

MPS Research Update

December 2017 & January 2018

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Staff mentions in the press, etc. Public Engagement,

Science Museum exhibition of quantum computing technology

The Science Museum in London will run a topical exhibition featuring the quantum computing technology developed in the Sussex IQT group. Following Seb Weidt's advisory work with the Museum, the exhibition will run for four months, probably starting in February. There will be three full-day live events with staff from the IQT group.

Graphene emulsions for strain sensing (Prof Alan Dalton)

A Nanoscale paper published in January on utilizing emulsions of graphene for strain sensing was picked up by national (Daily Mail, Telegraph) and international outlets (The Engineer, The Indian Express, Yahoo! News); now the highest ranked article on Altmetric from Nanoscale (out of 2533 articles) of all time. A comprehensive list of media uptake can be found here: <https://rsc.altmetric.com/details/31449259>

Both ITV Meridian and BBC South East filmed in the lab on development of liquid-based graphene health monitor sensors including Dr Matt Large being interviewed. These segments appeared in the evening news broadcast. The media files can be found on the Materials group website.

SEPnet Public Engagement Awards (Prof Winfried Hensinger)

Winni Hensinger was highly commended at the Communication Award of the SEPnet Public Engagement Awards for last summer's pop-up laboratory on quantum computing which appeared in Spitalfields market. Winni and his team were shortlisted for the trophy and Winni gave a presentation at the ceremony.

Dark Energy Survey data release (Prof Kathy Romer and colleagues)

Kathy Romer and colleagues have released the first three years' data from the Dark Energy Survey to the public, including details of stellar streams. Kathy's idea to engage Chilean schoolchildren in giving new names to the streams of stars was successful.

Awards and Recognitions

Dr Bertram Duering is the Co-Investigator of a successful application for an Alan Turing Institute Workshop grant (£4000). This provides additional funding for the workshop 'Gradient flows: challenges and new directions' to be held in September 2018 at the International Centre for Mathematical Sciences (ICMS), Edinburgh. Bertram is also a co-organiser of the workshop (grants are not held at Sussex, but directly at ICMS)

Prof Barry Garraway received special recognition from the CEO of EPSRC for his significant contribution to the EPSRC Peer Review. EPSRC drew this to the attention of the PVC for Research at Sussex.

Areas of Knowledge Exchange

Dr Luiz Vale Silva:

Beyond Standard Model searches, and sensitivity, motivated in particular by rare B-meson and kaon transitions

Dr Max Jensen:

The Knowledge Transfer Network (KTN) ran a study group 8 -10 January 2018. Links were set up with key UK academics working in the area of Energy Storage. Two of the three groups had Sussex leads. Follow-up events are expected with some of the high profile industrial partners.

Talks delivered (outside own research groups)

"A Lagrangian Scheme for the solution of nonlinear diffusion equations".

Seminar talk by Dr Bertram Duering, 05 December 2017, at Baylor University, Waco, TX, USA, also on 07 December 2017 at George Washington University, Washington DC, USA.

"Inhomogeneous Boltzmann-Type Equations Modelling Opinion Leadership and Political Segregation".

Minisymposium talk by Dr Bertram Duering, 11 December 2017, at the 2017 SIAM Conference on Analysis of Partial Differential Equations, Baltimore, USA.

Dr Luiz Vale Silva gave talks at the LHCb-UK meeting, Glasgow, 04 Jan 2018, and the FCC Physics workshop, CERN, 18 Jan 2018.

Prof Alan Dalton gave talks at ColInnovate 2018 in Cardiff, January 24th 2018, and delivered a keynote lecture at Heteronano, Benasque, Spain in December 2017.

"Primordial black hole formation during the QCD phase transition"

Talk by Dr Chris Byrnes at the Gravity@Malta conference, 22 January 2018.

Dr Miro Chlebik was an invited speaker at the 46th Winter School in Abstract Analysis (organized by Charles University, Prague, Czech Republic) 13-20 January 2018, where he gave three talks, "Going beyond variation of sets" (14 January 2018), "Sharp Lower bounds on dilation of measures on metric spaces" (15 January 2018), "On the Erdos similarity problem" (16 January 2018).

"Do the laws of particle physics need rewriting?"

Institute of Physics evening lecture at Sussex by Dr Sebastian Jaeger, Tuesday 05 December 2017.

Impact

Prof Alan Dalton:

Heads of Terms have been signed with Advanced Materials Development Ltd to fund and commercialise research from our group.

Dr Chris Byrnes:

I spent 4 days on a Royal Society shadowing scheme, following Dr Lucy Mason who leads a group in the Defence and Security Laboratory, Porton Down and spending 2 days in Westminster interacting with MPs/Lords and policy makers.

Dr James Waterfield:

James Waterfield has now started the RSE/STFC Enterprise Fellowship (to Sept 18)

Seb Oliver & Simon Peeters

Two STFC GCRF Foundation awards are forecasted. Over £100K for Seb Oliver "Applying Astronomy Data Analysis to enhance disaster forecasting", and almost £85K for Simon Peeters "Materia Obscura: Instrumentation Development to Observe the Invisible".

Significant Research outcomes – results

Dr Luiz Vale Silva:

Identification of a possibly important sensitivity of radiative muon decays into electrons for a certain class of dimension six New Physics operators

Prof Alan Dalton:

Significant research outcomes – results

- Functional liquid structures by emulsification of graphene and other two-dimensional nanomaterials, M. Large *et al.*, [Nanoscale](#).
- Considerations for spectroscopy of liquid-exfoliated 2D materials: emerging photoluminescence of *N*-methyl-2-pyrrolidone, S. Ogilvie *et al.*, [Nature: Scientific Reports](#).
- Understanding solvent spreading for Langmuir deposition of nanomaterial films: A Hansen solubility parameter approach, M. Large *et al.*, [Langmuir](#).

Other news

Dr Bertram Duering:

Acted as expert reviewer for European Commission in H2020 Marie Skłodowska-Curie actions WIDESPREAD-05-2017: TWINNING call

Dr Bertram Duering:

Is a Co-organiser of Minisymposium Kinetic and mean-field models in socio-economics and life sciences, SIAM Conference on Analysis of Partial Differential Equations (PD17), 9-12 December 2017, Baltimore, Maryland, USA.

Prof Antonella De Santo:

“External Esteem Indicators”

- a promotion case (to Professor) at a Russell group university
- a Killam Prize application (<http://canadacouncil.ca/funding/prizes/killam-prizes>)
- a Canada Research Chairs application (<http://www.chairs-chaire.gc.ca/home-accueil-eng.aspx>)
- a RESTART proposal to the Research Promotion Foundation (<https://iris.research.org.cy/#/>)

Dr Luiz Vale Silva:

Preparation of an article with researchers from Slovenia.

Prof Alan Dalton:

Dr Alice King visited HKUST in Hong Kong funded by her Kroto Fellowship to explore new research collaborations.

Dr Max Jensen:

Max has won an LMS award to facilitate exchanges with Prof Andreas Prohl (University of Tuebingen) to Sussex and the Universities of Chester, Nottingham, and York.

Department of Mathematics. Publications deposited in SRO in December 2017 and January 2018

To view the paper enter the SRO ID number as <https://sro.sussex.ac.uk/nnnnn>

Sussex Author	SRO ID	Status	Author(s)	Output Title	Volume Title
Fanzon, Silvio	72566	Published	Fanzon, Silvio	Geometric patterns and microstructures in the study of material defects and composites	Doctoral Thesis
Hirschfeld, James WP	72311	Published	Betten, Anton; Hirschfeld, James W P; Karaoglu, Fatma	Classification of cubic surfaces with twenty-seven lines over the finite field of order thirteen	European Journal of Mathematics
Makridakis, Charalambos	73106	Published	Karakashian, Ohannes; Makridakis, Charalambos	A posteriori error estimates for discontinuous Galerkin Methods for the Generalised Korteweg-de Vries Equation	Mathematics of Computation
Makridakis, Charalambos	73117	Published	Giesselmann, Jan; Makridakis, Charalambos; Pryer, Tristan	Energy consistent DG methods for the Navier-Stokes-Korteweg system	Mathematics of Computation
McCormick, David S	66125	Published	McCormick, David S; Olson, Eric J; Robinson, James C; Rodrigo, Jose L; Vidal-López, Alejandro; Zhou, Yi	Lower bounds on blowing-up solutions of the three-dimensional Navier–Stokes equations in $H^{3/2}$, $H^{5/2}$, and $B^{5/2}_{2,1}$	SIAM Journal on Mathematical Analysis (SIAM)
Styles, Vanessa M	72881	Published	Deckelnick, Klaus; Styles, Vanessa	Stability and error analysis for a diffuse interface approach to an advection-diffusion equation on a moving surface	Numerische Mathematik
Vysotskiy, Vladislav	69351	Accepted	Kabluchko, Zakhar; Vysotskiy, Vladislav; Zaporozhets, Dmitry	A multidimensional analogue of the arcsine law for the number of positive terms in a random walk	Bernoulli

Department of Physics & Astronomy. Publications deposited in SRO in December 2017 and January 2018

To view the paper enter the SRO ID number as <https://sro.sussex.ac.uk/nnnnn>

Sussex Author	SRO ID	Status	Author(s)	Output Title	Volume Title
Allbrooke, Benedict MM	72226	Published	Allbrooke, Benedict; Asquith, Lily; Cerri, Alessandro; DeSanto, Antonella; Salvatore, Fabrizio; Suruliz, Kerim; Sutton, Mark; Vivarelli, Iacopo	Search for a scalar partner of the top quark in the jets plus missing transverse momentum final state at $\sqrt{s} = 13$ TeV with the ATLAS detector	Journal of High Energy Physics
Allbrooke, Benedict MM	72227	Published	Allbrooke, Benedict; Asquith, Lily; Cerri, Alessandro; DeSanto, Antonella; Salvatore, Fabrizio; Suruliz, Kerim; Sutton, Mark; Vivarelli, Iacopo	Measurement of the prompt J/ψ pair production cross-section in pp collisions at $\sqrt{s} = 8$ TeV with the ATLAS detector	European Physical Journal C - Particles and Fields
Byrnes, Christian T	72580	Published	Gosenca, Mateja; Adamek, Julian; Byrnes, Christian T; Hotchkiss, Shaun	3D simulations with boosted primordial power spectra and ultracompact minihalos	Physical Review D
Byrnes, Christian T	72829	Published	Vieira, J P P; Byrnes, Christian T; Lewis, Antony	Can power spectrum observations rule out slow-roll inflation?	Journal of Cosmology and Astroparticle Physics
Calmet, Xavier	72399	Published	Calmet, Xavier; Kuntz, Iberê; Moss, Ian G	Non-minimal coupling of the Higgs boson to curvature in an inflationary universe	Foundations of Physics
Carron, Julien	72813	Published	Carron, Julien; Lewis, Antony; Challinor, Anthony	Internal delensing of Planck CMB temperature and polarization	Journal of Cosmology and Astroparticle Physics
Carron, Julien	72815	Published	Carron, Julien; Lewis, Antony	Maximum a posteriori CMB lensing reconstruction	Physical Review D
Crimin, Frances	72411	Published	Crimin, F; Garraway, B M; Verdu, J	The quantum theory of the Penning trap	Journal of Modern Optics
Dalton, Alan B	72954	Published	Brunner, Eric; Jurewicz, Izabela; Heister, Elena; Fahimi, Azin; Chiara, Bo; Richard, Sear; Donovan, Peter; Dalton, Alan	Growth and proliferation of human embryonic stem cells on fully synthetic scaffolds based on carbon nanotubes	ACS Applied Materials and Interfaces

Dalton, Alan B	72979	Published	Abdullah, Che Azurahaman Che; Azad, Chihye Lewes; Ovalle-Robles, Raquel; Fang, Shaoli; Lima, Marcio D; Lepró, Xavier; Collins, Steve; Baughman, Ray H; Dalton, Alan; Plant, Nick J; and 0 other(s)	Primary liver cells cultured on carbon nanotube substrates for liver tissue engineering and drug discovery applications	ACS Applied Materials and Interfaces
Dalton, Alan B	72980	Published	Henley, Simon J; Cann, Maria; Jurewicz, Izabela; Dalton, Alan; Milne, David	Laser patterning of transparent conductive metal nanowire coatings: simulation and experiment	Nanoscale
Dalton, Alan B	72986	Published	Boland, Conor S; Khan, Umar; Backes, Claudia; O'Neill, Arlene; McCauley, Joe; Duane, Shane; Shanker, Ravi; Jurewicz, Izabela; Dalton, Alan B; Coleman, Jonathan N	Sensitive, high-strain, high-rate bodily motion sensors based on graphene-rubber composites	ACS Nano
Dunningham, Jacob A	72007	Accepted	Proctor, Timothy J; Knott, Paul; Dunningham, Jacob	Multi-parameter estimation in networked quantum sensors	Physical Review Letters
Garraway, Barry M	72402	Published	Pleasance, Graeme; Garraway, Barry M	Application of quantum Darwinism to a structured environment	Physical Review A
Hile, Samuel J	71486	Published	House, M G; Kobayashi, T; Weber, B; Hile, S J; Watson, T F; van der Heijden, J; Rogge, S; Simmons, M Y	Radio frequency measurements of tunnel couplings and singlet-triplet spin states in Si:P quantum dots	Nature Communications
Hile, Samuel J	71488	Published	House, M G; Peretz, E; Keizer, J G; Hile, S J; Simmons, M Y	Single-charge detection by an atomic precision tunnel junction	Applied Physics Letters
Hile, Samuel J	71489	Published	Kobayashi, T; van der Heijden, J; House, M G; Hile, S J; Asshoff, P; Gonzalez-Zalba, M F; Vinet, M; Simmons, M Y; Rogge, S	Resonant tunneling spectroscopy of valley eigenstates on a donor-quantum dot coupled system	Applied Physics Letters
Hile, Samuel J	71490	Published	Gorman, S K; Broome, M A; Keizer, J G; Watson, T F; Hile, S J; Baker, W J; Simmons, M Y	Extracting inter-dot tunnel couplings between few donor quantum dots in silicon	New Journal of Physics
Hile, Samuel J	71491	Published	Broome, M A; Gorman, S K; Keizer, J G; Watson, T F; Hile, S J; Baker, W J; Simmons, M Y	Mapping the chemical potential landscape of a triple quantum dot	Physical Review B
Hile, Samuel J	71492	Published	Tettamanzi, Giuseppe Carlo; Hile, Samuel James; House, Matthew Gregory; Fuechsle, Martin; Rogge, Sven; Simmons, Michelle Y	Probing the quantum states of a single atom transistor at microwave frequencies	ACS Nano

Hile, Samuel J	71493	Published	Broome, M A; Watson, T F; Keith, D; Gorman, S K; House, M G; Keizer, J G; Hile, S J; Baker, W; Simmons, M Y	High-fidelity single-shot singlet-triplet readout of precision-placed donors in silicon	Physical Review Letters (PRL)
Hindmarsh, Mark B	72305	Published	Hindmarsh, Mark; Huber, Stephan J; Rummukainen, Kari; Weir, David J	Shape of the acoustic gravitational wave power spectrum from a first order phase transition	Physical Review D
Hindmarsh, Mark B	72400	Published	Lizarraga, Joanes; Urrestilla, Jon; Daverio, David; Hindmarsh, Mark; Kunz, Martin; Liddle, Andrew R	Can topological defects mimic the BICEP2B-mode signal?	Physical Review Letters
Hindmarsh, Mark B	72736	Published	Lizarraga, Joanes; Urrestilla, Jon; Daverio, David; Hindmarsh, Mark; Kunz, Martin	New CMB constraints for Abelian Higgs cosmic strings	Journal of Cosmology and Astroparticle Physics
Hindmarsh, Mark B	73105	Accepted	Hindmarsh, Mark	Sound shell model for acoustic gravitational wave production at a first-order phase transition in the early Universe	Physical Review Letters
Huber, Stephan J	72690	Published	Dorsch, G C; Huber, S J; Mimasu, K; No, J M	The Higgs vacuum uplifted: revisiting the electroweak phase transition with a second Higgs doublet	Journal of High Energy Physics
Jaeger, Sebastian	71747	Published	Geng, Li-Sheng; Grinstein, Benjamín; Jäger, Sebastian; Martin Camalich, Jorge; Ren, Xiu-Lei; Shi, Rui-Xiang	Towards the discovery of new physics with lepton-universality ratios of $b \rightarrow sll$ decays	Physical Review D
Large, Matthew J	72148	Published	Large, Matthew J; Ogilvie, Sean P; King, Alice A K; Dalton, Alan B	Understanding solvent spreading for Langmuir deposition of nanomaterial films: a Hansen solubility parameter approach	Langmuir
Large, Matthew J	72982	Published	Worajittiphon, Patnarin; Large, Matthew; King, Alice; Jurewicz, Izabela; Dalton, Alan	Stretchable conductive networks of carbon nanotubes using plasticized colloidal templates	Frontiers in Materials
Large, Matthew J	72984	Published	Jurewicz, Izabela; Fahimi, Azin; Lyons, Phillip E; Smith, Ronan J; Cann, Maria; Large, Matthew L; Tian, Mingwen; Coleman, Jonathan N; Dalton, Alan B	Insulator-conductor type transitions in graphene-modified silver nanowire networks: a route to inexpensive transparent conductors	Advanced Functional Materials
Lewis, Antony M	72811	Published	Lewis, Antony; Hall, Alex; Challinor, Anthony	Emission-angle and polarization-rotation effects in the lensed CMB	Journal of Cosmology and Astroparticle Physics

Lewis, Antony M	72812	Published	Peloton, Julien; Schmittfull, Marcel; Lewis, Antony; Carron, Julien; Zahn, Oliver	Full covariance of CMB and lensing reconstruction power spectra	Physical Review D
Litim, Daniel F	72277	Published	Bond, Andrew D; Litim, Daniel F	Asymptotic safety guaranteed in supersymmetry	Physical Review Letters
Litim, Daniel F	72306	Published	Bond, Andrew D; Litim, Daniel F	Theorems for asymptotic safety of gauge theories	The European Physical Journal C
Litim, Daniel F	72307	Published	Bond, Andrew D; Hiller, Gudrun; Kowalska, Kamila; Litim, Daniel F	Directions for model building from asymptotic safety	Journal of High Energy Physics
Litim, Daniel F	72789	Published	Litim, Daniel F; Marchais, Edouard; Mati, Péter	Fixed points and the spontaneous breaking of scale invariance	Physical Review D
Loveday, Jonathan N	72785	Published	Baldry, I K; Liske, J; Loveday, J; Wilkins, S M; al, et	Galaxy And Mass Assembly: the G02 field, Herschel-ATLAS target selection and data release 3	Monthly Notices of the Royal Astronomical Society
Loveday, Jonathan N	73121	Published	Gordon, Yjan A; Pimblet, Kevin A; Owers, Matt S; Bland-Hawthorn, Joss; Brough, Sarah; Brown, Michael J I; Cluver, Michelle E; Croom, Scott M; Holwerda, Benne W; Loveday, Jonathan; and 1 other(s)	Galaxy And Mass Assembly (GAMA): The effect of galaxy group environment on active galactic nuclei	Monthly Notices of The Royal Astronomical Society
Ogilvie, Sean P	71751	Published	Ogilvie, Sean P; Large, Matthew J; Fratta, Giuseppe; Meloni, Manuela; Canton-Vitoria, Ruben; Tagmatarchis, Nikos; Massuyeau, Florian; Ewels, Christopher P; King, Alice A; Dalton, Alan B	Considerations for spectroscopy of liquid-exfoliated 2D materials: emerging photoluminescence of N-methyl-2-pyrrolidone	Scientific Reports
Oliver, Seb J	72587	Published	Derby, Katherine; Oliver, Seb; al, et	STFC Food Network+ [Food Science and Technology]	
Oliver, Seb J	73205	Accepted	Marques-Chaves, Rui; Perez-Fournon, Ismael; Gavazzi, Raphael; Martinez-Navajas, Paloma; Riechers, Dominik; Rigopoulou, Dimitra; Oliver, Seb; Omont, Alain; Scott, Douglass; Shu, Yiping; and 0 other(s)	The strong gravitationally lensed Herschel galaxy HLock01: Optical spectroscopy reveals a close galaxy merger with evidence of inflowing gas	Astrophysical Journal
Peeters, Simon JM	72583	Published	Peeters, S J M; The SNO Collaboration, et al.	Search for neutron-antineutron oscillations at the Sudbury Neutrino Observatory	Physical Review D

Romer, Kathy K	72581	Published	Klein, M; Mohr, J J; Desai, S; Israel, H; Allam, S; Benoit-Lévy, A; Brokks, D; Buckley-Geer, E; Carnero Rosell, A; Carrasco Kind, M; and 33 other(s)	A multicomponent matched filter cluster confirmation tool for eROSITA: initial application to the RASS and DES-SV data sets	Monthly Notices of The Royal Astronomical Society
Rubio Jimenez, Jesus	72610	Published	Rubio, Jesús; Knott, Paul; Dunningham, Jacob	Non-asymptotic analysis of quantum metrology protocols beyond the Cramér-Rao bound	Journal of Physics Communications
Salvatore, Fabrizio F	72313	Published	Salvatore, Fabrizio; DeSanto, Antonella; Vivarelli, Iacopo; Cerri, Alessandro; Asquith, Lily; Allbrooke, Benedict; Suruliz, Kerim; Sutton, Mark; Chavez Barajas, Carlos	Search for dark matter produced in association with bottom or top quarks in $\sqrt{s} = 13$ TeV pp collisions with the ATLAS detector	European Physical Journal C: Particles and Fields
Sanz, Veronica	72014	Published	Alloul, Adam; Fuks, Benjamin; Sanz, Verónica	Phenomenology of the Higgs effective Lagrangian via FeynRules	Journal of High Energy Physics
Sinuco Leon, German	73127	Published	Sinuco-León, G A; Krüger, P; Fromhold, T M	Atom chips with free-standing two-dimensional electron gases: advantages and challenges	Journal of Modern Optics
Thomas, Peter A	72763	Published	Lovell, Christopher C; Thomas, Peter A; Wilkins, Stephen M	Characterising and identifying galaxy protoclusters	Monthly Notices of the Royal Astronomical Society
Wilkins, Stephen M	72788	Published	Wilkins, Stephen M; Feng, Yu; Di Matteo, Tiziana; Croft, Rupert; Lovell, Christopher C; Thomas, Peter	Dust-obscured star-forming galaxies in the early universe	Monthly Notices of the Royal Astronomical Society

Pfact	PI/Co-I	Principal Funder	Funder Programme	Project Title	Overall Applied Amount £	Notes
Submitted						
9024	Dalton, Alan	Royal Society	Apex Award	Nanoscale characterisation of time-dependent changes in the structural colour of jewel beetle wings on textiles	72,420	
8992	Duncan, Andrew	Royal Society	Apex Award	Data Driven Profiling and Assessment of Conflict in Africa	52,810	
9078	Duering, Bertram	European Union	H2020- Marie-Curie ITN	SWING: Mathematical Modelling and Scientific Computing for Future Energy Markets	491,828	Co-I (12% FTE), part of Michael Coulon (BSMS)'s application.
8928	Iliev, Ilian	European Union	H2020- Marie-Curie ITN	Exascale numerical simulations for future astronomical surveys (EXASIM)	0	
9016	Lakkis, Omar	Royal Society	Apex Award	Multiscale Computer Modeling of Vegetation Effects on Floods: Identifying Risk and Mitigation Opportunities.	99,998	
8983	Madzvamuse, Anotida	Royal Society	Apex Award	Understanding how single cells migrate through confined microenvironments	90,139	
8794	Pasquazi, Alessia	EPSRC	UKRI Innovation Fellowship	Industrial Pathway to Micro-Comb Lasers	580,169	2nd Stage submission
9114	Peccianti, Marco	European Union	H2020- Marie-Curie ITN	Non-Equilibrium Quantum Simulation with Trapped Ions (NEQSIM)	488,989	
8945	Sargent, Mark/Oliver, Seb/Iliev, Ilian	STFC	Malaysian-Newton-Fund	Building Parallel Computing Infrastructure for STEM in Malaysia: An Application to Radio Interferometric Imaging	101,229	
8941	Scalas, Enrico	Royal Society	Apex Award	Taming Unknown Unknowns	60,374	
Forecasted						
8493	Oliver, Seb	STFC	GCRF - Foundation Award 2017	Applying Astronomy Data Analysis to enhance disaster forecasting	100,462	

8929	Oliver, Seb	Public Health England	Research Grant	DISCUS-PHE: Applying Bayesian Probabilistic modelling to maximizing the public health value by linking electronic records and controlled surveys	15,342	
8537	Peeters, Simon	STFC	GCRF - Foundation Award 2017	Materia Oscura: Instrumentation Development to Observe the Invisible	84,731	
Awarded						
8599	Asquith, Lily	ROYAL SOCIETY	RSOC Research Fellows Enhancement Award	Machine Learning for Beyond the Standard Model Higgs and Top Physics	100,878	
8577	Byrnes, Christian	ROYAL SOCIETY	RSOC Research Fellows Enhancement Award	Primordial black holes, dark matter and inflation	81,555	
8036	Hensinger, Winnie	Innovate UK/EPSRC	Commercialisation of Quantum Technologies 3	ESCHER: Establishing Supply Chains for Emergent Quantum Computers	308,326	
8819	Hindmarsh, Mark	STFC	Public Engagement Spark Award	JWST Thermal Photobooth	6,753	
7678	Kiss, Istvan & Masoumeh Dashti	Leverhulme Trust	Research Grant	Confronting High Dimensional Network Models With Data: Low Dimensional Forward Approximation and Bayesian Parameter Learning	301,665	
8041	Orucevic, Fedja	TECHNOLOGY STRATEGY BOARD	None	OPTAMOT: Optimised Designs for Additively Manufactured Magneto Optical Traps	76,604	
8138	Wilkins, Stephen M	ROYAL SOCIETY	RSOC International Exchanges Scheme	Exploring the Epoch of Reionisation with the James Webb Space Telescope	10,000	

Funding Opportunities			
Funder	Scheme	Deadline	Hyperlink
ESRC	Research Centres	Outline stage: 15/03/2018	http://www.esrc.ac.uk/funding/funding-opportunities/centres-competition-2018/

EPSRC	The EPSRC Physical Sciences Theme, STFC's ISIS Neutron and Muon Source, and Japan Society for the Promotion of Science (JSPS) would like to invite you to our joint symposium: Innovation in materials characterization	18/01/2018	http://www.smartsurvey.co.uk/s/UKJSPS/
Canadian Institute for Advanced Research	Azrieli Program in Brain, Mind & Consciousness Bio-Inspired Solar Energy Gravity & the Extreme Universe Humans & the Microbiome Molecular Architecture of Life	22/02/2018	https://www.cifar.ca/global-scholars/
Isaac Newton Institute for Mathematical Sciences	Call for Research Programmes	31/01/2018	http://www.newton.ac.uk/science/proposals