Philip Leverhulme Prizes
Gala Dinner 2019

PROGRAMME

Welcome to this celebration of the Philip Leverhulme Prize Winners for 2018

The Philip Leverhulme Prizes commemorate the contribution to the Trust made by the Third Viscount Leverhulme, grandson of William Hesketh Lever, the founder of the Trust. They are awarded to recognise the achievements of outstanding researchers whose work has attracted international acclaim and whose future career is exceptionally promising. The awards' recipients over the years bear eloquent witness to how the UK has benefited from being open to academic talent from around the globe. Many previous winners have gone on to become distinguished leaders in their fields – and to secure further funding from the Trust. The 2018 winners have been involved in ground-breaking research and we congratulate them and celebrate their achievements tonight.

— Niall FitzGerald KBE DSA
Chairman of the Leverhulme Trust

Order of proceedings

6.30PM Wine reception

7.15PM Welcome
— Niall FitzGerald KBE DSA
Chairman of the Leverhulme Trust

7.30PM First course

7.50PM Presentation of Philip Leverhulme Prizes 2018
— Martin Rees
Astronomer Royal

8.10PM Dinner service resumes

8.30PM Presentation of Philip Leverhulme Prizes 2018
— Martin Rees
Astronomer Royal

8.45PM Closing remarks
— Martin Rees
Astronomer Royal

8.50PM Dinner service resumes

10.00PM Carriages

About the Philip Leverhulme Prizes 2018

Thirty prizes are awarded every year to mark the achievements of outstanding researchers across a range of disciplines. The winners each receive £100,000 to be used over a two or three year period for any scholarly purpose which can advance the prize-holder's research.

In 2018, prizes were awarded to researchers in the fields of Classics, Earth Sciences, Physics, Politics and International Relations, Psychology, and Visual and Performing Arts.

Classics

Dr Amin Benaissa

Faculty of Classics
University of Oxford

Amin Benaissa is one of three General Editors of the world-renowned *Oxyrhynchus Papyri* at Oxford. He is a wide-ranging classical scholar who combines the technical skills of papyrology with the literary and historical acumen required to place the texts and documents he studies in their broader cultural and historical contexts. He has edited over a hundred literary texts and documents from various collections. He is known for his 2012 work on *Rural Settlements of the Oxyrhynchite Nome*, an extensive resource for the study of the historical geography and rural society of Graeco-Roman Egypt. In 2018 he published his second major book, an edition with translation and commentary of the fragments of the first-century CE epic poet Dionysius. Dr Benaissa's next project, an intellectual biography of Apion, promises to be a major contribution to the study of the literary and religious culture of Roman Alexandria.

Dr Myles Lavan

School of Classics
University of St Andrews

Myles Lavan's monograph, *Slaves to Rome: Paradigms of Empire in Roman Culture* (Cambridge University Press, 2013), explores metaphors of enslavement in Latin texts to demonstrate how the Roman elite construct their relationship with their Imperial subjects as one of control by a superior culture. He thus challenges the prevailing scholarly consensus which regarded the early Roman Empire as committed to an integrationist mission. In this and other works, Dr Lavan brings to bear the expertise of a sensitive critic of Latin literature, combined with an historian's control of both source-based and model-based methodologies. His quantitative and probabilistic approach to long-standing problems in Roman history shows what can be done with computational models in the study of the pre-modern world, and will be developed further in forthcoming publications.

Dr Alex Mullen

Department of Classics and Archaeology
University of Nottingham

Alex Mullen's landmark study *Southern Gaul and the Mediterranean* (2013) transformed the field. Analysing a broad range of archaeological material as well as written texts, she offers an integrated account of cultural influence and cultural change across a very extended period, emphasising the importance of contact between Southern Gaul and Italy from an early date. Dr Mullen has also made contributions to the study of language use in Britain in the pre-Roman and Roman periods. Her innovative ERC project on the Latinization of the Northwestern Roman provinces (LatinNow) builds on this phenomenal range of expertise, bringing together a group of specialists to study a still broader geographical area, in order to shed new light on the relationship between language use and identities across a broad swathe of the Roman Empire.

Dr Amy Russell

Department of Classics and Ancient History
Durham University

Amy Russell's first book on the *Politics of Public Space in Republican Rome* won the 2017 C.J. Goodwin Award of Merit. Making a pioneering use of spatial theory, it showed that while it has been recognised that the language of the 'public' helped shape the construction of the 'private' in domestic space, reciprocally the 'private' intruded on 'public' space in complex and revealing ways. Her forthcoming publications are a monograph, *Senatorial Monuments and Political Identity*, and an edited volume on *The Roman Republic and Political Culture*. In 2019, she is leading a Major Project at Durham's Institute of Advanced Study, bringing together an interdisciplinary team to explore how 'The People' as a unified political entity is defined and operates. Her new project will enlist new institutional theory in a major re-examination of the Populus Romanus.

Dr Shaul Tor

Departments of Classics and Philosophy
King's College London

Shaul Tor's work to date has focused largely on Presocratic writers, and is marked by its combination of meticulous textual analysis and broad creative imagination. In his major monograph, *Mortal and Divine in Early Greek Epistemology*, and in a clutch of articles, Dr Tor sets the surviving fragments of the Presocratics in their wider cultural context, reading Xenophanes, Parmenides and Heraclitus alongside the poet Hesiod, and challenging the assumption that, in the Greek context, critical reasoning and divine revelation are incompatible. His work can take single-sentence fragments and entirely recast our understanding of their authors. It has made a major contribution to the 'theological turn' in the study of Greek religion. Further articles develop new ways of understanding Hellenistic Pyrrhonian Scepticism and the appeal of ancient Pyrrhonism in relation to central questions in contemporary philosophy.

Earth Sciences

Dr Juliet Biggs

School of Earth Sciences
University of Bristol

Juliet Biggs is a geophysicist who uses satellite geodesy to investigate volcanic and tectonic processes. Having developed a method to use satellite radar to measure rates of active fault movement, she widened her focus to volcanic processes. She developed methods to identify, measure and model deformation in satellite-based global surveys of volcanoes and to integrate other observations. Such systematic work enabled her to quantify links between deformation and eruption. Dr Biggs has shown that few eruptions occur without observable deformation and that many volcanoes hitherto thought to be dormant are undergoing deformation. Her work has led to the establishment of the Global Deformation Database Task Force. A foremost researcher on volcano geodesy she is developing machine-learning algorithms to identify deformation that might indicate pending eruptive activity. She also works closely with space agencies and volcano observatories in developing countries.

Dr Stephen Brusatte

School of Geosciences
University of Edinburgh

Stephen Brusatte is an earth scientist who is transforming our understanding of evolution on long timescales. Working mostly in the field of dinosaur palaeobiology, he has contributed a series of new insights into the nature and drivers of major evolutionary transitions. His work has shown that the evolution of birds from dinosaurs was in fact a gradual process, but that once flight was established a rapid burst in bird development was enabled. This is now providing a model for transitions in other groups. Dr Brusatte's work is characterised by creative approaches that draw on concepts and techniques from diverse areas of biology, geology and computing, and include rigorous numerical approaches to large datasets, and use of new imaging techniques. Another hallmark is his approach to public engagement, including advisory roles with the BBC and National Geographic, and popular science books.

Dr Heather Graven

Department of Physics and Grantham Institute
Imperial College London

Heather Graven is a climate scientist who has pioneered the application of radiocarbon in studies of the global carbon cycle; for example, by quantifying the emissions of atmospheric carbon dioxide and methane from human activities and by placing new and independent constraints on the oceanic uptake of atmospheric CO_2. Her research on understanding the relationship between human activities, the global carbon cycle and climate change has been embraced by the IPCC, on behalf of which she helps to organise the biogeochemical Earth System Model intercomparison experiments to inform future assessment reports. Dr Graven will use this award to quantify the uptake of CO_2 by terrestrial ecosystems with an emphasis on revealing and understanding the mechanisms at play. She also conducts a wide range of outreach and media activities and in doing so has become an ambassador for climate change research.

Dr Babette Hoogakker

Institute of Life and Earth Sciences
Heriot-Watt University

Babette Hoogakker has expertise in palaeo-oceanography, especially in understanding circulation and chemistry of past oceans and links to CO_2 in the geological past. She pioneered new methods to reconstruct oxygen concentrations in past oceans using isotopic measurements from fossilised marine *foraminifera*, a great achievement since the assessment of past oxygen levels in the ocean has proved exceptionally challenging. Her work highlighted changes in the oxygen content of ocean waters during glacial-interglacial periods at the time of the last ice age, critical for understanding the link with the drawdown of atmospheric carbon dioxide in the course of glacial episodes. Dr Hoogakker is known for her pioneering new methods for understanding climate change and will focus part of her future research on studies of organic carbon in *foraminifera* to understand past ocean productivity, carbon cycling and climate change.

Dr Amanda Maycock

School of Earth and Environment
University of Leeds

Amanda Maycock is a renowned climate scientist who uses a combination of atmospheric measurements and numerical models to understand interactions between atmospheric chemistry, radiative transfer and climate dynamics. Her work has led to substantial developments in our understanding of the role of the stratosphere in the climate system, including how changes in the concentration of stratospheric trace gases affect global and regional surface climate. Dr Maycock has taken leading roles in several international science programmes within the atmospheric sciences, establishing and developing new areas of investigation. She contributes to the International Scientific Assessment of Ozone Depletion, which monitors the successes of the 1987 Montreal Protocol, and the IPCC, which informs the multilateral discussions under the UN Framework Convention on Climate Change.

Physics

Dr Alis Deason

Department of Physics
Durham University

Gaining an insight into our place in the Universe is one of the major challenges of modern astronomy and galaxies are one of its key building blocks. Alis Deason's pioneering work has shown how our own galaxy, the Milky Way, and its nearest neighbour, Andromeda, provide a unique opportunity to study galaxy formation in action. Dr Deason pioneered studies of the Milky Way halo using large survey data coupled with cosmological simulations. She was able to show that the Milky Way has probably experienced just one big accretion event in the past and overall has had fewer large mergers than would be typical. Her work on galactic halos has wider significance in that they may contain the keys to understanding the nature of the dark matter of which they largely consist.

Dr Simone De Liberato

School of Physics and Astronomy
University of Southampton

Simone De Liberato is a physicist who works in solid-state cavity quantum electrodynamics. He has played a substantial role in developing the research field of ultra-strong light-matter coupling, starting from theoretical analysis but leading to collaborative world-leading experiments with a number of other groups. In addition to his prediction of the breakdown of the Purcell effect he has anticipated a wide range of related phenomena that are now being pursued experimentally. His research on intersubband polaritons and on localised phonon polaritons is pointing towards a new generation of mid-infrared and terahertz source and devices. His broadly inclusive and innovative approach are also evident in his public engagement work (including with the BBC), in his co-founding several successful technology businesses, and in his role as an advocate for entrepreneurship amongst scientists.

Dr Katherine Dooley

School of Physics and Astronomy
Cardiff University

Katherine Dooley has played a key role in the development of instrumentation for the LIGO interferometers that made the monumental discovery of gravitational waves from merging black holes and colliding neutron stars. She was one of a small handful of scientists in residence at the sites who carried out the creative work – in quantum optics, sensing and control – needed to commission the low-noise detectors. Dr Dooley's early work was critical to increase the sensitivity and stability of the LIGO and GEO600 laser interferometers and achieve record strain sensitivities. Her Prize will support a quest to develop challenging new technologies that will increase the length of stable observational runs that are possible with interferometric gravitational-wave detectors.

Professor Rahul Raveendran Nair

School of Chemical Engineering and Analytical Science
and the National Graphene Institute
University of Manchester

Rahul Raveendran Nair is a materials physicist who has made pioneering contributions to our understanding of the physical properties of graphene and other two-dimensional materials. His discovery that the optical absorbance of graphene is 'quantised', given by the product of the fine structure constant, α, and π came as a surprise and furthered our understanding of the optoelectronic properties of graphene.
Another remarkable discovery of his research is the superpermeable water flow through graphene oxide membranes. This work has led to new uses of graphene and graphene oxide in tuneable molecular sieving and is leading to the development of next-generation smart membrane technologies for applications such as water filtration, organic solvent nanofiltration, seawater desalination and in artificial biological systems.

Dr John Russo

School of Mathematics
University of Bristol

John Russo has combined powerful computational and theoretical techniques to address a suite of fundamental problems in soft condensed matter, and especially the structure of phase changes. In many cases these have challenged long-held assumptions, such as his finding that orientational order, rather than density, triggers crystallisation of hard and soft spheres. He has also contributed to the fundamental understanding of the glass transition in two and three dimensions. Applying aspects of this thinking to a substance as familiar as water, he and his collaborators have identified a hitherto unknown metastable form of ice, and explained some of waters many anomalous behaviours with a novel two-state model of its local structure. These ideas and methodologies create an opportunity to deepen our understanding of nucleation, in partnership with strong soft matter experimental groups worldwide.

Politics and International Relations

Dr Ezequiel González Ocantos

Department of Politics and International Relations
University of Oxford

In Latin America, judges have become key architects of fundamental rights. This represents a major transformation of the role of the judiciary in this region, one with profound implications for the distribution of power in society. In *Shifting Legal Visions: Judicial change and human rights trials in Latin America* (Cambridge University Press, 2016), Ezequiel González Ocantos provides a rigorous explanation of this transformation and its implications. This research has made a substantial contribution to debates about the nature of judicial power, the role of social mobilisation and the diffusion of new paradigms of rights adjudication in shaping the behaviour of courts. It has also informed briefs filed by international NGOs before the Inter-American Human Rights Commission. His future research will explore the consequences of another major transformation in the political involvement of Latin American courts: the anti-corruption judicial activism that has led to the resignation (Guatemala 2016), impeachment (Brazil 2016), indictment (Argentina 2017), and conviction (Brazil 2018) of former and sitting presidents.

Professor Chris Hanretty

Department of Politics and International Relations
Royal Holloway, University of London

Chris Hanretty is a leading scholar of public opinion, representation, legislative behaviour, and in the use of advanced statistical methods to study these phenomena. He has published influential work on non-majoritarian institutions, in particular quantitative work on courts and broadcast media. He has shown a relationship between appointments and judicial behaviour in West-European constitutional courts as well as the lack of such a link in the UK. His main contribution is in developing techniques for estimating constituency opinion in the UK, especially non-survey data, which can be used to understand a variety of problems of representation, such as MP voting patterns, as well as forecasting election outcomes. He is best known for having produced estimates of how each Westminster constituency voted in the 2016 EU membership referendum, estimates which have been cited repeatedly in parliamentary and public debates. He will be able to use the funds from the Prize to continue his research into constituency opinion by matching new data and estimating refined statistical models.

Professor Sophie Harman

School of Politics and International Relations
Queen Mary, University of London

Sophie Harman is established in three different disciplines, international relations, global health and the comparative political economy of development. In doing so she has built an original research agenda that critically examines international policy towards fighting HIV/AIDS, international development in Africa and gender and visibility. Her use of film-making as a tool of social science research is yet more evidence of innovation and originality. Her research has produced a series of ground-breaking journal articles, and research driven single authored and jointly written books. Her work has pioneered much needed research into hitherto understudied aspects of the global south and has a strong public engagement component. In 2018 she was awarded the Joni Lovenduski Prize for outstanding professional achievement by a mid-career scholar by the Political Studies Association, and in 2019 was nominated for the BAFTA for outstanding debut by a British writer, director or producer.

Dr Lauren Wilcox

Department of Politics and International Studies
University of Cambridge

Lauren Wilcox has drawn upon and added to feminist theories of embodiment to make an important contribution to our understanding of political violence within the framework of international relations. In doing so, she has opened up a surprisingly neglected area that will now benefit from her pioneering work, encouraging further study of the place of the embodiment of the subject in war and critical security studies. Her work in this field has already had significant impact and has helped to shape new debates in feminist and critical international relations. Building upon this, but taking some of its insights further, she is presently working on a project concerning 'war beyond the human', exploring the significance of the current posthuman moment as it affects the technologies, but also the ethics of war – and above all provoking us to think how we should understand these processes and the residues of the categories of thought with which they have been associated.

Professor Lea Ypi

Department of Government
London School of Economics and Political Science

Lea Ypi has made significant contributions to a number of debates in contemporary political theory. In her work on global justice, *Global Justice and Avant-Garde Political Agency* (OUP), she has developed a distinctive theory of cosmopolitanism that sheds new light on the relationship between political theory and political practice. Her most recent work, *The Meaning of Partisanship* (OUP, co-authored with Professor Jonathan White), explores the role of political parties in public life. This is a topic that has been unduly neglected by political theorists. *The Meaning of Partisanship* has created and defined a new normative agenda, stimulating others to debate these vital issues. In addition, Professor Ypi has made contributions to the interpretation of Kant and Marx, the ethical issues surrounding immigration, and the nature and implications of colonialism, among other topics. She is a winner of the British Academy Brian Barry Prize for excellence in Political Science.

Psychology

Professor Emily S Cross

Institute of Neuroscience and Psychology
University of Glasgow

Emily Cross has established herself as a leading authority in social robotics, working at the cutting-edge of a rapidly expanding field. Her research interests envelope the arts, science and technology and she is equally comfortable in and between domains that some regard as antithetical. She uses theory and methods from a number of disparate fields, including social cognition, cognitive neuroscience, empirical aesthetics and robotics. She addresses fundamental basic scientific questions about perception, action and the perception of action, exploring the role of experience and expectation in kinaesthetic empathy. The relevance of this for 'real world' issues is both obvious and profound. Professor Cross already has a strong international reputation and is regularly invited to consult, advise and give keynote presentations and lectures around the world.

Dr Steve Fleming

Wellcome Centre for Human Neuroimaging
University College London

Steve Fleming is an outstanding scientist whose work addresses the psychological processes and neural systems that support metacognition. He approaches this topic in an interdisciplinary fashion, using a range of psychological, physiological and neuroimaging methods, and has been keen to draw out the clinical implications of his work. Dr Fleming shaped the burgeoning field of metacognitive neuroscience a few years ago, by co-editing the first book on the topic with Chris Frith (*The Cognitive Neuroscience of Metacognition*, 2014). He often tackles scientific problems that have been thought to be purely philosophical, and his future research plans include explorations of links between metacognition and consciousness.

Dr Claire Haworth

School of Experimental Psychology
University of Bristol

Claire Haworth is an exceptionally talented psychologist, and a rising star in the field of Behavioural Genetics. In her early career, she was funded by two consecutive fellowships; an interdisciplinary fellowship from the MRC and ESRC, and a research fellowship from the British Academy. Her research focuses on mental health and wellbeing and the dynamic interplay between genetic and environmental influences. Her ground-breaking work has demonstrated how genetic influences can change as we get older or when we are exposed to different social and environmental conditions. Results of Dr Haworth's studies highlight the ways in which genetic risks impacting on mental health might be mitigated by behavioural interventions. She was awarded the British Psychological Society's Spearman Medal in 2017, for outstanding published work in psychology.

Dr Harriet Over

Department of Psychology
University of York

Harriet Over completed her postdoctoral training at the Max Planck Institute for Evolutionary Anthropology in Leipzig and since then has established herself as an acknowledged expert on social learning. Her research focuses on how children learn about the social world through observation and imitation. Using a combination of creative laboratory experiments and observational research in naturalistic settings, drawing on anthropology as well as developmental and social psychology, her work has moved the study of imitation away from a focus on cognitive, instrumental outcomes to recognising its pivotal role in building social relationships and understanding intergroup relations. She has published in leading journals in social, developmental and comparative psychology, won a number of prestigious awards and been successful in attracting substantial external funding.

Professor Nichola Raihani

Department of Experimental Psychology
University College London

Nichola Raihani's research explores the causes and consequences of variation in social cognition and behaviour, both from a proximate psychological perspective and from an ultimate evolutionary perspective. She undertook a four-year research fellowship at the Institute of Zoology, and a Royal Society University Research Fellowship prior to her appointment as Professor in 2017. Her work is interdisciplinary, drawing on insights from social, evolutionary, and clinical psychology, as well as evolutionary biology, behavioural economics and anthropology. Professor Raihani has developed an international network and publishes regularly both in popular science outlets and high quality academic journals. A major focus of her research now is to explore the socio-cognitive and behavioural consequences of variation in paranoid ideation.

Visual and Performing Arts

Dr Erika Balsom

Department of Film Studies
King's College London

Erika Balsom has established an international reputation for cutting edge research, especially in the interdisciplinary spaces her work has opened up between film studies, art history, aesthetics and ethics. Her first book, *Exhibiting Cinema in Contemporary Art* (Amsterdam University Press, 2013), examines the transformations of cinema after digitisation. Her second major monograph, *After Uniqueness: A History of Film and Video Art* (Columbia University Press, 2017), took up related questions of distribution, circulation and reproducibility. She has further co-edited an influential anthology *Documentary Across Disciplines* (MIT Press, 2016). Dr Balsom has also been one of the youngest scholars invited to deliver a prestigious Kracauer Lecture at Goethe Universität, Frankfurt. In 2017, she was invited to be film curator in residence at the Govett-Brewster Art Gallery in New Zealand, resulting in her commissioned essay *An Oceanic Feeling: Cinema and the Sea* (New Plymouth, New Zealand: Govett-Brewster Art Gallery/Len Lye Centre, 2018).

Dr Daisy Fancourt

Department of Behavioural Science and Health
University College London

Daisy Fancourt previously worked as a professional pianist while completing her doctoral thesis in Psychoneuroimmunology. Since, her research has explored the psychological and physiological impact of the arts on our health. She has worked as Arts Manager at the Chelsea and Westminster Hospital, and published the first practical textbook, *Arts in Health: Designing and Researching Interventions* (Oxford University Press, 2017). Her project over the next few years is focused research that combines diverse disciplinary approaches to explore the impact of arts engagement for individuals and society. Dr Fancourt's work will analyse national data to explore *how* arts engagement across the lifespan is linked with mental health/cognition/wellbeing, the interrogation of why we see these results, and research to support the scaling up of successful projects. Her work includes collaboration with UK Arts Councils, Public Health England, NHS England and the World Health Organisation.

Dr Ian Kiaer

The Ruskin School of Art
University of Oxford

Ian Kiaer combines a rigorous academic career with considerable international standing as an artist. His work researches architectures and specific buildings that act as resonant carriers for meaning. His process and practice takes form in extended mixed media, including painting, drawing and wall texts, juxtaposed and installed with projected film and photographs, architectural models and adapted objects, bringing together delicate and vital correspondent elements and traces to act as carriers of often-fractured narratives – charged to discover questions of wholeness and permanence. His new work will research the brutalist structure of a particular panoramic restaurant in Lisbon. Designed by Chaves de Costa, it is a building that has moved from a model of luxury during the Estado Novo dictatorship, to its present abandoned state as a site for graffiti, and parkour.

Dr Peter McMurray

Faculty of Music
University of Cambridge

Peter McMurray is an ethnomusicologist, media artist and lecturer at Queens' College, University of Cambridge. His research focuses on music, sound and ritual in contemporary Islam with special emphasis on migration and refugee movements in Turkey, Syria and Iraq. He is currently completing a book and media project entitled *Pathways to God; The Islamic Acoustics of Turkish Berlin*, whilst other recent publications have covered the influence of 'viral' music videos on social media channels, the importance of tape in the development of sound recording history, and the use of cartography in the mapping of sound and location. Dr McMurray plans to expand his research into further work looking at the ways music, sound, noise and silence play significant roles in the lives of refugees.

Dr Tiffany Watt Smith

Department of Drama
Queen Mary, University of London

Tiffany Watt Smith's research in emotions, the body and performance draw on her experience as a theatre director. She takes an interdisciplinary approach to the relationship between theatre and science. Her book *On Flinching*: *Theatricality and Scientific Looking from Darwin to Shell-Shock* (2014) has become a key reference point for scholarship in the history of emotions and theatre studies. Her next book, written for a general audience, *The Book of Human Emotions* (2015), argues for the importance of understanding the history and politics of our ideas about emotions, and has had an international reach. Dr Watt Smith's future project, on the performance of sleep, will offer original insights into the historical intersections between science, medicine and performance. She has a significant international and public profile, working regularly for broadcasting media, newspapers and journals, and on theatre projects that intersect with her research.

About the Trust

The Leverhulme Trust was established by the Will of William Hesketh Lever, the founder of Lever Brothers. Since 1925 we have provided grants and scholarships for research and education; today, we are one of the largest all-subject providers of research funding in the UK, distributing approximately £80m a year.

We award funding across academic disciplines, supporting talented individuals in the arts, humanities, sciences and social sciences. As well as substantial grants for research, we offer fellowships for researchers at every stage of their career, grants for international collaboration and travel, and support for the fine and performing arts.

The Leverhulme Trust is a charitable incorporated organisation.
Registered charity no. 1159154

LEVERHULME TRUST