
The Leverhulme Trust

1 Pemberton Row London EC4A 3BG

Philip Leverhulme Prize Winners 2011

The Leverhulme Trust Board are pleased to announce the results of the 2011 competition for Philip Leverhulme Prizes. These Prizes, with a value of £70,000 each, are awarded to outstanding scholars who have made a substantial and recognised contribution to their particular field of study, recognised at an international level, and where the expectation is that their greatest achievement is yet to come.

The Prizes commemorate the contribution to the work of the Trust made by Philip Leverhulme, the Third Viscount Leverhulme and grandson of the Founder.

The broad fields of research covered by this year's awards were:

- **Astronomy and Astrophysics**
- **Economics**
- **Engineering**
- **Geography**
- **Modern European Languages and Literature**
- **Performing and Visual Arts**

Astronomy and Astrophysics

Dr Emma Bunce

Department of Physics and Astronomy, University of Leicester

Emma Bunce is an internationally acclaimed expert on planetary aurorae; that is, the equivalent of the Earth's "Northern Lights" at other planets, notably Jupiter and Saturn. The basic mechanism for generating these spectacular displays can be understood in terms of the bombardment of the upper atmosphere by energetic charged particles, which excite neutral atoms in much the same way that a neon light glows. Dr Bunce's work on the aurorae at Jupiter revealed that aurorae there are much more rigidly controlled by characteristics of the planet than at Earth. More recently, Dr Bunce combined direct measurements of the particles and fields by the Cassini spacecraft with detailed images taken by the Hubble Space Telescope to develop a theoretical model for auroral displays at Saturn that resembles the Earth's configuration more than that at Jupiter, but with additional contributions from the far more dynamic outer magnetised atmosphere. Dr Bunce has won a number of prizes for her work, serves on national and international panels, and is one of the leaders developing the next major mission to Jupiter and its moons.

Dr Andrew Levan

Department of Physics, University of Warwick

Andrew Levan is a world leader in the observational study of gamma-ray bursts. These are the largest explosions in the Universe, briefly rivalling the combined luminous output of all its other constituents. Andrew has led much of the work on these objects, which appear to divide mostly into two types: the collapse of a massive spinning star to a black hole, or the coalescence of a neutron star with a second neutron star or a black hole. Very recently he has led work suggesting a third type, in which a star is torn apart by a supermassive black hole in the centre of a distant galaxy.

<http://www2.warwick.ac.uk/fac/sci/physics/research/astro/people/levan/>

Dr Richard Massey

Institute for Astronomy, University of Edinburgh

Richard Massey is mapping out the invisible landscape of dark matter which dominates the matter contribution to the Universe and controls the formation of galaxies. Dark matter is heavy, and so gravitationally influences the ordinary atoms that make up planets, stars and galaxies. However, it does not shine, so it can be seen only indirectly. Dr Massey has used the Hubble Space Telescope to watch dark matter deflect passing rays of light from distant galaxies: revealing the largest ever dark matter map in 3-D, and watching how it behaves during collisions of galaxy clusters. Dr Massey has also helped to extend the Hubble Space Telescope's working life by developing a method to correct radiation damage to its sensitive electronics. He is currently building a new telescope that will float to a similar vantage point at the top of the Earth's atmosphere, via a high altitude balloon.

<http://www.astro.caltech.edu/~rjm/>

Dr David Pontin

Division of Mathematics, University of Dundee

David Pontin is one of the world's experts on developing theoretical models for the way that magnetic fields interact with ionised gas, especially in the atmosphere of the Sun. If you heat any gas enough it becomes ionised, such as in a candle flame or a fluorescent light tube, and it behaves so differently from a normal gas that we give it a new name, "plasma", the fourth state of matter in addition to solids, liquids and gases. Most of the universe, including the ionosphere of the Earth and the whole of the Sun is in this plasma state. The main way in which plasma behaves differently from normal gas is that it interacts in complex and subtle ways with any magnetic field that is present. This interaction is responsible for many of the dynamic processes that we observe in the Universe, such as solar flares. The particular aspect of the interaction on which David Pontin is doing pioneering and world-leading work is to describe how the magnetic fields can break and re-connect and in the process heat and accelerate the plasma to very high energies.

<http://www.maths.dundee.ac.uk/~dpontin/index.html>

Dr David Seery

Department of Physics and Astronomy, University of Sussex

David Seery is a theoretical cosmologist whose work combines high-level technical ability with deep physical insight. He is a recognised world expert in the subject of cosmic non-gaussianity, which seeks to fully quantify the statistical properties of the large-scale Universe, his work being distinguished by his mastery of both the quantum mechanical and relativistic aspects of the topic. His highly-cited early papers on non-gaussianity from cosmic inflation models are seminal and initiated the field of systematic study of non-gaussianities from inflation. More recently he has contributed innovative new techniques which allow accurate numerical computation of the dynamical evolution of non-gaussianities. This work is of direct relevance to major ongoing projects, including the European Space Agency's Planck Satellite which will report its first cosmological results in early 2013.

Economics

Professor Michael Elsby

School of Economics, University of Edinburgh

Mike Elsby's research focuses on the interface between macroeconomics and labour economics, with a particular emphasis on developing a better understanding of high and volatile unemployment rates in developed economies from both theoretical and empirical perspectives. His recent work has examined the measurement of labour market flows over the business cycle and across firms, the economics of labour market adjustment costs, the role of trend wage growth on long-term increases in joblessness, and the aggregate labour market effects of downward rigidity in wages. His research is characterised by elegant and insightful theoretical models coupled with careful and detailed analysis of the data. He has already made a number of important contributions, providing a much richer and more comprehensive understanding of unemployment transitions and wage growth, and he has established himself as a leading expert in the theory and empirics of unemployment both in the US and the UK, as well as in other OECD countries.

<http://sites.google.com/site/mikeelsby/>

Professor Andrea Galeotti

Department of Economics, University of Essex

Andrea Galeotti has established himself as a worldwide leader in the relatively new field of network economics. Traditionally, economic models disregarded the details of how and why agents (consumers, firms, or other strategic actors such as politicians) associated themselves with each other. Network economics analyses both, how and why economic agents choose to interact with each other, and the consequences of the fine details of who knows whom and who deals with whom --- the network structure. Andrea Galeotti has made several important contributions to this new field. For example, he has made significant advances in our understanding of why and how some (few) people become influential, shaping the views of many. He has investigated how firms can optimally try to influence the influential in order to increase their sales. And he has analysed the important interplay of information exchange between voters and the disclosure choice made by politicians. His work shows great technical skill and deep insights into relevant problems.

<http://privatewww.essex.ac.uk/~agaleo/>

Dr Sophocles Mavroeidis

Department of Economics, University of Oxford

Sophocles Mavroeidis works on the interface of econometrics and macroeconomics. His research has focussed on the practical issues that arise in analysing and drawing inferences from economic data. As such it has had a substantial impact on both academics and policy makers. For example, two of his early publications were on the pitfalls that can arise when traditional econometric methods are used to estimate equations designed to capture the trade-off between output and inflation. More recently he has turned his attention to the statistical issues involved in estimating the models of the economy that are currently used by many central banks.

<https://sites.google.com/site/sophoclesmavroeidis/>

Dr Helen Simpson

Centre for Market and Public Organisation, University of Bristol

Dr Helen Simpson is a leading expert in the economics of firm location. Her work to date has examined the links between firms and universities and the importance of geographical co-location, whether providing employers with incentives to train low skilled workers brings benefits, the role of competition in the product market on innovation and productivity growth and how regional wage variation affects the decision of industry to locate. All these issues are crucial for knowing whether the millions spent by government on regional investment funds and subsidies to firms are good investments or simply a waste of tax payers' money. Dr Simpson's research in these fields is cutting edge and innovative, exploiting new sources of data and working with a range of other academics to provide new insights on old puzzles. She is also actively sought out by governments and policy makers for her knowledge and advice.

<http://www.bristol.ac.uk/cmpo/people/researchers/simpson/>

Dr Paul Surico

Department of Economics, London Business School

Dr Surico has a hugely impressive research portfolio examining the nature and causes of variations in macroeconomic activity. Such variations are often referred to as the business cycle, and Dr Surico's research focuses particularly on the effects of policy actions on the business cycle. His research shows a deep understanding of modern macroeconomic theory, while employing cutting edge statistical/econometric techniques to provide innovative empirical analyses of important issues. Influenced partly by a period working at the Bank of England, many of Dr Surico's publications are concerned with the effects of monetary policy. In addition, he has made important contributions to empirical modelling in contexts where responses to policy vary over sectors or individuals, and also where the nature of responses may change over time. There is every indication that his future work will continue to enhance our understanding of the complex macroeconomy.

<http://www.london.edu/facultyandresearch/faculty/search.do?uid=psurico>

<https://sites.google.com/site/paolosurico/>

Engineering

Dr Maria Ana Cataluna

School of Engineering, University of Dundee

Maria Ana Cataluna is one of the world's leading young engineers in the area of ultrafast photonics. She has pioneered important developments in the use of novel nanomaterials (quantum dots) leading to the demonstration of a new generation of extremely compact, low-cost and high-performance ultrafast lasers, only a few millimetres in length, by harnessing the discrete nature of the energy levels in quantum dots as an extra degree of freedom. Her research has shown major advantages and new functionalities of this technology, with a wide range of applications ranging from optical telecommunications to biomedical imaging

<http://www.dundee.ac.uk/elecengphysics/staff/mariaanacataluna/>

Dr Simon Cotton

Institute of Electronics, Electrical Engineering and Computer Science, Queen's University Belfast

Simon Cotton has gained an international reputation for his work on body-centric communications, which is presently one of the most rapidly-evolving areas of wireless communications. His work is focused on understanding how wireless signals propagate around the human body, from the body to nearby wireless infrastructure, and also from person to person. Using both advanced modelling and experimental measurements he has been able to characterise this form of propagation, and devised wearable communications systems which will lead to applications as diverse as telemedicine, precision athlete monitoring and new social networking experiences.

<http://www.ee.qub.ac.uk/wireless/>

Dr Antonio Gil

School of Engineering, Swansea University

Antonio Gil is distinguished for his pioneering work in computational mechanics, a branch of engineering concerned with modelling the behaviour of structures under load using computer methods. He has devised entirely new methodologies which provide important tools to model, understand and predict the behaviour of structures from the nano-scale through to macroscopic scales. While his key contributions are in fundamental engineering science, his work has a very broad range of applications in areas of societal benefit such as the design of heart valves and prosthetics.

Work at the nano-scale is centred on modelling the behaviour of grapheme sheets, a new and poorly understood material which promises transformative engineering applications. At larger scales, Dr Gil's work on the interaction of fluids with membranes has seen application in modelling cardiovascular heart valves and offers the prospect of exploitation as an efficient tool for clinical diagnostics and planning surgical interventions. Dr Gil's work is an outstanding example of innovative fundamental, but highly applicable, engineering research.

<http://www.swan.ac.uk/staff/academic/engineering/gilantonio/>

Dr Katsuichiro Goda

Faculty of Engineering, Bristol University

Katsuichiro Goda's research is focused on catastrophic earthquake risk management from both economic and societal viewpoints. He has made breakthrough achievements by developing spatial correlations models of peak ground motions for different sites which have enabled seismic loss estimation of spatially distributed buildings and infrastructure. He was recently selected as a member for the UK-based Earthquake Engineering Field Investigation Team (EEFIT) mission for the 2011 Tohoku earthquake in Japan. In the next few years, Goda plans to concentrate on two major research topics: Infrastructure risk management subjected to multi-hazards, such as earthquakes and deterioration; and Seismic hazard/risk assessment of great subduction earthquakes. Dr Goda's research is characterised by his original and ground-breaking approach to earthquake engineering responses at a systems level and its social relevance to vulnerable infrastructure at risk from seismic risks.

<http://www.bristol.ac.uk/civilengineering/person/katsu.goda.html>

Dr Karen Johnson

School of Engineering, Durham University

Karen Johnson works in the field of sustainable engineering hydro-geo-chemistry, looking at innovative ways to reclaim wasteland and improve soil health using sustainable remediation technologies. Her research involves many disciplines, leading to collaborations with physicists, engineers, chemists, biologists and importantly but unusually in addition social scientists. She and her collaborators have for instance identified significant health inequality around low quality land such as brownfield and community mental health. Karen has had excellent and sustained success in securing competitive grant funding from EPSRC and industry and stands out as one of the top engineering scientists of her generation to demonstrate impact of their research at a relatively early stage of their careers.

<http://www.dur.ac.uk/ecs/profiles/?id=2208/>

Geography

Dr Peter Adey

School of Physical and Geographical Sciences, Keele University

Adey has established himself as a leading figure in the growing field of mobility studies within human geography, most notably through his monograph 'Aerial Life: Spaces, Mobilities, Affects' (Wiley-Blackwell, 2010). He has pioneered studies that address the relationship between space, security and mobility, working across the sub-disciplinary divisions of cultural, political and transport geography. He has also brought his research strengths to bear on the field of resilience and had a public impact on emergency planning through his work with the National Archives public workshops. His growing international research reputation is testament to the significance of his work and places him at the cutting edge of mobility and security debates. His proposed work on evacuation politics aims to pull together his research interests in a timely and engaging manner that will be of relevance across the social sciences.

<http://www.keele.ac.uk/gge/people/adey/>

Dr Siwan Davies

School of Environment and Society, Swansea University

Siwan Davies has gained an international reputation for dating rapid climate changes over past 150,000 years using micro-tephra in sediments and ice cores. She has organised tephra records into internationally accepted chronological frameworks across ice cores, especially from Greenland, and marine sediments. The work opens up exciting new possibilities for examining seemingly intractable problems, like quantifying the leads and lags in the climate system. She is President of an INQUA focus group and her research has recently been rewarded with a European Research Council grant. She plans to build a research team that can integrate ice core and marine sediment records.

<http://www.swan.ac.uk/staff/academic/environmentandsociety/geography/daviessiwan/>

Dr Hayley Fowler

School of Civil Engineering and Geosciences, Newcastle University

Hayley Fowler is internationally recognised for her outstanding achievements and substantial body of work on climate change, most notably predicting the extremes of precipitation and their impacts on water resource systems. She is widely known for her contribution to UK climate forecasts through her work on the 'weather generator' which was used by DeFRA to provide daily climate change information in their 2009 UK Climate Projections. Her scientific contributions are much wider as she researches at the interface of climatology and hydrology which provides for a holistic approach to water resource impacts and leads to work that has direct policy implications hence funding from DeFRA, the Environment Agency as well as the EU and UKRCs. Another key contribution has been on downscaling techniques to augment regional climate change predictions and provide local hydrological scenarios. Probabilistic modelling research has been coupled to hydrological impacts analysis including the extremes of flood risk and drought. In effect she has been able to bridge the gap between climate modellers and users of climate change information generated from climate models.

<http://www.staff.ncl.ac.uk/h.j.fowler/index.htm>

Dr Simon L Lewis

School of Geography, University of Leeds

Simon Lewis conducts research to understand the structure and function of tropical forests, especially with regards their role in the global carbon budget. He has gained an international reputation for testing significant hypotheses using different lines of evidence from Africa and Amazonia, including long-term inventory plots. He calculated the effects of drought on Amazonian forest carbon budgets and showed that carbon storage in African forests was increasing. He has organised the only ground-based forest monitoring network in Africa and currently holds a Royal Society University Research Fellowship. He plans to expand the African network, improve the forest database, provide new carbon balance estimates to the IPCC, and investigate future changes in forest biodiversity.

<http://www.geog.leeds.ac.uk/people/s.lewis/>

Dr Simon Reid-Henry

School of Geography, Queen Mary, University of London

Simon Reid-Henry has a surprisingly broad repertoire for a young academic, having undertaken important research on topics ranging from contemporary geopolitics, to economic geography, to the geography of science and development – across to the politics of revolutions. He has also carried out important internationally relevant work disputing the legal arguments for detention at Guantanamo Bay. This research invariably combines history with geography. He has a successful track record of book publication, is a regular and incisive contributor to national and international debates, and he has written for a broad public audience as well as academic specialists. He is a Geographer and writer more widely, of both outstanding potential and demonstrable achievement.

<http://www.geog.qmul.ac.uk/staff/reidhenrys.html>

Modern European Languages and Literature

Dr Anthony Bale

Department of English and Humanities, Birkbeck, University of London

Anthony Bale has written copiously on Medieval English literary and religious culture. In his first monograph, which received two prizes, he revealed the dynamics of anti-Semitism in England between 1350 and 1500 across a whole range of texts, institutions, and devotional practices. In the second, he analysed the aesthetic function of images of violence perpetrated by Jews, highlighting the centrality of pain and persecution in both Christian and Jewish religious culture. His multi-faceted study of anti-Semitism resists easy generalisations and probes the aesthetic and emotive component of anti-Semitic imagery. In addition to a generous series of articles, he has published two edited volumes and is completing a new scholarly translation of Mandeville's *Book of Travels*. He is currently engaged in an analysis of the imaginary re-fashioning of the Calvary in post-Crusade Jerusalem, which promises to shed fascinating light on the way Western countries have shaped the Holy Land, with lasting consequences that continue to affect interactions between faith communities in the present.

<http://www.bbk.ac.uk/english/our-staff/full-time-academic-staff/bale>

Dr Lindiwe Dovey

Department of Languages and Cultures of Africa, SOAS, University of London

Lindiwe Dovey has been awarded a prize for the breadth and acuity of her comparative research into African postcolonial audiovisual adaptation. She focuses upon adaptation from francophone and Anglophone literary and non-literary sources (including theatre, opera and dance) into a range of audiovisual media (film, television series and screen installations) as a powerful global process of rehistoricisation of cultural heritage. Her 2009 monograph *African Film and Literature: Adapting Violence to the Screen* explored adaptation as a vehicle of the critique of contemporary violence in two of the major spheres of current African film-making, francophone West Africa and post-apartheid South Africa; ongoing and future work will expand this focus geographically into new African contexts and beyond. A significant strand of Dr Dovey's work to date has been empirical: interchange with African film directors, an interest in the public reception of audiovisual adaptations and her own close involvement in the organisation and programming of African film festivals. One of her most striking research priorities is the promotion of serious scholarship on the centrality of film festivals to the birth and conceptualisation of African cinema.

<http://www.soas.ac.uk/staff/staff36139.php>

Dr Kirsty Hooper

School of Cultures, Languages, and Area Studies, University of Liverpool

Kirsty Hooper works at the interface between three key fields in Hispanic Studies: women's and gender studies, Galician studies, and studies of the construction of Spanish national identity. She is engaged in the transnational study of minorities, most significantly with a focus on the culture and literature of Galicia in north-west Spain. Her two monographs, one on Sofia Casanova, a Galician expatriate who lived in Poland and Russia, and the other on cultural relations and the Anglophone world, have made serious contributions to this emerging research area. Her current projects – a volume on Galicia in the British popular imagination and a counterpart volume on the British imagination of Spain's plural cultures – mark a broadening of interest, and maintain her commitment to transnational studies. She is energetic and productive, notable for breadth, rigour and theoretical sophistication. She has a prodigious output for one so young, with an extraordinary capacity for initiative, and is already a well-known international figure, central to the networking research relations between Spain, the UK and the US.

<http://www.kirstyhooper.net/>

Dr Ben Hutchinson

School of European Cultures and Languages, University of Kent

Ben Hutchinson has published widely on German, French and English literature. His first book, *Rilke's Poetics of Becoming* (2006), looked closely at the grammar and syntax of Rilke's early poetry to show how its thematic concerns were expressed through stylistic details. This concern with style continued in his second book, written in German during his tenure of a Humboldt Fellowship at the Deutsches Literaturarchiv at Marbach, W.G. Sebald: *Die dialektische Imagination* (2009), based also on examining Sebald's personal library and his marginalia. His recent *Modernism and Style* (2011) relates the concept and practice of literary style in Anglo-America, French and German modernism to impulses from philosophy (Schopenhauer and Nietzsche). Besides publishing widely, he is active in organising international conferences, and has helped powerfully to energize a strong team of mostly young scholars in comparative literature in Kent.

<http://www.kent.ac.uk/secl/german/staff/hutchinson.html>

Dr Robert Macfarlane

Faculty of English, University of Cambridge

Robert Macfarlane is the author of a wide-ranging scholarly study of the relationship between originality and plagiarism in the nineteenth century: it demonstrates that modern ideas of a sharp opposition between creation and borrowing cannot usefully be applied to authors such as George Eliot, Dickens and Oscar Wilde. Whilst completing this work, he also published *Mountains of the Mind*, a highly unusual mix of cultural history (asking why people love mountaineering and when did the obsession emerge?) with biography (notably of George Mallory) and with personal passion. Praised by critics as 'elegant', 'magnificent' and, perhaps most relevant to the remit of the Philip Leverhulme Prize, 'genre-busting', it won three of Britain's most prestigious literary prizes: Guardian First Book Award, the Somerset Maugham Award, and the Sunday Times Young Writer of the Year Award.

Macfarlane's third book, *The Wild Place* continued in the same vein, as the author recorded his quest to find the last forms of wilderness in the 'denatured' archipelago of the British Isles. Robert Macfarlane is the most eloquent of the young voices that are enabling literary study to make a contribution to our urgent modern debates about environmental crisis.

<http://www.emma.cam.ac.uk/teaching/fellows/display/?fellow=172>

Performing and Visual Arts

Dr Ed Bennett

Composition Department, Birmingham Conservatoire

Ed Bennett is a leading young composer, whose work has been commissioned and performed by a wide range of major artists and ensembles, including the BBC Symphony and Philharmonic Orchestras, RTE National Symphony Orchestra of Ireland, the Ulster Orchestra, the London Sinfonietta and Sound Intermedia, Fidelio Trio and Berlin Percussion Ensemble. His music explores three main areas of creative innovation: the integration of live interactive electronics with amplified instruments, improvisation (including his ongoing collaboration with saxophonist Paul Dunmall), and multi-disciplinary work with several distinguished choreographers and visual artists, including Marcel Dzama, Juneau Projects and Ann Van den Broek. He also leads his own performing ensemble Decibel which he uses as a medium for exploring and developing new work.

<http://www.edbennett.co.uk/>

Dr Helen Freshwater

School of English Literature, Language and Linguistics, Newcastle University

Helen Freshwater is one of the most dynamic and thoughtful of the new generation of UK dramaturgs. Dramaturgy as a nominated field of study is still relatively young in the UK; at its best it provides a vibrant interchange between professional practice and academic study and it is in precisely this cross-over that Dr Freshwater stands alone. There are almost no theatre academics in the UK who can claim that one of their publications has shaped an award-winning play, and very few rehearsal room dramaturgs with Dr Freshwater's academic credentials. Her proposed research project, combining as it does an exploration of the cultural context of childhood on stage with an examination of the actual practice of the employment of child performers in commercial theatre, epitomises this synthesis of the contextual with the practical, which is dramaturgy at its most valuable

Ms Esther Johnson

Media Arts, Sheffield Hallam University

Esther Johnson is a filmmaker and photographer whose works discover unexpected, emotionally resonant stories in the ordinary, the neglected and the forgotten. In this way her films and photographs quietly celebrate eccentric and marginal figures – like obsessive wireless radio collector Gerald Wells, the subject of her 2010 film *Analogue Kingdom*. Central to her films is a keen attention to the visual, and especially sonic, texture of objects, places and people (an interest also given expression in Ms Johnson's audio works for radio and gallery spaces). Through this combination of precisely rendered details and evocative stories, Johnson creates films that are once densely poetic and remarkably accessible. Her work has been exhibited and recognized by a wide range of international festivals and museums, including Tate Modern, the London Film Festival, the Istanbul Biennale, and the Museo de Arte Moderna, Rio de Janeiro.

<http://www.blanchepictures.com/>

Ms Phoebe Unwin

The Slade School of Fine Art, University College London

Phoebe Unwin has gained a prestigious Philip Leverhulme Award due to the clarity of vision which is expressed through her work in paint. She has gained wide international recognition at a precocious age and substantial esteem from her peers. Recently, she became an active member of a research-intensive department at a prominent art school. Her existing work as a painter is already sought after by public and private collections internationally. Her worthiness of an award was further enhanced by her potential to become a truly significant voice in the future of British painting.

Ms Emily Wardill

Central Saint Martins College of Art and Design

Emily Wardill is a remarkable filmmaker and visual artist whose work is the product of intensive and rigorous research. Emily's work addresses pivotal issues of our time, in particular through its investigations of cognitive science, language, representation and politics. Her research looks at the relationship between ideas and their materialisation and her work has had an impressive impact, with numerous high-profile exhibitions of her work in film. Emily plans to use the prize funds to contribute to the production of a new film work, enhancing the thematic strands of her work to date.