

## Research Project Grants – June 2016

### SCIENCES

**Dr Andrew Bayliss**

*University of East Anglia*

Examining the mechanisms underpinning shared attention

£270,862

**Dr Yoselin Benitez-Alfonso**

*University of Leeds*

Unlocking plant intercellular channels: lessons from cell wall molecular biophysics

£353,301

**Dr Roger Benson**

*University of Oxford*

Timing the origin of genome doubling in fossil teleosts

£248,425

**Dr Jacopo Bertolotti**

*University of Exeter*

Prime factorisation using light

£118,672

**Dr Caroline Brennan**

*Queen Mary, University of London*

The genetics of numeracy and the evolutionary basis of number; can fish count?

£291,247

**Professor Fernando Bresme**

*Imperial College London*

Electrotunable nanoscale friction: from full stall to superlubricity

£237,563

**Dr Amanda Bretman**

*University of Leeds*

How are flexible behavioural responses to rapidly changing environments coordinated at the genomic level?

£245,369

**Dr David Chesmore**

*University of York*

Automatic acoustic observatories: non-invasive long term monitoring of acoustic species

£310,933

**Dr Andy Chow**

*University College London*

Agent-based modelling and optimisation of transport network resilience

£72,865

**Dr Georgina Cosma**

*Nottingham Trent University*

Novel approaches for constructing optimised multimodal data spaces

£115,355

**Dr Claire Cousins**

*University of St Andrews*

Frozen but not forgotten: microbial habitability and preservation in planetary fluids

£165,903

**Professor Norman Fenton**

*Queen Mary, University of London*

Improved understanding of causal models in dynamic decision-making

£383,510

**Dr Kumiko Fukumura**

*University of Strathclyde*

The mechanisms of choosing pronouns: a cross-linguistic study

£156,799

**Professor Ruth Gregory**

*Durham University*

Challenging the standard model with black holes

£192,413

**Dr Antonia Hamilton**

*University College London*

Understanding and generating real-time face-to-face social interactions

£314,885

**Dr D Flemming Hansen**

*University College London*

Exploring the conformational sampling and motions of side chains in proteins

£198,009

**Professor Felix Hofmann**

*University of Oxford*

Probing the invisible: characterising atomic-scale point defects with X-rays

£254,220

**Dr Sarah Horswell**

*University of Birmingham*

Advanced bioelectrochemical measurements on unsupported membranes

£245,580

**Dr Francis Jiggins**

*University of Cambridge*

The evolution and origins of arthropod RNAi

£153,665

**Dr Matthew Johnson**

*University of Sheffield*

Organisation of photosystem I and ATP synthase in plant photosynthetic membranes

£178,389

**Professor Alex Kacelnik**

*University of Oxford*

Relational concept imprinting in ducklings

£171,635

**Professor Anthony Kenyon**

*University College London*

Understanding and controlling dynamic functional oxides

£331,470

**Dr James Kilner**

*University College London*

The role of emotion in believable acting

£149,231

**Dr Daniele Leonori**

*University of Manchester*

Visible-light mediated synthesis of nitrogen-centred radicals

£105,569

**Professor Alistair McGregor**

*Oxford Brookes University*

How to build a spider: regulation of segmentation in *Parasteatoda tepidariorum*

£160,246

**Professor Michael Morgan**

*City University London*

A bayesian approach to the control of eye movements in human subjects

£122,047

**Dr Ian Morris**

*University of Surrey*

Lower bounds for Lyapunov exponents

£267,776

**Dr Robert Nash**

*Aston University*

Cognitive biases in the recipience of past- and future-oriented feedback

£98,236

**Professor Tim Naylor**

*University of Exeter*

A new understanding of planet formation

£184,349

**Dr Karen Olsson-Francis**

*Open University*

The feasibility of contemporary life elsewhere in our Solar System

£170,394

**Dr Antonio Padilla**

*University of Nottingham*

A new approach to the cosmological constant problem: disentangling local physics from global

£212,393

**Professor Daniel Paulusma**

*Durham University*

Efficient graph colouring algorithms via input restrictions

£187,316

**Professor Neil Robertson**

*University of Edinburgh*

Materials development to realise the organic piezoelectronic transistor

£299,296

**Professor David Rueda**

*Imperial College London*

Visualising repressor-activator competition as a mechanism of Ikaros-mediated gene regulation

£186,209

**Professor Saverio Russo**

*University of Exeter*

Room temperature quantum electronics

£254,711

**Professor Pauline Schaap**

*University of Dundee*

Understanding the molecular mechanisms that control somatic cell specialisation

£227,354

**Dr Felix Schulze**

*University College London*

Advances in contact topology via Lagrangian mean curvature flow

£337,709

**Dr Howard Snelling**

*University of Hull*

Laplacian magic windows

£123,828

**Professor Gyaneshwar Srivastava**

*University of Exeter*

Tuning thermal transport in nanocomposites with size, shape and interface control

£228,338

**Dr Anne Straube**

*University of Warwick*

How microtubule plus tip trackers couple polymer assembly to cargo transport

£256,434

**Dr Dhanraj Vishwanath**

*University of St Andrews*

What does it mean to 'see in 3D'? Explaining the phenomenology of stereopsis

£161,204

**Dr Bridget Waller**

*University of Portsmouth*

Cultural variation in the social function and expression of guilt

£106,827

**Professor Eske Willerslev**

*University of Cambridge*

Method for quantification of ancient plant populations using fossil pollen DNA

£354,456

**Dr Kate Wilmut**

*Oxford Brookes University*

Movement planning during reach-to-grasp tasks across the lifespan

£52,581

**Dr Mischa Zelzer**

*University of Nottingham*

Surfaces, the next frontier in understanding and controlling gel properties

£154,274

**HUMANITIES**

**Dr Christopher Briggs**

*University of Cambridge*

Living standards and material culture in English rural households, 1300–1600

£319,133

**Professor Cyprian Broodbank**

*University of Cambridge*

Archaeological deep history and dynamics of Mediterranean Africa, c.9600–700 BCE

£115,433

**Professor John Divers**

*University of Leeds*

Thinking counterfactually. How would have been reveals what is and what must be

£165,945

**Dr John Gilmore**

*University of Warwick*

Oriental poetry, Latin scholarship and the European Enlightenment: the case of William Jones

£249,968

**Dr Nathaniel Hansen**

*University of Reading*

The psychology of philosophical thought experiments

£101,062

**Professor John Klapper**

*University of Birmingham*

Inner and outer exile in fascist Germany and Spain: a comparative study

£314,730

**Professor Clive Oppenheimer**

*University of Cambridge*

Nature and impacts of Middle Pleistocene volcanism in the Ethiopian Rift

£165,547

**Dr Kim Sloan**

*British Museum*

Enlightenment architectures: Sir Hans Sloane's catalogues of his collections

£332,552

**Dr Sethina Watson**

*University of York*

The register of Walter de Gray, Archbishop of York (1215–55)

£152,339

**SOCIAL SCIENCES**

**Professor Robin Goodwin**

*University of Warwick*

Psychological sequelae of the Great Miyagi Earthquake: a four-wave study

£62,129

**Dr Tim Jay**

*Sheffield Hallam University*

How does game-based learning promote children's mathematical cognition?

£128,978

**Dr Alex Mesoudi**

*University of Exeter*

The cultural evolution of social hierarchy: an experimental investigation

£217,042

**Professor Charles Watkins**

*University of Nottingham*

British amateur topographical art and landscape in Northwest Italy, 1835–1915

£141,462