

# Newton Advanced Fellowships 2015

The full list of recipients and their UK partners is as follows:

## Brazil

**Dr Henrique de Melo Jorge Barbosa**, University of Sao Paulo and **Professor Gordon McFiggans**, University of Manchester

*Measurements and modelling of anthropogenic pollution effects on clouds in the Amazon*

**Professor Marilia Buzalaf**, Bauru School of Dentistry, University of São Paulo and **Professor John Michael Edwardson**, University of Cambridge

*Identification of proteins conferring protection against dental erosion*

**Dr Helena Cimarosti**, Universidade Federal de Santa Catarina and **Professor Jeremy Henley**, University of Bristol

*SUMOylation: novel neuroprotective approach for Alzheimer's disease?*

**Professor Fernanda das Neves Costa**, Federal University of Rio de Janeiro and **Dr Svetlana Ignatova**, Brunel University

*Countercurrent chromatography coupled with MS detection: tracking the large-scale isolation of target bioactive compounds to be used as starting material for the synthesis of new drug candidates*

**Professor Pedro Duarte**, University of Sao Paulo and **Professor Sir David Hendry**, Nuffield College

*Recent History of Macroeconomics and the Large-Scale Macroeconometric Models*

**Dr Cristina Eluf**, State University of Bahia and **Dr Vander Viana**, University of Stirling  
*Corpus linguistics and teacher education: New perspectives for Brazilian pre-service teachers of English to speakers of other languages*

**Dr Fernanda Estevan**, University of Sao Paulo and **Dr Thomas Gall**, University of Southampton

*Affirmative Action in College Admission: Encouragement, Discouragement, and Social Mobility*

**Professor Marcio Ferreira**, Universidade Federal do Rio de Janeiro and **Professor Jane Langdale**, University of Oxford

*Towards crop improvement: manipulation of C4 photosynthesis*

**Professor Luciano Freschi**, University of São Paulo and **Dr James Hartwell**, University of Liverpool

*Functional genomics and hormonal regulation of Crassulacean acid metabolism (CAM) in a C4-CAM facultative species*

**Professor Erica Cristina Rocha Gorga**, Fundação Getulio Vargas São Paulo School of Law (Escola de Direito de São Paulo da Fundação Getulio Vargas) and **Professor Luca Enriques**, University of Oxford

*Shareholder Coalitions Across Countries: A Force for Good or Evil?*

**Professor Augusto Afonso Guerra Junior**, Federal University of Minas Gerais and **Professor Marion Bennie**, University of Strathclyde  
*Prospective cohort of patients, systematic review and deterministic-probabilistic record linkage from the databases: Brazilian National Health System (SUS), Belo Horizonte. Minas Gerais*

**Professor Carlo Patti**, Universidade Federal de Goiás and **Dr Benoit Pelopidas**, University of Bristol  
*Global Nuclear Vulnerability: the effects of the Cuban Missile Crisis on British, French and Brazilian nuclear policies*

**Dr Leonardo Marquez Pedro**, Federal University of São Carlos and **Professor Etienne Burdet**, Imperial College London  
*Technology-based assessment and training of bimanual manipulation*

**Dr Amedea Seabra**, Universidade Federal de São Paulo and **Dr Richard Weller**, University of Edinburgh  
*Nitric oxide donors to augment cutaneous nitrogen oxide stores*

**Dr Roberto Serra**, Universidade Federal do ABC (UFABC) and **Professor Irene D'Amico**, University of York  
*Quantum thermodynamics in many-body systems*

**Dr Eliana Sousa Silva**, Universidade Federal do Rio de Janeiro and **Professor Paul Heritage**, Queen Mary University of London  
*Someone to watch over me: new ways of understanding police, culture and the favela in Rio de Janeiro*

**Professor Carlos Thomaz**, Centro Universitario da FEI (Fundacao Educacional Inaciana) and **Professor Daniel Rueckert**, Imperial College London  
*Learning and extracting priori-driven representations of face images to understand the human visual recognition system*

**Professor Daniela Vaz**, Universidade Federal de Minas Gerais and **Professor Subhobrata Mitra**, Nottingham Trent University  
*The effect of attentional focus on movement coordination*

## China

**Dr Xuecheng Bian**, Zhejiang University and **Professor Jin Y. Ooi**, University of Edinburgh  
*Effect of particle shape, size and particle friction in granular solid flow in railway ballast*

**Professor Qin Chen**, Suzhou Institute of Nano-Tech and Nano-Bionics, Chinese Academy of Sciences and **Professor David Cumming**, University of Glasgow  
*Integrated Terahertz Sensors*

**Professor Gong Cheng**, School of Medicine, Tsinghua University and **Professor George Christophides**, Imperial College London  
*Mosquito C-type lectins facilitate dengue infection*

**Dr Xiang Cheng**, Union Hospital, Tongji Medical College of Huazhong University of Science and Technology and **Professor Ziad Mallat**, University of Cambridge  
*The protective role of activated Regulatory T Cells in myocardial ischemia/reperfusion injury and the study of its mechanisms*

**Dr Liang Gao**, National Astronomical Observatories, Chinese Academy of Sciences and **Professor Carlos Frenk**, Durham University  
*The formation of structure in a universe dominated by sterile neutrino warm dark matter: simulations and comparison with observations*

**Dr Longhua Hu**, University of Science and Technology of China (USTC) and **Professor Michael Delichatsios**, University of Ulster  
*Scaling and modeling of soot, heat feedback and burning rate of large scale hydrocarbon pool fires in presence of wind*

**Dr Xun Huang**, Peking University and **Dr Anurag Agarwal**, University of Cambridge  
*Theoretical developments and validations for new designs of acoustic cloak in turbulent flows*

**Dr Wenlin Li**, Second Military Medical University and **Dr Huiliang Li**, University College London  
*Towards rapid and efficient production of oligodendrocyte precursors from human pluripotent stem cells*

**Dr Jiang Liu**, Beijing Institute of Genomics, Chinese Academy of Sciences and **Dr Paola Oliveri**, University College London  
*Epigenetic control of development: Inheritance and reprogramming of parental DNA methylomes in sea urchins*

**Professor Wanqi Liang**, Shanghai JiaoTong University and **Professor Malcolm Bennett**, University of Nottingham  
*Molecular mechanism and hormonal control of tiller growth vigour in rice*

**Professor Gang Liu**, Institute of Metal Research, Chinese Academy of Sciences and **Professor John Irvine**, University of St Andrews  
*Designing layered photocatalysts with tailored properties for solar fuels*

**Professor Guangshuo Ou**, Tsinghua University and **Professor Jordan Raff**, University of Oxford  
*Dissection of molecular and cellular mechanisms of cilium assembly in *C. elegans* and *Drosophila**

**Professor Tao Shao**, Institute of Electrical Engineering, Chinese Academy of Sciences and **Dr Xin Tu**, University of Liverpool  
*Novel nanosecond-pulsed plasma/catalysis process for the conversion of methane into value-added fuels*

**Dr Jie Tang**, Tsinghua University and **Dame Wendy Hall**, University of Southampton  
*Discovering Object Patterns Arising from Heterogeneous, Evolutionary and Large-Scale Online Social Networks*

**Professor Andrew Teschendorff**, Chinese Academy of Sciences and Shanghai Institute for Biological Sciences and **Professor Stephan Beck**, University College London  
*Dissection of Intra-Sample Epigenetic Heterogeneity using Blind Source Separation Algorithms*

**Professor Fangwei Wang**, Zhejiang University and **Professor Jonathan Higgins**, Newcastle University  
*Development of small molecule inhibitors of the mitotic kinase Bub1*

**Professor Lin Wang**, Fudan University and **Professor Hugh Coe**, University of Manchester  
*Chemical analysis and precursor identification of secondary organic aerosols using FIGAERO-CI-ToFMS*

**Dr Xiaoqun Wang**, Institute of Biophysics, Chinese Academy of Science and **Professor Zoltan Molnar**, University of Oxford  
*Molecular and cellular mechanisms underlying neurogenic division of OSVZ progenitors in the mammalian brain*

**Dr Yang Wang**, Dalian Medical University and **Dr Judy Coulson**, University of Liverpool  
*Mechanistic study of the reduction of RBM4 in cancer and its role in regulating the oncogenic SRSF1*

**Dr Qi Yang**, Xuanwu Hospital, Capital Medical University and **Professor René Botnar**, King's College London  
*3.0T Magnetic Resonance Delayed Enhancement Vessel Wall Imaging in Patients with Type 1 and 2 Diabetes*

**Professor Qingzheng Yang**, Beijing Normal University and **Dr Roman Boulatov**, University of Liverpool  
*Stiff-stilbene powered photoactuation*

**Professor Xiangjiang Zhan**, Institute of Zoology, Chinese Academy of Sciences and **Professor Michael Bruford**, Cardiff University  
*New methods to study altitudinal adaptation on the Tibetan Plateau*

**Professor Mao Ye**, Dalian Institute of Chemical Physics, Chinese Academy of Sciences and **Professor Wuqiang Yang**, University of Manchester  
*Optimisation of methanol-to-olefins fluidised bed reactors by high-temperature electrical capacitance tomography*

**Dr Zongjun Yin**, Nanjing Institute of Geology and Palaeontology, Chinese Academy of Sciences and **Professor Philip Donoghue**, University of Bristol  
*Decoding the Doushantuo*

**Professor Fu Yu**, Institute of Microbiology, Chinese Academy of Sciences and **Dr Hasan Yardimci**, Cancer Research UK  
*Using single-molecule approaches to identify mechanisms of DNA replication timing*

**Dr Qiang Zhang**, Tsinghua University and **Professor Magdalena Titirici**, Queen Mary University of London  
*New developments in graphene/hydrothermal carbon cathodes for durable Li-S batteries*

**Professor Yongqun Zhu**, Life Sciences Institute, Zhejiang University and **Professor Gad Frankel**, Imperial College London  
*Molecular Mechanisms of the type III Effectors EspO and EspI from EPEC/EHEC*

## **Mexico**

**Dr Ines Arroyo-Quiroz**, Centro Regional de Investigaciones Multidisciplinarias (CRIM), National University of Mexico (UNAM) and **Dr Tanya Wyatt**, Northumbria University  
*International Trade in Wildlife involving Mexico: A Critical Appraisal of Wildlife Trade Dynamics between Mexico and the European Union*

**Dr Ruben Fossion**, National Institute of Geriatrics and **Professor Maia Angelova**, University of Northumbria at Newcastle  
*Loss of complexity of human physiological signals with ageing and degenerative disease*

**Dr Luis Garcia-Naranjo**, UNAM (National Autonomous University of Mexico) and **Dr James Montaldi**, University of Manchester  
*Geometric Methods for Nonholonomic Systems*

**Dr Nadia Martinez-Villegas**, IPICYT, Instituto Potosino de Investigacion Cientifica y Tecnologica, A.C. and **Professor Bhaskar Sengupta**, Heriot-Watt University  
*Distribution of arsenic on agricultural soils and its influence on exposure risks through maize ingestion and agricultural activities in Matehuala, San Luis Potosi, Mexico*

**Dr Jose Martinez-Carranza**, National Institute of Astrophysics, Optics, and Electronics (INAOE) and **Dr Walterio Mayol-Cuevas**, University of Bristol  
*RAFAGA: Robust Autonomous Flight of unmanned Aerial vehicles in Gps-denied outdoor Areas*

**Dr Sergio Navarrete Pellicer**, Centro de Investigaciones y Estudios Sociales en Antropología social, CIESAS and **Dr Lucy Duran**, School of Oriental and African Studies  
*Afro-Mexican musical youth in Oaxaca: roots, creativity, community*

**Dr Rafael Peña-Miller**, Centro de Ciencias Genómicas, Universidad Nacional Autónoma de México and **Dr Craig MacLean**, University of Oxford  
*Antibiotic resistance adaptation in fluctuating environments: from single-cells to bacterial communities*

**Dr Abril Saldana-Tejeda**, Universidad de Guanajuato and **Professor Peter Wade**, University of Manchester  
*Genomics and child obesity in Mexico: the resignification of race, class, nation and gender*

### **South Africa**

**Professor Hasani Chauke**, University of Limpopo and **Professor Richard Catlow**, University College London  
*Computational Modelling for Titanium Development*

**Dr Karen Cohen**, Groote Schuur Hospital and University of Cape Town and **Professor Munir Pirmohamed**, University of Liverpool  
*Drug induced liver injury due to anti-tuberculosis treatment: predictive mechanism-based biomarkers and genetic associations.*

**Professor Keertan Dheda**, University of Cape Town and **Dr Taane Clark**, London School of Hygiene and Tropical Medicine  
*Using whole genome sequencing to identify genetic features of Mycobacterium tuberculosis that correlate with drug susceptibility and clinical outcome in a prospective study of patients with XDR-TB.*

**Dr Nico Fischer**, University of Cape Town and **Professor Graham Hutchings**, Cardiff University  
*Phase transformations of nano-particulate heterogeneous catalysts captured in-situ*

**Dr Lauren Graham**, University of Johannesburg and **Professor Andy Furlong**, University of Glasgow  
*Youth transitions to work in South Africa: Evaluating the role of youth employability programmes*

**Dr Chandre Gould**, Institute for Security Studies and **Professor Brian Rappert**, University of Exeter  
*Cataloguing Secrets, Transforming Justice: An Innovative Manuscript and an Interactive Archive*

**Dr Julia Goedecke**, Non-Communicable Diseases Research Unit, South African Medical Research Council and **Professor Brian Walker**, University of Edinburgh  
*Non-communicable disease risk in black South Africans: dissecting the role of glucocorticoids.*

**Dr Agostino Pietro Maria Inguscio**, University of Cape Town and **Professor Deborah Oxley**, University of Oxford  
*Establishment of the Programme in Global Economic History at UCT*

**Dr Pieter Levecque**, University of Cape Town and **Professor Andrea Russell**, University of Southampton  
*Advanced X-ray and Fundamental studies of Pt electrocatalysts supported on doped SiC and B4C*

**Dr Lisa Micklesfield**, University of the Witwatersrand and **Dr Soren Brage**, University of Cambridge  
*Physical activity and components of body composition and growth in cohorts of black South African participants at different stages in the life course*

**Professor Marlien Pieters**, North-West University and **Dr Fiona Green**, University of Surrey  
*The role of plasma levels and genetics of haemostatic factors in cardiovascular disease development in Africans*

**Professor Geo Quinot**, Stellenbosch University and **Professor Sue Arrowsmith**, University of Nottingham  
*Developing the scholarship of African public procurement regulation*

**Dr Joseph Raimondo**, University of Cape Town and **Professor Colin Akerman**, University of Oxford  
*Cellular mechanisms of epilepsy in neurocystercosis*

**Dr Deborah Seddon**, Rhodes University and **Dr Andrew van der Vlies**, Queen Mary University of London  
*An Arc to the Future: Preserving and Promoting Orature in the South African Literary Imaginary*

**Professor Stephanus Jacobus van Zyl Muller**, Stellenbosch University and **Dr Jonathan Eato**, University of York  
*South African Jazz Cultures and the Archive*

#### **Turkey**

**Dr Elif Alkay**, Istanbul Technical University and **Professor Craig Alexander Watkins**, University of Sheffield  
*Construction, economic development, and planning policies: investigating the causal links*

**Dr Gorkem Akgoz**, Hacettepe University and **Dr Nicola Pizzolato**, Middlesex University  
*Back into the factory: writing theory and practice of the industrial workplace into 21st century history and social theory*

**Dr Banu Kavakli Birdal**, Istanbul Kemerburgaz University and **Professor Dominic Abrams**, University of Kent

*Perception of and Attitude towards the Syrian Refugees in Turkey*

**Dr Memed Duman**, Hacettepe University and **Dr Humphrey Yiu**, Heriot-Watt University  
*A Surface Plasmon Resonance (SPR) Sensor System using Molecular Imprinted Polymer-Nanoparticle composites for Ultrasensitive detection of Pharmaceutical Emerging Contaminants in Fresh Water Sources*

**Dr Ceyhun Elgin**, Bogazici University and **Dr Cem Oyvay**, University of Greenwich  
*Wage-Led vs. Profit-Led Growth: A Comprehensive Empirical Analysis*

**Dr Berat Haznedaroglu**, Bogazici University and **Professor Alison Gail Smith**, University of Cambridge  
*Cellular and Molecular Characterization of Non-model Microalgae for Maximized Lipid Synthesis*

**Dr Feyza Kazanc**, Middle East Technical University and **Dr Hannah Chalmers**, University of Edinburgh  
*Flexible Oxy-Combustion for Turkish Fuels*

**Professor Alptekin Küpçü**, Koç University and **Dr Emiliano De Cristofaro**, University College London  
*Password-based and Social Authentication: Preventing Phishing and Malware*

**Dr Mehmet Kurt**, Bingol University and **Professor Penelope Jane Green**, Queen Mary University of London  
*Islamist Radicalisation, Civil Society and the State in Southeastern Turkey*

**Dr Fitnat Banu Demir Pakel**, Bilkent University and **Professor Beata Javorcik**, University of Oxford  
*Using Processing Trade to Facilitate Innovation in Response to a Competitive Shock*

**Dr Tevfik Emre Serifoglu**, Bitlis Eren University and **Dr Naoise Mac Sweeney**, University of Leicester  
*Vanishing Landscapes: The Lower Göksu Archaeological Salvage Survey*

**Dr Lucas Thorpe**, Bogazici University and **Dr Sasha Mudd**, University of Southampton  
*Agency and autonomy: Kant and the normative foundations of republican self-government*

**Dr Gunder Varinlioglu**, Mimar Sinan Fine Arts University and **Professor Sam Turner**, Newcastle University  
*New approaches to historic landscapes: Bogsak in Isauria*

**Dr Engin Volkan**, Istanbul Bilgi University and **Dr Mehmet Pinar**, Edge Hill University  
*Designing Composite Indices for Risk Factors and Risk Avoidance: International Capital Flows and World Income Inequality*

Ends