

University of Sussex
Celebrating research and impact

Sussex Impact and Research Awards

2015

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University of Sussex
Research & Enterprise

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Welcome

I am delighted to welcome you on behalf of the University to our celebratory reception and presentation of the inaugural Sussex Impact and Research Awards.



As you know, the UK government and other research funders increasingly require universities to demonstrate the impact of their research, and at Sussex a key part of our approach is to recognise, celebrate, and invest in outstanding impact. I have therefore initiated this first ever set of University awards for outstanding impact (both achieved and emerging), which not only recognise our researchers' achievements but also include a modest financial investment in their work.

This event is not only about recognising the winning entries; it gives a heightened profile to the range of impacts Sussex research creates across society, the economy, culture, technology, health, the environment, and beyond.

Nor do the awards solely focus on impact, but also on the research of our outstanding new and emerging researchers. This recognition demonstrates our institutional commitment to the future of the University and the broader academy as places of excellence and innovation.

I hope that you enjoy the occasion, and will join me in congratulating not only our winners, but also all those who are engaged in excellent research and the creation of impact across our Sussex community.

Michael CR Davies

Professor Michael CR Davies FRSE
Pro-Vice-Chancellor (Research)

Enabling impact

This award celebrates outstanding engagement and activity that is likely to lead to research impact of reach and significance. Nominations, based on established or ongoing research, have demonstrated involvement with non-academic partners or the public and innovation in deriving economic, cultural, health, social or similar benefits from research.

The criteria for nominations included evidence of activities that took place between January 2013 and April 2015 that could lead to impact. Judges are looking for the sustainability of activity (eg embedding activities into practice) as well as demonstrated links to high quality research. There are three awards in this category, two for any faculty and research staff, and one for early career researchers (ie researchers no more than seven years from the award of their doctoral degree).

Nominations were received from almost every school, covering a wide breadth of research and impact activities and included areas such as: pathways to women's empowerment, improving efficiencies of gasoline engines, and uncovering Sussex's rich modernist history. All nominations demonstrated great commitment to current impact activities and even greater potential for impact in the future.



Read more about the impact of Sussex research:

www.sussex.ac.uk/research/impact



Championing well-being in old age through creative research and networking
Dr Khalid Ali (BSMS)

Through significant contributions to ageing and stroke research at regional, national and international levels, results have led to active involvement with organisations and initiatives (eg Ageing Research Lead in Kent, Surrey and Sussex Comprehensive Research Network, and Patient and Public Involvement activities), and contributions to local arts, film and training.

Enhancing and embedding staff engagement in the NHS

Prof Katie Bailey (Business and Management)

This project investigates the value of engagement as a management strategy, providing guidance on how to raise levels of engagement for health care managers and policymakers, producing a series of 'How to' guides, a summary of evidence for practitioners, and a series of five podcasts on the NHS Employers' website.

Revelations: experiments in photography
Dr Ben Burbridge (Art History)

By revealing the enormous influence of early scientific photography on modern and contemporary photographic art, Burbridge's research has shaped a major exhibition at two prestigious UK museums, informed a new book, received wide national and international media coverage and achieved the potential to transform understandings of photography, art and science.

Pathways of women's empowerment

Prof Andrea Cornwall (Anthropology/Global Studies)

This international consortium, led by Prof Cornwall, has enabled impact through a range of international project initiatives, action research introducing feminist approaches to cash transfers, improving support for women's funds in British aid spending, influencing activism on sexuality education and filmmaking.

Natural history collections and the botanical and meteorological history of the Indian Ocean, 1500–1900

Dr Vinita Damodaran (History)

This project on Indian Natural History collections in Botany and Meteorology has achieved outstanding engagement with a range of non-academic partners in the UK and India and has highlighted new sources of data to understand environmental and climate change, and has reached wider audiences through museum displays and online digital resources.

Sussex modernism

Dr Alistair Davies (English)

This project is uncovering Sussex's rich Modernist history with partners through a series of talks for the general public. This is a stepping stone to further engaging with the public, schools, art galleries, and Brighton University to map the early 20th-century artists, writers, photographers, composers, and architects of the area.

From risk to crowd safety through psychology

Dr John Drury (Psychology) with Dr Holly Carter and Dr Richard Amlôt (Public Health England) and other colleagues.

Research on crowd behaviour in emergencies and disasters has led to engagement with government and emergency planners to embed findings into civil contingencies planning and guidance, and with event safety professionals to transform training, which will increase crowd safety and save lives.

Adaptive cylinder pressure reconstruction for production engines

Dr Julian Dunne (Engineering and Design)

Collaboration between the University of Sussex and Jaguar Land Rover over 12 years has led to development of a technology to improve the efficiency of gasoline engines, which if adopted widely could help vehicles achieve better fuel economy – and ultimately lower selling prices – and potentially reduce CO₂ emissions by 10 per cent.



Towards sustainable food

Dr Rachael Durrant (SPRU)

Dissemination of research into civil society activism for sustainable food systems led governments and charities to seek advice on how to support this change. Additionally, foundation of the Brighton and Sussex Universities Food Network, and help establishing the Food Research Collaboration, has enabled connections between NGOs, policy makers and academics.

**The Home Front
Melanie Friend (Media and Film)**

The Home Front, the Impressions Gallery touring photographic exhibition with accompanying publication, has a focus on air shows that aims to inspire reflection on the normalization of war, exploring the uneasy relationship between militarism, marketing and entertainment. The exhibition has been accompanied by 10 public events that helped raise awareness of everyday militarisation.

Here comes the sun: 7 families, 7 pre-payment meters, 7 solar systems: one year – one estate

Dr Sabine Hielscher (Sussex Energy Group, SPRU) with Nicolette Fox (Sussex Energy Group, SPRU)

Based on recent research, Nicolette produced an accessible booklet to support households in benefiting from solar panels supplied by their social landlord. Already there are plans by two councils to distribute it to hundreds of homes, and it has impacted how a national solar installer engages with households.

Changing perceptions of ensemble performance through technology

Dr Ed Hughes (Music) with Dr Alice Eldridge (Informatics – Evolution, Behaviour and Environment) and Dr Chris Kiefer (Informatics)

A research project looking at how technology might improve the chances of keeping one’s place in musical ensembles will culminate in an orchestral performance – including non-classical musicians – at the 2016 Brighton Science Festival. It has support from national and local music-based organisations, schools and colleges.

Quantifying effects of climate change related uncertainties on flooding and drought phenomena

Dr Omar Lakkis (Mathematics) with Philip Townsend (Mathematics), Dr Justin Butler (Ambiental Technical Solutions), Prof Martin Todd (Geography), Prof Charalambos Makridakis (Mathematics), David Martin (Ambiental Technical Solutions)

In developing computer models of the input and output of rain patterns, this research has the possibility to help understand, and possibly mitigate, the impact of climate change. The project’s impact is expected to reach thousands of human beings, via applications with the industrial partner Ambiental Technical Solutions.

Chemical and biological weapons – history, use and governance

Dr Caitriona McLeish (SPRU) with Dr James Revill (SPRU)

Drs McLeish and Revill are researchers of the Harvard Sussex Program, the leading centre for research on Chemical and Biological Weapons (CBW) control. Through intense engagement, they have helped shape public policy on CBW and are currently researching allegations of chemical weapons use as part of an international investigation.

Emerging healthcare technology to help patients with epilepsy

Dr Yoko Nagai (BSMS)

Building on research which developed a non-drug treatment for epilepsy (electrodermal biofeedback), clinical trials are being conducted and a self-contained interactive biofeedback system is also under development. The treatment has the potential to offer life changing opportunities for many patients with drug resistant epilepsy.

Evaluating the impact of seven-day GP opening on A&E attendances

Dr Vikram Pathania (Economics) with Prof Peter Dolton (Economics)

Research shows a drop in attendance to A&E by patients whose GP surgeries introduce seven-day opening. The researchers calculated this would translate into two million fewer visits to A&E each year implying a cost saving of £194m. The findings are currently being discussed at NHS organisations and reported by national newspapers.



Diversity at home: Irish women travellers and residents in the south of England

Dr Roberta Piazza (English)

Although they need permanent society's community services, travellers self-segregate from settled residents. Such isolation often causes suspicion among the local community. Using women's voices as a bridge between residents and travellers groups, the project aims to contribute to Brighton & Hove Council's Annual Health report and organise awareness workshops.

The culture of early modern Sussex

Dr Paul Quinn (English)

The Culture of Early Modern Sussex presents the forgotten, ignored, and unknown history of Sussex from 1500 – 1700. Through current exhibitions at galleries and museums, the religious, political and literary history of Sussex is revealed. Engagement through exhibitions, talks, and a website have also re-contextualised the recent controversy over fracking.

The Sussex Research Network

Dr Robert Rosenthal (Education) with Prof Colleen McLaughlin (Education) and Prof Gillian Hampden-Thompson (Education)

In September 2014 the Department of Education launched the Sussex Research Network (SRN) in partnership with seven local secondary schools. It aims to develop a research culture in the schools so that teaching and learning will improve. In this way, the SRN will support the government's Teaching School strategy.

Translating critical scholarship on conflict and security into public and policy impacts

Prof Jan Selby (International Relations)

Prof Selby pursues four types of research, engagement and leadership activity with impact potential: in Israeli-Palestinian water politics; in peace processes; energy and environmental security; and through facilitating engagement as Director of Sussex Centre for Conflict

and Security Research and as Research Director of the Department of International Relations.

The Centre on Innovation and Energy Demand

Dr Steven Sorrell and the Centre on Innovation and Energy Demand (CIED) team in the Sussex Energy Group at SPRU: Dr Florian Kern, Dr Colin Nolden, Dr Sabine Heilscher, Professor Adrian Smith, Dr Mari Martiskainen, Dr Noam Bergman, Dr Paula Kivimaa, Dr Lee Stapleton, Sarah Schepers, Bettina Zenz and Nancy Carter

The Centre on Innovation and Energy Demand (CIED) team successfully embeds a culture of impact into the centre. The Impact, Communications and Engagement strategy ensures that everyone is clear on the aims, objectives and activities and how they can play a role in creating opportunities for impact.

Curating childhoods: developing a multimedia archive of children's everyday lives

Prof Rachel Thomson (Education and Social Work) with Dr Liam Berriman (Education and Social Work), and Fiona Courage (Mass Observation Archive)

The Curating Childhoods project, which engages with parents, young people and archive users, has sought to transform how we design and curate an ethical archive of children's everyday lives in the digital age, developing new dialogues around how data is shared and cared for in a digital society.

Achieving impact

This award recognises the reach and significance of impact that has been achieved. Nominations, based on established research excellence, have demonstrated evidence of impact and the sustainability of the achievement of this impact. They have also demonstrated knowledge exchange and involved engagement with non-academic users, and benefits can directly be linked to research outcomes.

The criteria for nominations included evidence of the impact, and the reach and significance the impact achieved. This award recognises impact that was demonstrable between January 2013 and April 2015 and linked to high quality research.

There are three awards in this category, two for any faculty and research staff, and one for early career researchers (ie researchers no more than seven years from the award of their doctoral degree).

Entries in this category are diverse including subjects ranging from the social cost of carbon, to children's reading comprehension and the conservation of wild bees. The range of nominations demonstrate the outstanding research and impact activities that are taking place across the University.



Read more about the impact of Sussex research:

www.sussex.ac.uk/research/impact



Queer anthropology in practice

Dr Paul Boyce (Anthropology)

Research into sexual and gender minority lives in Nepal and India formed the basis of public engagement, for example in offering new critical views on the relationship between law, sexuality and development in Nepal, which were presented to UK parliament, and represented via a photographic exhibition and public talks.

Brighton Fuse

Dr Roberto Camerani (SPRU)

The Brighton Fuse research project, which studied the creative, digital and IT cluster in Brighton & Hove, produced results that have informed future strategies of how to make the cluster more competitive, spread learning to other regions, and helped achieve high growth in the creative and digital industries in Brighton.

TexRad-Feedback cancer management imaging software

Prof Chris Chatwin (Engineering & Design) with Dr Rupert Young (Engineering & Design) and Dr Balaji Ganeshan (Visiting Research Fellow, BSMS)

The TexRAD Cancer management technology is being used as a research tool in seven of the G8 Countries. FDA and CE approvals for clinical use are imminent, and once granted, will enhance: cancer diagnosis, prognosis and individualised patient treatment planning.

Ensuring the legality of detention in situations of armed conflict

Dr Alex Conte (Law)

Research assessing the legality of detention in armed conflict has resulted in critical shaping of new UN Basic Principles and Guidelines on the right to challenge the lawfulness of detention.

The Podoconiosis Research Hub: guiding treatment and leading advocacy for podoconiosis

Prof Gail Davey (Wellcome Trust Brighton & Sussex Centre for Global Health Resources, BSMS) with Prof Melanie Newport and Kebede Deribe (both of Wellcome Trust Brighton & Sussex Centre for Global Health Resources, BSMS)

World class genetic, epidemiological and social science research into podoconiosis, a form of tropical 'lymphoedema' or leg swelling, has: underpinned applications for funding patient care; informed training of health professionals; mobilised the private sector to engage in disease prevention; and been used for national guidelines and to influence policy.

Ebola response anthropology platform

Prof James Fairhead (Anthropology) with Prof Melissa Leach (Institute for Development Studies), other colleagues and members of the Ebola Response Anthropology Platform

Based on continuing anthropological research, the 'Ebola Response Anthropology Platform' was established in September 2014 to bridge calamitous cultural divides in the Ebola response, and has led to improved mutual understanding between the emergency response world and affected communities.

Conserving wild bees

Prof Dave Goulson (Life Sciences)

As a result of ongoing research into the decline of bees, and most recently the impacts of pesticides on bees, national and international policy debates have been informed and public engagement to save wild bees in the UK has risen.



Word learning through repeated storybook reading

Dr Jessica S Horst (Psychology)

The 'Word Learning Through Repeated Storybook Reading' project demonstrated that preschool children learn more word meanings after hearing the same stories read repeatedly than after hearing the same number of different stories. This research has underpinned reading projects for pre-schoolers in Durham and Hampshire and been disseminated to many audiences.

The market response to corporate scandals involving CEOs

Dr Surendranath Rakesh Jory (Business and Management)

Research on the changes made to corporations following scandals involving their CEO has attracted much press and media attention in recent months. It has been rated as a top 5% of all articles scored by Altmetric.

Introducing benefit from personalised management to the day-to-day care of children with asthma and allergy

Prof Somnath Mukhopadhyay (BSMS) with Dr Katy Fidler (BSMS), Dr Kaninika Basu (BSMS), Dr Christina Jones (BSMS), and Dr Paul Seddon (Academic Department of Paediatrics and Brighton and Sussex University Hospitals NHS Trust)

Research at the BSMS into the effects of genotype variation on responses to asthma medicines in children has underpinned improved approaches to the management of childhood asthma leading to changes in media attitudes and altered physician and public perceptions regarding the development of new treatments based on personalised medicine.

Separated by a common language: changing understanding of language origins and use, through public engagement

Dr Lynne Murphy (English, Language and Linguistics)

Lexicological and pragmatics research into American and British Englishes has impact on language professionals and the general public through public engagement methods (Twitter, blogs, events, media appearances), creating a space for debate about language, influencing dictionary entries and informing writers and translators.

Children's reading comprehension: from research to policy and practice

Prof Jane Oakhill (Psychology)

Research into reading comprehension in primary school children has been used to justify a greater emphasis on skills for reading comprehension in the recent revisions of the National Curriculum, English, and has underpinned recent training

programmes in both the UK and Argentina.

UK-India collaborative study on barriers to low carbon technology transfer to developing countries

Dr David Ockwell (Geography) with Prof Jim Watson (SPRU), Dr Rob Byrne (SPRU) and Prof Gordon MacKerron (SPRU)

Research on low carbon technology transfer to developing countries has impacted on the policies, negotiating positions and funding strategies of a range of national and international governmental organisations (eg World Bank, UNFCCC) and the Governments of the UK, India and Chile, and led to the adoption of climate policy mechanisms, including 'Climate Innovation Centres'.

'Lad cultures' and sexual violence in higher education

Dr Alison Phipps (Sociology)

Ongoing research on sexual harassment and violence amongst students in higher education has put this important gender issue on the UK policy agenda, and inspired a variety of different organisations (eg NUS, individual students' unions, third sector and community groups) to establish initiatives to tackle it.

Redistribution of placental blood at birth of a preterm infant

PD Dr Heike Rabe (BSMS), with Brighton Perinatal Study group: Department of Neonatology and Maternity of Brighton & Sussex University Hospitals NHS Trust

Research into the redistribution of placental blood at birth, either via delayed cord cutting or a novel 'milking' method, has led to recommendations published by the World Health Organisation and UNICEF last year which have particular short and long term benefits to preterm infants.

SPRU: celebrating 50 years of ideas, innovation and impact

Prof Johan Schot (SPRU) with the whole SPRU team

SPRU researchers have acted as trusted independent sources of high quality advice on areas including innovation policy, GM technologies, arms control, climate change and through this close engagement they have achieved impact at the highest levels of government, industry and civil society locally, in the UK and internationally.

Challenging social attitudes to shyness: an interactive digital art exhibition exploring the relationship between culture, new technologies and shyness

Dr Susie Scott (Sociology)

Research into the socio-cultural dimensions of shyness challenges the idea that it is an individual problem. Social spaces, like public art galleries and museums, can instead become more inclusive and 'shy-friendly'. Ten local artists and curators collaborated in designing a special digital art exhibition on the theme of celebrating shyness.



Life science in society – bionetworking in Asia
Prof Margaret Sleeboom-Faulkner (Anthropology) with Bionetworking in Asia research team

Sussex-led collaborative research projects on bionetworking have revealed how vulnerable populations experience the global surge in innovative life science and technologies. Through national and international engagement, it has led to a variety of impacts on research regulations, ethics and patient needs.

The social cost of carbon
Prof Richard Tol (Economics)

Research yielding estimates of the 'social cost of carbon' (SCC) has started to transform industrial, commercial and residential energy use in the USA, has influenced the US government's increase in the SCC in June 2013, and has the prospect of transforming energy use in power generation and transport.

Digital stadium
Dr Ian Wakeman (Informatics) with Dr Dan Chalmers (Informatics)

Research led to development of a networking technology that connects stadium crowds via their smartphones, which has been commercialised in the company, TribeHive. The technology has been downloaded by over 40,000 phones so far and TribeHive is thriving and expecting year on year growth.

Emerging researcher

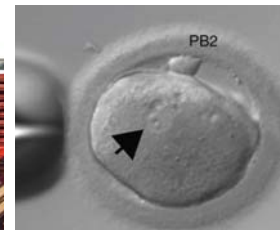
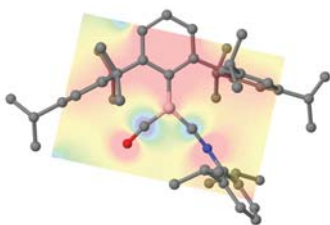
This award recognises the achievement of research of the highest calibre from individuals in the early stages of their research career (no more than seven years from the award of their doctoral degree). Two awards will be presented to researchers who have distinguished themselves by their exceptional contributions to their research field as a whole.

The judges will be looking for evidence of a research finding or discovery of significance at the University of Sussex. Individuals were invited to describe their significant role in a project of scale or significance and to demonstrate a strong portfolio of research outputs.

Ranging from contemporary art photography to risk factors of female infertility, and responses to hate crime, the nominations represent excellence in basic and applied research that makes a difference and promises exciting work from future leaders.



Read more about the impact of Sussex research:
www.sussex.ac.uk/research/impact



Contemporary art photography as an expanded field

Dr Benedict Burbridge (Art History)

Developed in collaboration with leading museums and arts organisations, this pioneering inter-disciplinary research presents a dynamic field of inquiry that demands photographic art be situated in a radically expanded framework.

Policy recommendations for conservation of biodiversity and ecosystem services in oil palm plantations

Dr Claudia Gray (Life Sciences)

This research on the management of riparian zones in oil palm plantations has made a significant contribution to the field of applied ecology and has directly informed the activity of several non-governmental organisations and businesses.

Post-transcriptional control of gene expression by the 5'-3' exoribonuclease XRN1

Dr Chris Jones (BSMS)

This research has shown that cells and organisms cannot survive without the XRN1 protein (which destroys mRNAs), while reduced levels of XRN1 are linked to childhood bone cancer. They are employing genetic and molecular techniques to determine how disruption in XRN1 level leads to impaired development and disease.

Live coding musical performance

Dr Thor Magnusson (Music)

Live coding is a new approach to creative expression using computers. This digital arts research has led to the creation of two live coding programming systems, journal and conference papers, performances at festivals, workshops and initiation of the Live Coding Research Network.

Age as a major risk factor for female infertility and miscarriage

Dr Louise Newnham (Life Sciences)

A collaboration between two IVF clinics and research scientists at Sussex has uncovered new insight into the problem of increased risk of female infertility and miscarriage with age which will help advance understanding of this complex trait and ultimately help women to make more informed reproductive choices.

Applied computational chemistry and new boron compounds

Dr Alfredo Vargas (Chemistry)

The combined descriptive and predictive power of computational chemistry was successfully exploited for the advancement of research on boron-containing compounds, leading to potential promising applications in functional materials, energy storage, catalysis, and medicinal chemistry.

Criminology: responses to hate crime

Dr Mark Walters (Law)

Over the past four years, this researcher has established a body of work that has substantially contributed to the advancement of the study of hate crime and restorative justice, informed policy and practice both locally and nationally, and contributed to the development of the International Network for Hate Studies.

Making public speech reverberate

Dr Tom F Wright (English)

This research explores the complex meanings of public speaking in British and American cultural history, focusing on the values and ideas that surround 'live voice' at periods of technological change, and what these tell us about literature, culture and society.



Jubilee

Photo credits

05 (left to right): Vinita Damodaran (group on steps); Melanie Friend (addressing group) ©Louise Harman (photographer); John Drury (emergency preparations), reproduced with permission of Public Health England.

06: Melanie Friend (*The Home Front* cover), Dewi Lewis Publishing in association with Impressions Gallery, published 2013.

07 (left to right): Ben Burbridge (street exhibit) 'Whose Streets? Photographs from the Argus Archives', Jubilee Square, Brighton, part of Brighton Photo Biennial 2012, Agents of Change:

Photography and the Politics of Space, ©Nigel Green, courtesy of Brighton Photo Biennial; Caitriona McLeish (UN Office, Palace of Nations, Geneva); Andrea Cornwall (*Pathways of Women's Empowerment* cover), photograph by Sheikh Rajibul Islam; Julian Dunne (Jaguar engine); Paul Quinn (Lewes martyrs engraving), reproduced with kind permission of johnfoxe.org

09 (left to right): Jessica Horst (reading with child); Chris Chatwin (TexRad launch group); Roberto Camerani (Brighton Fuse logo); Gail Davey (feet of Podoconiosis sufferers)

10 (left to right): Somnath Mukhopadhyay (undertaking clinical work); Jane Oakhill (group of children); SPRU (panel discussion); Lynne Murphy (blog).

11 (left to right): Ian Wakeman (smartphone app); Dave Goulson (bumblebee), LASI.

13 (left to right): Ben Burbridge (gallery) Revelations: Experiments in Photography, Media Space at the Science Museum, London ©Kate Elliott, courtesy of the Science Museum; Alfredo Vargas (diagram); Thor Magnusson (orchestra group); Mark Walters (book cover) with thanks to the Southwark Hate Crime Network; Louise Newnham (fertility image).

14–15: Stuart Robinson at the University of Sussex.

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If you would like more information about Sussex Impact Day, the Sussex Impact and Research Awards, or have any impact-related questions please contact the Research Quality and Impact team.

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Read more about the impact of Sussex research at:

www.sussex.ac.uk/research/impact

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