members' attitudes to, and experiences of, dignity in care. Their resulting report has been influential across the sector, and has informed the development of educational materials produced and used by practitioners in the NHS and the private sector. An evaluation of the impact of the campaign suggested that these materials facilitated dignifying and innovative practices. These improvements included practitioners making dining areas in care homes feel more like restaurants, and replacing paper bibs with linen clothes protectors; providing privacy signs and pegs for curtains around hospital beds; and rewarding staff for delivering dignifying care.

The social work profession has received significant scrutiny in response to some high-profile cases and a national drive to improve standards.

Hilary Tompsett, Head of the School of Social Work, is a qualified and registered social worker and Vice-Chair of the General Social Care Council (GSCC). Her research interests include interprofessional practice and power and authority in professional practice. In 2006–09, she led a government-commissioned project on conflicts of interest for GPs when safeguarding children (£125,000).

Tompsett has contributed to national strategic government working parties and also presented evidence to the House of Commons Select Committee on social work



training for professionals working with children and families. She is currently chair of the education working group for the National Social Work Reform Board.

Engineering

Several of the University's engineering research projects are helping industry to rethink construction practices.

Professor Mukesh Limbachiya, Director of the Sustainable Technology Research Centre, took the lead in a project funded by the Engineering and Physical Sciences Research Council examining the behaviour and design of products made from the environmentally friendly, high-performance building material, Aircrete. Project partners

included the National House-Building Council and the Aircrete Products Association. The resulting data has enabled designers to offer more economic and sustainable solutions to meet the UK's structural and thermal requirements.

Education

Engagement with practice is central to many of the University's postgraduate research programmes. A notable example is the innovative part-time Professional Doctorate in Education (EdD), offered jointly with Roehampton University. A substantial component in the programme addresses the skills and training needed for professional practice in the field.



Cross-cutting research themes

Kingston University takes a multidisciplinary approach to much of its research. By encouraging an open and collective research ethos, it has drawn together a breadth of expertise that sheds novel perspectives on a range of issues. Some of the multidisciplinary approaches that University researchers are taking to real-world problems are featured in the following pages.

The ageing population

As the population of the UK grows older, it is becoming increasingly important to address the impact of an ageing population on healthcare and other public services. Researchers at Kingston University are involved in projects associated with ageing, including stroke, dementia, diabetes and social care.



Helping people to cope with stroke

Stroke is the third biggest cause of death in the UK and the largest single cause of severe disability. The ageing of the UK population may lead to an increased incidence of stroke in coming vears. Researchers in the Faculty of **Health and Social Care Sciences have** been exploring how to support stroke survivors and their carers.

Supporting life after stroke

ver a number of years, Dr Fiona Jones, Reader in Rehabilitation based in the joint Faculty of Health and Social Care Sciences, has developed an award-winning self-management programme for people living with stroke. The programme was

formally launched in 2010 under the name 'Bridges: stroke self-management', and has a dedicated research group within the

The programme is a complex intervention with several additional strands of research.



Supported by PhD students, Jones is exploring practice change in stroke care and the barriers and enablers to selfmanagement and participation after stroke. She is also working with Royal Holloway, University of London, on the psychometric analysis of her stroke self-efficacy questionnaire, which measures confidence in areas relating to life after stroke.

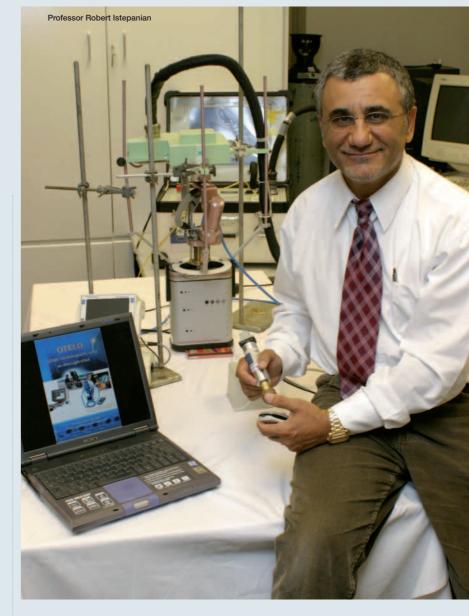
'Bridges' has achieved national and international recognition. Today, more than 30 stroke teams across the UK have integrated the programme into their current practice. A pilot randomised controlled trial in Belfast found the programme to be feasible and acceptable to patients, carers and clinicians, and findings will inform the next stage of research, which will involve trialling multiple centres. The programme was named as one of the UK Stroke Improvement Plans, making it a priority project in 2010.

In 2009, Jones received the 'Life after Stroke' award for excellence in stroke care from the Stroke Association.

Supporting the carers

Over the last four years, Nan Greenwood, Senior Research Fellow, and Ann Mackenzie, Professor of Gerontological Nursing, have been researching the impact of caring on informal or family carers of stroke survivors. By raising awareness of the possible impact of caring and the carers' responses to their situations, they hope that support from services for these carers will improve and that, eventually, this should lead to more successful interventions with stroke carers.

Their work has included three systematic reviews of the literature, the latest of which highlighted the 'biographical disruption' of stroke caring that comes with changes in relationships and identity and loss of autonomy. Their most recent study was funded by the Royal College of General Practitioners (£1,864). It investigated what informal carers of stroke survivors would like from primary care and their opinions of the report New Deal for Carers. •



Taking a mobile approach to healthcare

Kingston University's Robert Istepanian is Professor of Data Communications and the founding director of the Mobile Information and Network Technologies Research Centre (MINT) at the University. His world-leading research focuses on the use of emerging mobile and network technologies for healthcare application.

Istepanian's recent work includes a study of UK and Canadian perspectives on the use of emerging wireless and network technologies in managing chronic diseases that particularly affect elderly people: stroke, diabetes and congestive heart failure. His research with the University of Toronto and Toronto General Hospital and their global e-health innovation centre has the potential to enable patients to monitor their health and personalise their care using mobile phone technologies. The project was funded by the Leverhulme Trust (£20,997).

The study followed previous clinical trials with St George's, University of London and the NHS Trust on mobile diabetes management, which were funded by Motorola, USA. More recently, the British Council Development Partnerships in Higher Education (DelPHIE) programme provided £72,000 for a project to enhance e-health services in Iraq, and the Council for Assisting Refugee Academics provided £24,000 to fund research on mobile diabetes management in Iraq.

Istepanian's paper, 'M-Health: Beyond Seamless Mobility' published in the leading iournal IEEE Transaction on Information Technologies, is the world's most frequently cited paper on mobile health care and it received the Institute of Electrical and Electronics Engineers' Engineering (IEEE) in Medicine's award for 'best paper'. His current research includes investigating 4G technologies for healthcare and medical applications. •

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The ageing population 31

Helping people to deal with dementia

As the UK population ages, the incidence of dementia continues to increase. Around 820,000 people currently suffer from dementia, according to the Alzheimer's Research Trust. The syndrome is most common in people over 65: one in 20 people over 65 and one in five people over 80 have a form of dementia. Dementia currently costs the UK economy £23 billion per year: more than cancer and heart disease combined.

Dementia is a syndrome associated with an ongoing decline of the brain and its abilities. It can affect the sufferer's ability to think, remember, understand, make judgements, use language, control emotion or behave appropriately in social situations.

Kingston University research is offering new insights into good practice in the care of people with dementia.

Incontinence care for people with dementia

Vari Drennan, Professor of Health Policy and Service Delivery in the joint Faculty of Health and Social Care Sciences, has undertaken extensive research in the field of health and social care for older people, with a focus on services outside hospital for people with dementia, and their carers.

Most recently, Drennan led the EVIDEM-C (evidence-based interventions in dementia) team in a research collaboration with University College London on promoting continence and managing incontinence for people with dementia living at home. At present, there is no evidence-based guidance for health professionals or social care staff on how best to support these people. By providing this guidance, Drennan's work has the potential to make a significant difference to the quality of life of people with dementia.

The five-year project is funded by the National Institute for Health Research Programme Grant for Applied Research (£1.9 million, of which £136,972.69 came to the Faculty). ◆

The benefits of design

The design of environments – which includes the choice of building materials and sensory design issues relating to sight, sound and smell – can improve the long-term care environment for people with dementia, their carers and relatives. Design can also make buildings and landscapes easier to navigate, reducing stress and improving people's sense of wellbeing.

Hilary Dalke, Professor of Design, and Director of the Design Research Centre (DRC), recently led a research and product development project called 'Living with Dementia – Can Design Make a Difference?'. The project was funded by the Audi Design Foundation (£30,000) and resulted in an exhibition at the Building Centre in London, supported by Shaw Healthcare.

Disseminating the project findings on sensory design in the exhibition, and in a

research report published in July 2010, and the design of a blueprint for a care home unit, has had a wide impact. This includes informing continuing professional development courses for the London Borough of Tower Hamlets; collaborations with the Glasgow-based design company Graven Images and Steffian Bradley Architects Boston USA; invitations to speak at a World Health Organisation meeting in Helsinki, and at Clerkenwell Design Week for InterfaceFLOR events on colour and sensory design; and an article for New Design magazine.

The results have also contributed to the Design Research Centre's reputation as an internationally recognised centre of excellence with expertise in the areas of colour, lighting and sensory design for special needs environments.



Care home unit design for people with dementia. Six bed unit that is part of a village neighbourhood complex Designers: Hilary Dalke, Alessio Corso; architect and model: Hussen Iqbal

Older people in the community

In a rapidly changing and ageing world, where public services are under increasing strain, it is important that older people remain engaged with the community. Kingston researchers are undertaking work that will help to ensure that older people will be able both to contribute and participate, to maintain their wellbeing and independence.



Sustainable living and older people

Older people have often accumulated considerable experience of living sustainably, but they may not be aware of the latest energy-saving techniques and ways to adapt their homes. Additionally, they may not be aware of the grants and support available to make improvements. These initiatives are not just environmentally beneficial, they also help to tackle fuel poverty.

Dr Yamuna Kaluarachchi, Reader and Deputy Director of the Real Estate Research Centre (RERC), was the principal investigator for a public engagement project, 'Sustainable Living and the Older Community', in partnership with Age Concern, the Energy Saving Trust and Friends of the Elderly.

The project aimed to stimulate interest in sustainable living and engage older people in a public debate over the best way forward for the UK. Participants reported increased awareness of sustainability: many had changed their behaviour, and almost 60 per cent had discussed what they had learned with family, friends or their community.

The project won a highly commended award in the 2009 Green Guardian awards, and reached the final shortlist for the 2010 Sustain Magazine and Green Gown Awards. It was funded by an EPSRC grant of £93,875. ◆

Coping in unfamiliar surroundings

Nigel Walford, Professor of Geographic Information Systems was a coinvestigator on a project called 'Older People's Use of Unfamiliar Spaces' ('OPUS').

The research explored the ways older people use and navigate unfamiliar spaces as pedestrians. It investigated the influences on their ability to cope with such environments and how they might curtail their autonomy and independence, leading to social exclusion. The work also examined how technologies can assist people in adapting to these environments.

OPUS built on the research to develop a prototype Geographical Information

Systems/GPS-based spatial data collection tool to assess the walkability of urban environments.

Project partners included Swansea
University, Anglia Ruskin University and
Middlesex University, with the Welsh
Assembly Government, Colchester Borough
Council, Castleoak Care Partnerships,
Age Concern Cymru, Swansea Network
50+, Swansea U3A, and Clinical Research
Collaboration Cymru.

The project was funded by the UK Research Council's New Dynamics of Ageing Programme, ESRC (£313,979, with £125,282 to Kingston University). ◆

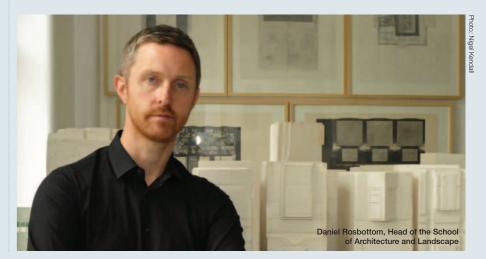
Award-winning housing

aniel Rosbottom, Head of the School of Architecture and Landscape and a practice-based researcher, has won a string of awards for his work with DRDH Architects, where he is a founding director. Most recently, the practice was awarded first place in an international competition to design a social centre with sheltered housing in Aarschot, Belgium. The project was carried out in collaboration with Belgian practice, Architecten de Vylder Vinck Taillieu.

The project integrates housing for the elderly with social spaces for a wider elderly community. These social facilities become

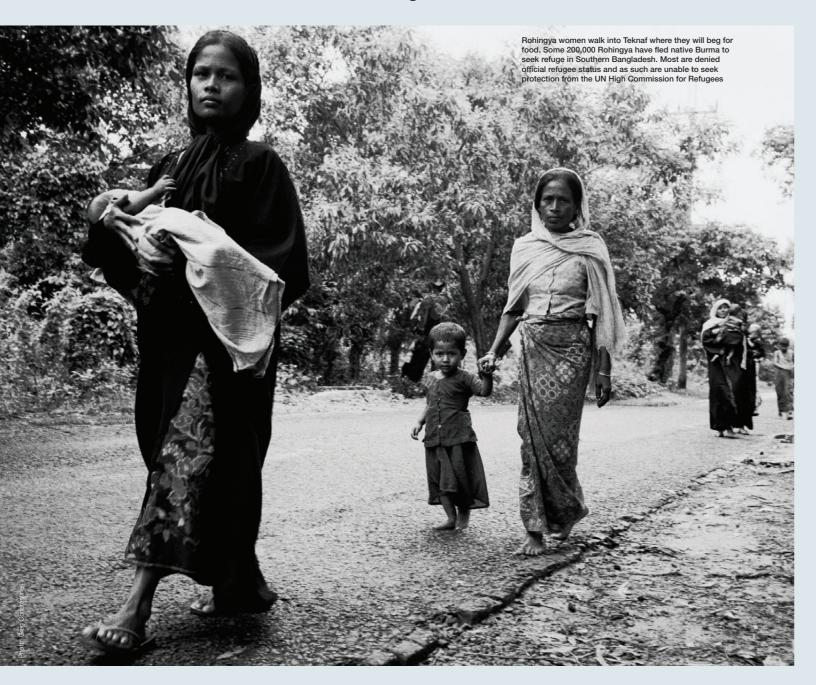
integrated into the public life of the town through their immediate relationship to a new urban square at the end of the town's high street, which accommodates the daily market. The form and arrangement of buildings are in sympathy with the surrounding terraced housing; despite being at a very different scale, it does not seem an alien, institutional presence within the town

The project was commended in the New Aging 2010 Awards, run by the University of Pennsylvania, which commented on the research's focus on integration.



Migration, identity and citizenship

Migration is a complex phenomenon with far-reaching political, economic, social and environmental implications. Researchers at Kingston University have been examining how migration, and European integration, shape people's sense of identity and citizenship, and affect their wellbeing and access to basic human rights.



The implications of statelessness

uropean integration is central to the work of Professor Brad Blitz of the Centre for Earth and Environmental Science Research, who has an international reputation for his work on the challenges of post-conflict integration and the return of refugees. In 2007, he drafted the annual report on the denial and deprivation of citizenship, which was delivered to the UN Human Rights Council by the UN Independent Expert on Minorities. He has also acted as an expert witness in UK courts, and his research reports have been given as evidence on human rights matters and cited in judgements. His recent work, funded by the Rothschild/Ford Foundation, examines statelessness, racism and exclusion in Europe. The findings will appear in Statelessness in the European Union: Displaced, Undocumented and Unwanted, to be published by Cambridge University Press.

Blitz is currently uncovering evidence of the benefits of citizenship as a means of countering human rights violations and social, economic and political instability. He has also been contracted by UNICEF to draft a report on children affected by migration in eight Asian countries, and has been awarded US\$180,000 from the US Department of State, Bureau of Population, Refugees and Migration for a comparative livelihoods study of stateless and formerly stateless people in Bangladesh, Kenya, Slovenia and Sri Lanka.

The welfare of migrants

Dr Eleni Hatzidimitriadou, a researcher in the joint Faculty of Health and Social Care Sciences, has a strong record of international research collaborations and networks in the field of migration, social exclusion and policy development. Her current projects include a qualitative study of how migrant and refugee health and social care professionals make use of their

cultural capital when they are employed in the sector; and a pilot study examining the views, experiences and needs of older Chinese people in relation to mental illness. Both projects are funded by the South West London Academic Network Interprofessional Institute small grants scheme. A further qualitative pilot study exploring the social dimension of mental health problems of migrant young mothers is also being undertaken.

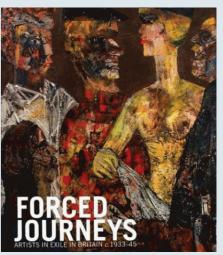
In 2005, Hatzidimitriadou was a partner in a three-year project with German, Canadian and Turkish academics investigating the role of cultural capital in youth migrant transitions into the labour market. The project was funded by the German Volkswagen Foundation.

Currently she is conducting a study with seven European countries on the prevalence, determinants, effects, policies and practices related to domestic violence against women and men in Europe. The consortium was awarded for 30 months by the Executive Agency for Health and Consumers (€999,137), and the UK budget is €177,450. ◆

Helen Bamber Centre

uman rights, conflict analysis and genocide are key areas of research for the members of the University's Helen Bamber Centre for the Study of Rights, Conflict and Mass Violence, led by Professor Philip Spencer.

The multidisciplinary Centre is named in honour of veteran human rights campaigner Helen Bamber, who has devoted her life to the victims of conflicts across the world. It brings together academics, writers, policymakers and activists to analyse the causes, dynamics and effects of abuses and to promote, develop and shape swift and effective public and policy responses.



Forced Journeys cover image: 'Strip Poker' by Austria

Artists in exile

An extraordinary exhibition held in London in 2009 featured the work of 35 émigré/refugee artists who were in exile in Britain during the Second World War.

Forced Journeys: Artists in Exile in Britain c.1933 to 1945 was hosted at the Ben Uri Gallery, the London Jewish Museum of Art. Research emanating from within the University's Visual and Material Culture Research Centre (VAMCRC) and its work on the diasporic practices of émigré artists in Britain contributed to the exhibition. Co-curated by Rachel Dickson and Sarah MacDougall of the Ben Uri Gallery, and developed in conjunction with the Courtauld Institute London, the exhibition included a film interview with the Austrian exiled artist Ernst Eisenmayer which was made by VAMCRC's director Professor Fran Lloyd.

The exhibition was accompanied by a series of talks and a book of the same name, in which Lloyd contributed a chapter on Ernst Eisenmayer, and VAMCRC's post-doctoral research fellow Jonathan Black contributed a chapter on German poster designer Hans Schleger. Black has also recently received an AHRC Fellowship for £168,000 to study the work of sculptor Ivor Roberts-Jones.

In 2010, the exhibition moved to the Sayle Gallery in Douglas, Isle of Man, to mark the 70th anniversary of the opening in May 1940 of the Isle of Man internment camps, and then travelled to the Williamson Art Gallery and Museum in Birkenhead.

A Migration, identity and citizenshi

Protecting the public 35

Memories of Yugoslavia

Professor in English Literature and Creative Writing Vesna Goldsworthy is the author of *Chernobyl Strawberries:* A Memoir, an account of moving between cultures and languages. It builds on research into western perceptions of the Balkans developed in her seminal book *Inventing Ruritania*.

Goldsworthy, a former BBC journalist, adopted an innovative, non-linear approach to narrative, and the memoir has had both academic and popular impact. It is included in university programmes worldwide and has been the subject of two PhDs, several MA dissertations and an EU-funded study. It was a bestseller in several European countries, and the book's ideas reached millions of people through serialisations on BBC Radio 4 and in *The Times* newspaper and other media.

Goldsworthy contributes to British publications such as the *Guardian* newspaper and the *London Review of Books*, and scripts and produces cultural programmes for UK and European radio and television. Last year she devised and presented a programme with the theme of blood in fiction on Swedish TV, and she is writing an episode of BBC Radio 4's *Something Understood*.

She is also the founding director of the Faculty of Arts and Social Science's Centre for Suburban Studies (CSS), pioneering interdisciplinary approaches to the study of suburbia and charting cultural representations of the suburbs in the past and present. The Centre's reputation as one of the most distinctive, non-partisan bodies to comment on suburb-related matters is widely recognised.



Searching for European identities

Dr Atsuko Ichijo is co-ordinating research across nine European countries in an attempt to define what it is to be 'European'. The project is named 'IME', or 'Identities and Modernities in Europe: European and national identity construction programmes, politics, culture, history and religion'.

Ichijo is working with partners in Bulgaria, Croatia, Finland, France, Germany, Greece, Hungary and Turkey. The emerging findings indicate that these countries have more in common than might be expected. The EU's efforts to promote Europe have so far either been non-existent or low-key, and many states remain ambivalent about promoting

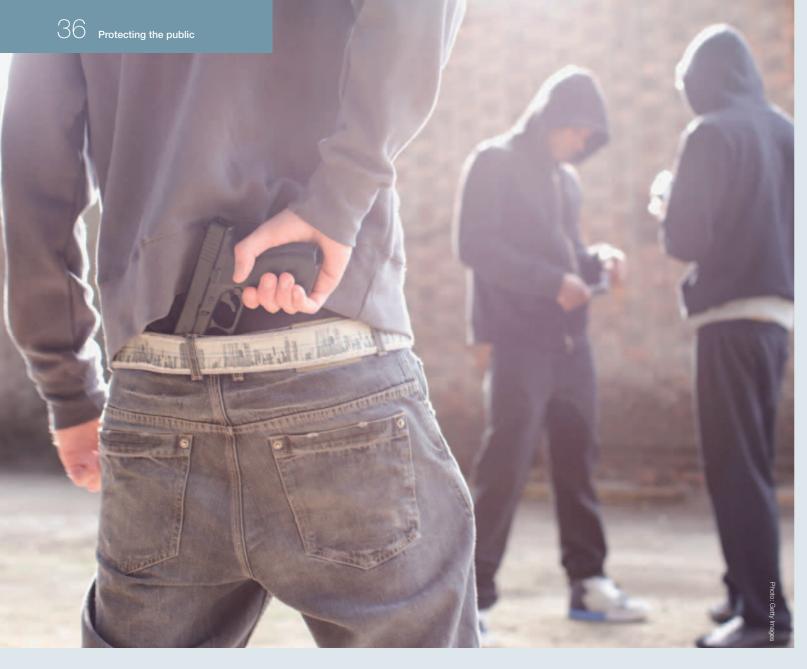
European identities. However, Ichijo says that the economic downturn seems to have changed the way its citizens think of Europe.

Ichijo says: "The project challenges the conventional wisdom that European identities are an elite construction. By finding out what people at grass-roots level feel about being European, our research aims to contribute to policy areas that are involved in identity construction."

The project is funded under the European Commission's Seventh Framework Programme (€1.448 million). Kingston University's share is €302,000. ◆

Protecting the public





Youth justice

Work by Professor of Law Julia Fionda is helping to inform policy and the development of common law, particularly in relation to young people. Fionda's research and writings, including her book Devils and Angels: Youth, Policy and Crime, advocates a minimalist approach to youth justice based on the premise that most young delinquents grow out of criminal behaviour. Fionda has also undertaken research into the impact of Anti-Social Behaviour Orders (ASBOs) and other noncriminal disposals used to prevent youth crime and is investigating the impact of 'civilising' responses to youth crime on both the young offenders themselves and on the youth justice process and the rule

Also from the School of Law, Dr Penny Darbyshire is completing a book reporting several years of research observing the work of judges. She shadowed judges throughout England and Wales, from

district judges to Supreme Court Justices. The research was funded by the Nuffield Foundation (£24,000).

Supporting justice for the vulnerable

rofessor Vari Drennan is exploring how to improve support for vulnerable people who have been victims of crime, and ensure they get a fair hearing within the criminal justice system. The study will build on research by the charity Mind, which showed that people with mental health problems are more likely to be victims than perpetrators of crime. Many experience difficulties in reporting a crime or attending court because of tensions with the police and poor mental health awareness across agencies.

The research is being conducted with Victim Support, Mind, and the Institute of Psychiatry, King's College London. It runs from 2010-2013, with funding from the

Big Lottery Fund and Victim Support (£480,000). •

Safeguarding children

ilary Tompsett, Head of the School of Social Work, was principal investigator for a project funded by the Department for Education and Skills (DfES) and Department of Health (DoH) investigating conflicts of interest for GPs when safeguarding children. The project report, The Child, The Family and the GP, revealed that GPs lacked confidence in social workers and were reluctant to get involved with them, preferring to refer patients to other health professionals first. Social workers, however, expected fuller engagement by GPs in child protection

The research team included senior social work lecturer, Christine Atkins, Dr Ann Gallagher and the late Professor Paul Wainwright. The project was funded by the DfES and the DoH (£125,000). ◆

Drugs and medicine

Medical and life sciences research at Kingston University is supported and developed by the SouthWest London Academic Network (SWan) and in collaboration with national and international partners. Recent studies include cutting-edge work on colorectal cancer, chronic lymphocytic leukaemia, radiology and digital imaging.

Treating colorectal cancer

The treatment of colorectal cancer is the subject of a three-year PhD studentship under principal investigator Dr Helmout Moditahedi, a researcher in Kingston's Biomedical and Pharmaceutical Research Group (BPSRG). In collaboration with St Luke's Cancer Centre, Royal Surrey County Hospital, the project is investigating the roles of cancer stem cells and antiepidermal growth factor receptor (EGFR) family members in the progression of colorectal cancer, and the response to therapeutic interventions. The results are likely to inform the development of new diagnostic tools and more-effective therapeutic approaches to the disease.

The project runs from 2009–2012, funded by the BRIGHT (Better Research into Gastrointestinal Cancer Health and Treatment) charity (£99,462). •





Medical Imaging research at the Digital Imaging

Medical applications of digital imaging

The development of technology in the diagnosis of disease is leading to significant challenges for radiologists. For example, one person's CT (Computerised [Axial] Tomography) scan may generate a thousand images that need to be checked visually; as the number of images increases, the task becomes impossible.

However, work carried out by the Digital Imaging Research Centre, led by Professor Jamshid Dehmeshki, focuses on vascular disease and computer-aided detection (CAD) and measurement (CAM) of lesions in medical images. The CAD research examines the perception processes of human vision in the diagnosis of abnormalities, and develops computational models to describe them. The aim is to increase the radiologist's accuracy - in a previous study, performance of radiologists using CAD improved by up to 20 per cent.

Dehmeshki has been instrumental in designing and developing three families of medical imaging software: Colon CAR (Computer Assisted Reader), Heart Screen, and Lung CAR. These have all received US Food and Drugs Administration (FDA) approval and CE marking, which confirms that they meet EU consumer safety requirements. Dehmeshki has also led the delivery of five medical software products with FDA approval and CE marking, and designed and patented architecture for image processing products with FDA compliance.

Recent work has involved vascular imaging in the areas of pulmonary embolism detection (Brain BA), vessel stenosis quantification (Thoracic TAA), and abdominal aortic aneurysm (AAA) detection/characterisation. The TAA project was partially funded by SWan (£75,000). The project leading to the automation of the accurate measurement of AAA was funded by DTI and Mediar Ltd (£115,000). A CAD

prototype for AAA was demonstrated at RSNA (Radiological Society of North America) 2008. A patent for the technology was granted in February 2010, and a clinical trial will be conducted by Lausanne Hospital and St George's Hospital.

A medical image analysis and visualisation package, which utilises these CAD technologies, was funded by SWan (£29,800). •

A network for public health

Wan was established in 2007 with OHEFCE funding as an innovative alliance between Kingston University, Royal Holloway, University of London and St George's, University of London, focusing primarily on the health, social care, biomedical and life sciences. It provides a collaborative, multidisciplinary research and local support network, linking students and researchers with practitioners and employers to enhance teaching and research opportunities in the UK and overseas. Using virtual learning technologies and innovative research, SWan draws on the complementary strengths of its partners to create new ways of addressing major social and scientific issues.

The academic work of the alliance has been led by the directors of three virtual institutes – the Institute for Biomedical and Life Sciences; the Institute for Leadership and Management in Health; and the Interprofessional Institute (Health and Social Care) - with teams drawn from each of the three founding institutions. •

Protecting the public Supplementary information 30



Doping in sport

With sports doping methods becoming evermore sophisticated, two Kingston scientists have led a team to monitor whether the use of anabolic steroids can be reliably detected at extremely low concentrations in hair samples.

Professors Declan Naughton and Andrea Petroczi from the School of Life Sciences found that, for dope testing, hair is tamperresistant, provides more time for detection, is easy to collect and store, and presents a reduced biohazard. In a related study, the scientists also found evidence that selfreported data commonly used in social science research of doping was likely to be

questionable. This was because respondents were consistently likely to manipulate their answers in order to maintain the image they wished to project.

The research programme began in 2008, emerging from behavioural research. It is funded by several sources including three grants from the World Anti-Doping Agency amounting to some £70,000. The collaborative programme includes universities in the UK, Hungary and Australia.

Searching for a leukaemia vaccine

hronic lymphocytic leukaemia (CLL) is Uthe most common form of leukaemia

in the western world. The disease normally progresses slowly but remains incurable.

Professor Andy Jewell and partners at Harrington Cancer Center, Amarillo, Texas, have investigated exploiting the immune system to develop a vaccine-style

The research team managed to identify a marker (SEMG1) in patients with CLL, which was specific for CLL but would not cross-react with normal cells. SEMG1 is normally found in semen, but they have shown that it is also expressed by CLL cells (and not by normal cells) in about half of patients. Some patients with CLL also make antibodies against SEMG1, showing that it is a susceptible target for the immune system and therefore for a

This work was supported by grants from the National Institutes of Health and the National Cancer Institute (£90,000).

Public safety

Reducing risk from radioactive gas | courses on radon detection, legislation

Radon is a naturally occurring radioactive gas that occurs as uranium decays in rocks and soils. It is harmless in the open but can become dangerous in enclosed spaces such as homes or caves.

Professor Gavin Gillmore, member of the Centre for Earth and Environmental Science Research, is an internationally renowned expert in radon and health in the natural and built environment. He has developed KUMicro (Radon), a Health Protection Agency-validated commercial laboratory in the University, which provides indoor radon measurements for homes and workplaces.

Gillmore is also a director of the Radon Council, an independent non-profit selfregulatory body for the UK remediation industry. Its formation was welcomed in the interim report of the Parliamentary Select Committee on Indoor Pollution, which called upon industry to provide a solution to the radon problem. Through the have responded by developing a computer Radon Council, Gillmore provides training

and treatment.

Gillmore has also contributed to the NHS research and development programme on reducing radiation risk. His research led to the confirmation of synchronicity between radon, tides and earthquakes. With international partners, he is working on a four-year project, 'Radon, Health and Natural Hazards (IGCP Project 571)', which aims to develop a scientific network to change policy and practice on radon measurement and remediation around the world.

The project runs from 2009–2014 and is funded by UNESCO and the International Union of Geological Sciences (\$20,000).

Transporting food safely

Population growth and the urbanisation of developing countries have led to growing concerns about food safety. Researchers at the School of Life Sciences programme to analyse trends in food

alerts. The programme analyses patterns of traffic in faulty foods and highlights countries that detect faulty foods, as well as those with the worst safety records.

The research is led by Professors Declan Naughton and Andrea Petroczi. Naughton is Director of the University's Biomedical and Pharmaceutical Sciences Research Group – an interdisciplinary group enhancing the knowledge of diseases in humans and animals and applying a molecular understanding to these processes and their treatment. He is also Chairman of the External Review Working Group of the European Food Safety Authority and sits on the National Measurement System Government Chemist Working Group.

The research began in 2007, funded by sources including the Kingston University Research Development fund (£19,500). The collaborative project involves colleagues from the Laboratory of the Government Chemist and Hampshire County Council. •

Supplementary information

This section acknowledges the achievements of more Kingston researchers who have made valuable contributions to knowledge and scholarly activity in their fields, and who have secured large research grants.

Over the past two years, the University has appointed a number of new readers and professors to enhance its burgeoning research culture and the level of research excellence within the University.

Further research grants

Engineering and Physical Sciences
Research Council

Dr Ruth Rettie: 'CHARM': Digital technology – shaping consumer behaviour by informing 'normal' practice (£453,823)

Joint project with the University of the West of England and Swansea; total value £920,134

HARM is a three-year project that aims to develop, evaluate and understand the ways in which digital technology can be used to encourage more-sustainable behaviour by informing people and challenging 'normal' practice. It involves three studies: electricity consumption, active lifestyle, and Facebook. The studies have been chosen for their diversity, their relevance to current social concerns, and the challenges they present both in terms of intrinsic motivation and digital technology.

In each study, CHARM will provide a detailed understanding of conceptions of 'normal' practices, their amenability to change and the ways in which they can be shaped by social group feedback.

Engineering and Physical Sciences
Research Council

Dr Jian Wang: 'DRONE': Design tool for cost-effective reduction of noise from enclosed power generators (£320,287)

his project aims to develop and deliver an analysis-driven design tool for the UK-based power-generation industry. Generators are used to provide electricity back-up for a range of uses, from homes to hospitals, factories and airports, including aircraft ground start units, and are renowned for being noisy. Noise reduction is important for the environment, and for complying with noise emission legislation: employees should be exposed to a maximum average noise level of no more than 80dB, averaged over a working day or week. Noise reduction will make generators more pleasant to use and less bothersome for people nearby.

This project will develop a multidisciplinary tool to aid the design and development of diesel power generators. It will help manufacturers to predict noise and sound levels and will also take into account the

cost-effectiveness of the new designs and technologies.

Kingston University is working with leading manufacturers and professionals in this area, and is enabling the effective transfer of knowledge between an academic institution and industry.

Economic and Social Research

Professor Katie Truss: 'Bilateral Ireland': Knowledge-intensive firms in the UK and Ireland: influences, strategies and skills (£158,582)

Joint project with Dublin City University, which received €171,000 from the Irish Research Council for the Humanities and Social Sciences

This study explored the impact of industrial policy, labour market regulation, and firm strategies and practices on skills and broader employee outcomes in knowledge-intensive firms in the UK and Ireland

The UK and Ireland have historically adopted divergent approaches to industrial

policy, potentially leading to different outcomes for both the firm and the individual in terms of skills, productivity, wellbeing and performance. Prior research in this area has been limited. Given the growth of employment in the sector in both economies, the study will examine important questions about the workforce in this sector.

Phase 1 of the project comprised 25 interviews with policy-makers and industry representatives. Phase 2 comprised 16 case studies in the UK and Ireland, with a dataset of almost 800 questionnaires and 200 interviews. Phase 3 is a broader industry survey, which has yielded around 200 questionnaires from a wider sample of companies across both sectors.

Several conference papers have already been presented, two journal articles are under review, two reports and further journal articles are in preparation, and a workshop is being organised for practitioners.

European Commission Seventh Framework Programme

Dr Christos Politis: 'PEACE': IP-based emergency application and services for next-generation networks (€2.65 million from 2009–2012 – Kingston University's share is €335,000)

Kingston University is a partner in a European consortium, the PEACE project, which includes French electronics company Thales (which supplies equipment to the Ministry of Defence), and the Spanish telecoms operator Telefónica.

Extreme emergencies, such as the London bombings of July 2005 and the massive forest fires in Europe in 2008, exposed the vulnerabilities of communications technologies. The PEACE project is addressing the challenge of providing an IP-based communication solution for emergency services within the context of next-generation networks.

For daily emergency services, PEACE proposals include solutions for handling emergency calls, prioritising calls,

interacting with legacy systems, supporting disabled users, and controlling congestion. In extreme emergencies the project also introduces an innovative, secure, ad-hoc multimedia communication framework, and novel protocols and secure mechanisms for emergency Mobile Ad-hoc NETworking (eMANET). Features include a secure peer-to-peer overlay mechanism, lightweight trust establishment, an intrusion detection feature, and a hybrid adaptive energy-efficient routing protocol.

European Commission Seventh Framework Programme

Professor Tao Zhang: 'ADVANCE-FSP': Large scale production of tailored nano-oxides by advanced high-output, high-versatility flame spray pyrolisis (£177,000)

Nano-sized ceramic particles with high purity have many potential industrial applications, such as catalysts and optical windows, but no process is available to produce these materials at low cost on a large scale. Among all the techniques available, flame spray pyrolysis (FSP) is a most promising process, capable of producing mixed ceramic nano-particles directly from low-cost precursors. However, the current research is limited to laboratories where the production rate is less than 100g/hour with very low efficiency. This has restricted the scale-up of production.

Led by Professor Zhang, team members Dr George Simpson and Dr Yufeng Yao will carry out computer simulation and experimental tests to study the theory for particle formation and design, and will construct an industrial production line to produce nano-particles at a production rate of 5kg/hour. The theory and technique this develops will enable manufacturers to produce industrial equipment for large-scale production.

The project is a collaborative project supported by FP7 NMP with 12 partners from six European countries; total value £2.7 million. ◆

National Institute for Health Research, Service Delivery and Organisation Programme

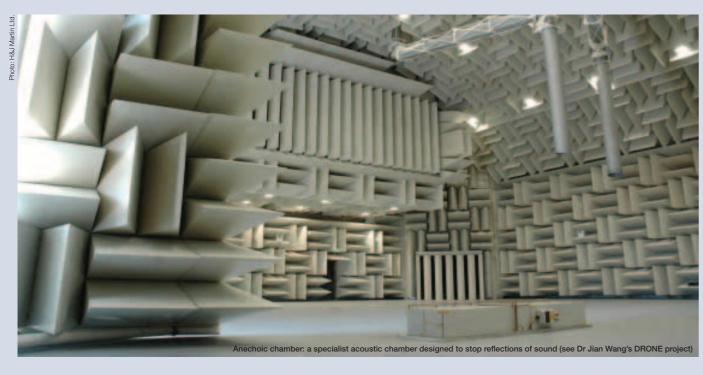
Professor Christine Edwards: 'ENFORM': Explaining health managers' information-seeking behaviour and use (£315,286)

While the concept of evidence-based practice is well established in medicine, we know very little about health service managers' use of information or evidence in decision-making. This project is designed to fill that gap and to identify both the barriers that prevent managers from making better use of information and the factors that facilitate them doing so.

Change management projects in four NHS Trusts (two acute, one mental health and one primary care), and a national survey, are being used to explore when and how managers decide they need information, where they look for it, how they evaluate it and how they use it. The project also investigates the role of knowledge 'intermediaries' such as librarians, knowledge managers, consultants and trainers. The researchers are using traditional methods for management research (in-depth interviews and questionnaires), and a relatively novel technique (q-methodology) to get realistic data about people's attitudes and opinions.

The research team has expertise in management research and health, and includes members from Kingston Business School; Faculty of Health and Social Care Sciences; St George's, University of London; University College London; and the University of East Anglia.

The relevance of the research to management practice and service users has been ensured by a further £61,000 award for a National Institute for Health Research Service Delivery and Organisation management fellow – a manager seconded to the research team from an NHS trust. There will also be a user panel, whose members are involved in every stage of the study. The results will feed into health managers' education and training and, more generally, provide guidance in better practices for those using and supplying information. •



Supplementary information 43

Further Knowledge Transfer grants

The Knowledge Transfer Partnerships (KTP) scheme is a Technology Strategy Board business support programme that helps companies access university knowledge, expertise and resources for strategic projects.

KBC Advanced Technologies plc

Dr Chris Reade, with Dr Walter Skok (£121,729)

BC is a global, independent consultancy to the energy and process industries, with offices in Surrey, Singapore and the USA. The company assists clients in improving operational performance, environmental practices and investment strategies.

The KTP project aims to develop a strategy to improve the management of the company's organisational knowledge. This will address the need for excellent communication structures; the provision of an accessible and user-friendly information repository; the development of a knowledge-sharing culture; and the need for interchangeable systems, allowing for the transfer of project information and knowledge worldwide. •

Salvation Army

Dr Martha Mador (£115,367)

The Salvation Army, the UK's largest independent provider of social care, works with people who need support, including homeless, elderly and vulnerable people. It wanted to develop and deliver new ideas for alternative education programmes for young people, helping them redefine their aspirations, get back on track and return to training or education.

KTP Associate Ben Walford undertook research to develop a social inclusion strategy. Under the guidance of Dr Martha Mador, Head of Enterprise Education at Kingston University, he helped draw up a framework for a six-week pilot programme. Participants were asked to plan and run a micro-business - an activity which involved

the teenagers learning effective teamworking and goal setting as well as the practical skills needed to run a business. The Salvation Army's youth work division ALOVE, which piloted the programme, is now preparing to extend it to other



Chess Dynamics Ltd

Professor Andrzej Ordys (£188,070)

hess Dynamics designs, develops Uand manufactures future-generation defence systems. The company relies on its ability to anticipate and respond to emerging technological advances to stay competitive. More-stringent accuracy specifications are being placed on high-end tracking and motion stabilisation for satellites and surveillance systems, and Chess Dynamics intends to develop technologies that will enable it substantially to improve accuracy and tracking speed.

The KTP project aims to develop mathematical models to simulate mechanical tracking systems. It will also develop systems for accurate estimation of the angular and linear position, based on improved sensors and advanced algorithms, advanced control system algorithms to minimise the non-linear effects in drive systems, and methods to transfer control and estimation system design into embedded hardware for fast real-time implementation.



Kingston University Research Repository

he Repository was created in 2006 and has been expanding ever since. With over 6,500 recorded items, it is now the 20th largest university repository in the UK. It includes academic papers, and also a range of research outputs such as books, theses, conference papers, designs, exhibitions and audio-visual materials.

The Repository is an open-access digital archive that contains the details of published research produced at the University, often including links to freely available electronic copies. Where the research cannot be made available

electronically, details of its physical location are provided.

The Repository conforms to the Open Archives Initiative (OAI) standards. This means that research outputs deposited here have a higher ranking by search engines such as Google, and that deposited research is harvested and indexed by specialist services such as OAIster. All information can be viewed on internetenabled devices as well as on computers.

Visitor numbers reflect growing international interest in the University's research. Between May 2008 and April 2010, the Repository experienced an

increase in traffic of nearly 62 per cent. In the past year, the Repository has attracted over 103,274 visitors from 184 countries and territories worldwide, of which 87 per cent were new visitors. Most non-UK visitors came from the USA. Canada. Australia, India and Germany.

Kingston University Research Repository

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Kingston University Research Repository team, Susan Miles (left) and Sandy Leitch























Professorial appointments

Several of the University's new professorships have been mentioned in the main body of this publication. In addition, the University awarded the following professorships in 2009/10.

Eric Alliez

Professor of Contemporary French Philosophy

Alliez' research interests are in philosophy and the visual arts; the work of Gilles Deleuze and Félix Guattari; and the history of time and political ontology of capitalism. He has been a founding member of the editorial committee of the journal Multitudes, and editor of the Works of Gabriel Tarde. His current projects include a research programme 'Undoing the Image of Contemporary Art', and work on transdisciplinarity with Professor Peter Osborne.

Vincent Dalv

Professor of Applied Econometrics Daly's expertise lies in applied econometrics, with a particular interest in forecasting methods. His recent and forthcoming publications address economic growth and development. He is a former member of the steering group for the Conference of Heads of University Departments of Economics, and a current member of the National Advisory Group for the Economics Network of the UK Higher Education Academy.

Gennady Falin

Professor of Actuarial Science and Mathematics

Falin's work has been published extensively and includes around 100 articles on retrial queues, circuit switching networks, stochastic orderings, slotted ALOHA and other stochastic modelling problems. He has written a research monograph Retrial Queues with Professor JGC Templeton. a further five textbooks on actuarial mathematics, and four textbooks and 20 papers on elementary mathematics.

Keith Grieves

Professor of History and Education Grieves has a particular research interest in British society during the First World War,

including the impact of war on rural communities and the relationship between home landscapes and the battlefields in the imagination of the citizen soldier. His work on war memorials after 1918 helped to inform the Channel 4 documentary series Not Forgotten, which investigated the impact of the First World War on British society. He is currently researching a cultural history of the Surrey greensand hills in war and peace.

Peter Hallward

Professor of Modern European

Hallward is a member of the Centre for Research in Modern European Philosophy. He is the author of *Damming the Flood:* Haiti and the Politics of Containment; Out of this World: Deleuze and the Philosophy of Creation; Badiou: A Subject to Truth and Absolutely Postcolonial. He is currently working on a project entitled 'The Will of

Matthew Humphreys

Professor of Law

Humphreys' research field is environmental law and he has a particular interest in aspects of social justice. His latest monograph is Sustainability in European Transport Policy. His current projects explore sustainability, focusing on people rather than sectoral regulation, and the links between environmental law and regeneration. Humphreys is lead academic in a Knowledge Transfer Partnership with Renaisi, an urban regeneration company based in central London, and leads a £53 million urban regeneration project as Chair of the EC1 New Deal Partnership.

Martin McQuillan

Professor of Literary Theory and **Cultural Analysis**

McQuillan's work is at the interface between continental philosophy, literary theory, contemporary culture, politics, art and literature. His most recent publications include Deconstruction after 9/11 and The Origins of Deconstruction. He is currently editing posthumous texts from the Paul de Man archive at the University of California (Irvine).

Peter Osborne

Professor of Modern European Philosophy and Director of the Centre for Research in Modern European Philosophy

Osborne has played a leading editorial role on the journal Radical Philosophy since the 1980s. His main research interests are in the philosophy of time and history, and the philosophy of art. His books include The Politics of Time: Modernity and the Avant-Garde Philosophy in Cultural Theory Conceptual Art (Marx Walter Benjamin: Critical Evaluations in Cultural Theory) and, most recently, El arte más allá de la estética: Ensayos filosóficos sobre el arte contemporáneo. He has contributed catalogue essays to a wide range of exhibitions internationally. He is currently developing a collaborative research project on transdisciplinarity in the arts and humanities and is completing a book on philosophical aspects of contemporary art.

Matthew Pateman

Professor of Contemporary Popular Aesthetics

Pateman's research moves between television, music, literature and philosophy. Currently he is preparing a book about the impact of Joss Whedon on television creativity and aesthetics, having previously written an award-winning monograph on Whedon's Buffy The Vampire Slayer.

Patricia Phillippy

Professor of English Literature and **Creative Writing**

Phillippy's research is on 16th and early 17th century literature and culture, with a focus on gender and women's writing. Her most recent publications are Painting Women: Canvases, Cosmetics, and Early Modern Culture, and Women, Death, and Literature in Post-Reformation England. She has just completed an edition of the writings of Elizabeth Cooke Hoby Russell (1540–1609), forthcoming in the Other Voice in Early Modern Europe series. Her current book project studies funeral monuments alongside manuscripts, viewing both as sites for life writing in early modern England.

Paul Robson

Professor of Entrepreneurship

Robson has recently worked on a variety of government and industry research projects on entrepreneurship and business policy with colleagues in the University's Small Business Research Centre. These have included the 'Partner for Growth – Get Your Share' project sponsored by Royal Mail, and the 'Scottish Investment Bank: Market Gap Analysis' project for the Scottish Government.

Elizabeth Tyrrell

Professor of Medicinal and Pharmaceutical Chemistry

Tyrrell's main subject expertise is synthetic organic chemistry with a particular interest in the synthesis of drug-like molecules. Combining these interests has recently led to the development of ranges of similar compounds that have more than one biological effect: for instance, novel compounds related to beer hop extracts have been shown to arrest cancer cell growth and inhibit the cells' migration to bone tissue; they are also anti-inflammatory. Tyrrell has been involved in several Knowledge Transfer Partnerships and has seen products from these consultancies reach the marketplace. Last year, one of her publications was in the top 10 USA citations for organic chemistry.

Professor of Media and Cultural Studies

Wilson's research covers the fields of popular music, psychoanalysis, critical and cultural theory. His most recent publications are The Order of Joy: Beyond the Cultural Politics of Enjoyment and Great Satan's rage: American negativity and rap/metal in the age of supercapitalism. He is currently working on a book on the audio unconscious.

46 Supplementary information

At a glance: Kingston University professors

Professor Raid Alany	Professor of Pharmaceutics
Professor Eric Alliez	Professor of Contemporary French Philosophy
Professor Andy Augousti	Professor of Applied Physics and Instrumentation
Professor Stephen Barber	Professor of Media Arts
Professor Antonia Bifulco	Professor of Lifespan Psychology and Social Science
Professor Robert Blackburn	Professor of Small Business Studies
Professor Brad Blitz	Professor of Human and Political Geography
Professor Fred Botting	Professor of English Literature and Creative Writing
Professor Ann Bowling	Professor of Health Care of Older Adults
Professor Jonathan Briggs	Professor of eCommerce
Professor Edward Bromhead	Professor of Geotechnical Engineering
Professor lan Brown	Professor of Drama
Professor John Brown	Professor of Pharmacy
Professor Chris Cairns	Professor of Pharmacy Practice
Professor Brian Cathcart	Professor of Journalism
Professor Howard Caygill	Professor of Modern European Philosophy
Professor Colin Chambers	Professor of Drama
Professor Mary Chambers	Professor of Mental Health Nursing
Professor Elizabeth Chell	Professor of Entrepreneurship
Professor Norma Clarke	Professor of English Literature and Creative Writing
Professor David Cottington	Professor of Modern Art History
Professor Hilary Dalke	Professor of Design
Professor Vince Daly	Professor of Applied Econometrics
Professor Julia Davidson	Professor of Criminology and Sociology
Professor John Davis	Professor of History and International Relations
Professor Jamshid Dehmeshki	Professor of Medical Image Computing
Professor Vari Drennan	Professor of Health Policy and Service Delivery
Professor Robert East	Professor of Consumer Behaviour
Professor Christine Edwards	Professor of Human Resource Management
Professor Tim Ellis	Professor, Digital Imaging Research Centre
Professor Richard Ennals	Professor of Corporate Responsibility and Working Life
Professor Jean-Noel Ezingeard	Professor of Processes and Systems Management
Professor Ilaria Favretto	Professor of Contemporary European History
Professor Julia Fionda	Professor of Law
Professor Peter Foot	Professor of Materials Science
Professor Gavin Gillmore	Professor of Environmental Geoscience
Professor Vesna Goldsworthy	Professor of English Literature and Creative Writing
Professor Keith Grieves	Professor of History and Education
Professor Peter Hallward	Professor of Modern European Philosophy
Professor Jane Harris	Professor of Design
Professor Ruth Harris	Professor of Nursing Practice and Innovation
Professor Les Hatton	Professor of Forensic Software Engineering
Professor Matthew Humphreys	Professor of Law
Professor Mike Hurley	Professor of Rehabilitation Sciences

Professor Robert Istepanian	Professor of Data Communications
Professor Ian Jarvis	Professor of Geochemistry
Professor Andrew Jewell	Professor of Immunology
Professor Martyn Jones	Professor of Human Resource Management
Professor Graeme Jones	Professor of Computer Vision
Professor Raymond Jones	Professor of Social Work
Professor Stavros Kalafatis	Professor of Business Marketing
Professor Andrey Karlyshev	Professor of Microbiology
Professor Mukesh Limbachiya	Professor of Civil Engineering
Professor Frances Lloyd	Professor of Art History
Professor Wendy Lomax	Professor of Brand Marketing
Professor Anne Massey	Professor of Design History
Professor Catherine McDermott	Professor of Design History and Curating
Professor Martin McQuillan	Professor of Literary Theory and Cultural Analysis
Professor Robin Middlehurst	Professor of Higher Education
Professor Simon Morgan Wortham	Professor of English Literature
Professor John Mullarkey	Professor of Film & Television
Professor Declan Naughton	Professor of Biomolecular Sciences
Professor François Nectoux	Professor of Contemporary European Studies
Professor Andrzej Ordys	Professor of Automotive Engineering
Professor Peter Osborne	Professor of Modern European Philosophy
Professor Matthew Pateman	Professor of Contemporary Popular Aesthetics
Professor Andrea Petroczi	Professor of Public Health
Professor Craig Phelan	Professor of Modern History
Professor Patricia Phillippy	Professor of English Literature and Creative Writing
Professor Gwyneth Pitt	Professor of Law
Professor Charles Rice	Professor of Architectural History and Theory
Professor Guy Robinson	Professor of Geography
Professor Fiona Ross	Professor of Primary Care Nursing
Professor Sarah Sayce	Professor of Real Estate
Professor Edith Sim	Professor of Pharmacology
Professor David Smallbone	Professor of Small Business and Entrepreneurship
Professor Penny Sparke	Professor of Design History
Professor Philip Spencer	Professor of Holocaust and Genocide Studies
Professor Engelbert Stockhammer	Professor of Economics
Professor Philip Terry	Professor of Psychology
Professor Peter Treloar	Professor of Mineralogy and Petrology
Professor Elizabeth Tyrrell	Professor of Pharmaceutical and Medicinal Chemistry
Professor Sergio Velastin	Professor of Applied Computer Vision
Professor Nigel Walford	Professor of Applied Geographic Information Systems
Professor Martyn Waller	Professor of Biogeography
Professor Martyn Waller Professor Julius Weinberg	Professor of Biogeography Professor of Health Sciences
Professor Julius Weinberg	Professor of Health Sciences

At a glance: Kingston University centres of research excellence

Centre for Abuse and Trauma Studies (CATS)

CATS is a centre for research, practice and training on issues of trauma and abuse. The Centre provides a hub for researchers in the areas expertise in visual surveillance, medical imaging of psychology, criminology, social work, policing and law.

Telephone: +44 (0)20 8417 2642 antonia.bifulco@kingston.ac.uk Co-Director: Professor Julia Davidson Telephone: +44 (0)20 8417 2280 Email: j.davidson@kingston.ac.uk

Co-Director: Professor Antonia Bifulco

Centre for Earth and Environmental Sciences Research (CEESR)

The Centre covers three research areas: geodynamics and crustal processes: environmental change; and agriculture, people and place.

Director: Professor Martyn Waller Telephone: +44 (0)20 8417 2511 m.waller@kingson.ac.uk

Centre for Fire and Explosion Studies (CFES)

CFES is recognised internationally for its work in the development and application of advanced computational fluid dynamics models for fire and explosion studies.

Director: Professor Jennifer Wen Telephone: +44 (0)20 8417 4836 j.wen@kingston.ac.uk

Centre for Research in Modern European Philosophy (CRMEP)

The Centre has in international reputation for research and publication in the field of post-Kantian European philosophy, characterised by an emphasis on broad cultural and intellectual contexts and a distinctive sense of social and political engagement.

Director: Professor Peter Osborne Telephone: +44 (0)20 8417 2141 p.osborne@kingston.ac.uk

Contemporary Art Research Centre (CARC)

The Centre provides an intellectual and creative milleu for innovation in contemporary fine art.

Co-Director: Louis Nixon Telephone: +44 (0)20 8417 4127 Email: I.nixon@kingston.ac.uk

Co-Director: Sarah Jones Telephone: +44 (0)20 8417 4212 sarah.jones@kingston.ac.uk

Digital Imaging Research Centre (DIRC)

DIRC is one of the largest computer vision groups in the UK, with internationally recognised and intelligent environments.

Director: Professor Sergio Velastin Telephone: +44 (0)20 8417 2719 Sergio.velastin@kingston.ac.uk

Helen Bamber Centre for the Study of Rights, Conflict and Mass Violence

The Centre provides a focus for research and teaching in two related areas: human rights and international conflict.

Director: Professor Philip Spencer Telephone: +44 (0)20 8417 2346 p.spencer@kingston.ac.uk

Materials Research Centre (MATRC)

MATRC houses research groups working on theoretical and applied mechanics, molecular electronics and photonics, and constructional materials and sustainable technology.

Director: Professor Tao Zhang Telephone: +44 (0)20 8417 4703 t.zhang@kingston.ac.uk

Mobile Information and Network Technologies Research Centre (MINT)

MINT conducts research on the application of mobile technologies to healthcare systems by addressing bio-information systems, network security, quality of service and location-based

Director: Professor Robert Istepanian Telephone: +44 (0)20 8417 7267 r.istepanian@kingston.ac.uk

Modern Interiors Research Centre (MIRC)

The Centre's work focuses on research relating to the design and meaning of interiors in the period 1870 to the present.

Director: Professor Penny Sparke Telephone: +44 (0)20 8417 3269 p.sparke@kingston.ac.uk

Real Estate Research Centre (RERC)

The Centre brings together researchers working in the field of real estate and the sustainability agenda as it applies to property.

Director: Professor Sarah Sayce Telephone: +44 (0)20 8417 7117 s.sayce@kingston.ac.uk

Small Business Research Centre (SBRC)

SBRC is one of the UK's longest established research groups in the field of small business and entrepreneurship.

Director: Professor Rob Blackburn Telephone: +44 (0)20 8417 5354 r.blackburn@kingston.ac.uk

Sustainable Technology Research Centre

STRC is a multidisciplinary centre researching sustainable and cost-effective construction techniques, environmentally friendly sustainable construction materials, and the recycling of waste materials for reuse.

Director: Professor Mukesh Limbachiya Telephone: +44 (0)20 417 2268 m.limbachiva@kingston.ac.uk

Visual and Material Culture Research Centre

The Centre provides a focus for interdisciplinary research in visual and material culture and the histories of art, design and architecture.

Director: Professor Fran Lloyd Telephone: +44 (0)20 8417 4021 Email: f.lloyd@kingston.ac.uk

Kingston's Centres of Research Excellence

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