

MPS Research Update

October, November, December 2018

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Staff mentions in the press, public engagement

The Conversation

Professor Seb Oliver featured on *The Conversation* with his article discussing “How astrophysics could transform the treatment of cystic fibrosis and other rare diseases”.

Dr. Nicos Georgiou featured on *The Conversation* with his article offering the Prisoner’s Dilemma, a mathematical game theory, as a solution to help explain what the Prime Minister is up to in the long-running Brexit deal negotiations.

Thought Leaders

Professor Marco Peccianti and Dr. Juan Sebastian Toterogongora were interviewed by ‘Thought Leaders’ on Nonlinear Ghost Imaging: A New Terahertz Imaging Concept, <https://www.azooptics.com/Article.aspx?ArticleID=1438>

Physics researchers had the following articles featured in the press:

- “Customizing Broadband Light Sources Using a Photonic Chip and AI” on *Photonics.com*, November 2018
- “When AI and optoelectronics meet: Researchers take control of light properties” on *ScienceDaily*, *Phys.org* and *EurekAlert!*, November 2018
- “Citizen scientists excel at creating Bose-Einstein condensates” on *PhysicsWorld*, December 2018
- “Remote optimization of an ultracold atoms experiment by experts and citizen scientists” on *PNAS* (Proceedings of the National Academy of Sciences of the USA)

The Times of India

Professor Barry Garraway featured on *The Times of India* regarding the IIT-P hosts conference on Quantum and Atom Optics. <https://timesofindia.indiatimes.com/city/patna/bseb-holds-workshop-on-new-answer-sheet-format/articleshow/67133311.cms>

Awards and Recognitions

Professor Antonella De Santo was rewarded the **Senior Experimental Fellowship** at the Institute for Particle Physics Phenomenology (IPPP) in Durham. This will enable the furthering of ongoing collaborations between members of the Sussex ATLAS team, IPPP researchers and other researchers nationwide.

Dr Nicholas Simm, Research Fellow in Mathematics has received a **Royal Society University Research Fellowship**.

Dr Lily Asquith. Elected to Royal Society Science Policy Expert Advisory Committee, joined Windsor Fellowship as a mentor for destination stem and joined Newton International Fellowships Panel.

Professor Bertram Duering took up a visiting research appointment at the Department of Applied Mathematics and Theoretical Physics, University of Cambridge.

Also appointed as expert reviewer for the following:

- European Commission in H2020 Marie Skłodowska-Curie actions Individual Fellowships (IF) 2018
- Italian Ministry for Universities and Research 'Progetti di ricerca di rilevante interesse nazionale'
- A research proposal for King Fahd University of Petroleum and Minerals, KSA.

Professor Barry Garraway elected Chair of IOP Quantum Optics, Quantum Information and Quantum Control Group Committee.

Areas of Knowledge Exchange

National Academy of Sciences of Ukraine

Konstantin Blyuss visited the National Academy of Sciences of Ukraine as part of RDF grant to collaborate on a joint project, November 2018.

Reported by Konstantin Blyuss

Invited visit and a research seminar in the group of Prof Bruno Buonomo, Naples, November, 2018.

Reported by Iacopo Vivarelli.

IHEP Beijing exchange programme is in preparation for second academic visit.

Off-campus talks delivered

“Developing a modular microwave trapped ion quantum computer”

Talk by Winfried Hensinger at The Fifth European Conference on Trapped Ions (ECTI), Israel, November 2018.

“Strong coupling of a single ion to an optical cavity”

Talk by Costas Christoforou at The Fifth European Conference on Trapped Ions (ECTI), Israel, November 2018.

“LIGO, inflation and primordial black holes”

Talk by Christian Byrnes, Stockholm and London, October 2018.

“Calorimeter, calibration and shower response”

Talk by Iacopo Vivarelli, IDEA detector workshop, Italy, December 2018.

“Perspectives on Complex Systems”

Talk by Konstantin Blyuss, International workshop at Technical University, Berlin, December 2018.

“H0 from CMB and Planck”

Talk by Antony Lewis at the Hubble Constant Controversy, Berlin, November 2018.

“CMB lensing and delensing”

Talk by Antony Lewis in Zurich, October 2018.

Plenary talk at JGRG28 (Japanese General Relativity and Gravity)

Talk by Mark Hindmarsh, Rikkyo University, Japan, November 2018.

“Topology of twists, extremising twist paths and multiple solutions to a nonlinear elliptic system in variation”

Dr. Ali Taheri was a symposium speaker at The 84 Annual Conference of the Indian Mathematical Society, Jammu and Kashmir, India, November 2018.

“From Weyl chambers to Weyl law: An improved asymptotics for the remainder term of the spectral counteracting function of a compact Lie group”

Dr. Ali Taheri was a keynote speaker at the International Conference on Harmonic Analysis, Operator Theory and Banach Algebras, Sardar Patel University, Gujarat, India, November 2018.

“An infinite scale of incompressible twisting solutions to the nonlinear system $L[u; A, B] = \nabla \cdot P$ and a notion of system discriminant”

Dr. Ali Taheri was a plenary speaker at the Delhi Analysis Conference, November 2018.

“Geometric and Functional Inequalities in Sobolev Spaces: From Isocapacity Estimates to Littlewood-Paley Theory”

Dr. Ali Taheri was a seminar Speaker at the Jawaharlal Nehru University, South Asian University, Delhi University, November 2018.

“Women in Mathematics and Future of Mathematical Research”

Dr. Ali Taheri was an invited panel member at Delhi University, India, November 2018.

“Dressing ultra-cold atoms for control and quantum technology”

Professor Barry Garraway was an invited distinguished speaker (plenary) at International Conference on Quantum and Atom Optics (ICQAO-2018), Patna, India, December 2018. This talk was also given at the AIP Congress Perth, Australia, December 2018.

“Decay of quantum systems analysed with pseudomodes of reservoir structures”

Professor Barry Garraway was a plenary speaker at Quantum Optics IX, Cartagena, Colombia, October 2018.

Impact

Professor Matthias Keller. Ongoing collaboration with Allecta LTD to commercialise optical fibre vacuum feedthroughs.

Science and Technology’s Committee Quantum Technologies Report

Sussex provided the parliamentary Science and Technology Committee with evidence including an urge to boost funding for research into quantum technologies. The published parliamentary report has concluded that quantum technologies offer the opportunity for significant economic growth and improved capability across most industry sectors.

Significant Research Outcomes

Professor Winfried Hensinger. The Ion Quantum Technology Group, led by Winfried Hensinger have managed to significantly reduce the effects of environmental noise affecting trapped ion quantum computers.

<http://www.sussex.ac.uk/staff/newsandevents/?page=1&id=46639?ref=email>

Professor Matthias Keller. There has been the first worldwide demonstration of strong ion-cavity coupling, a prerequisite for scalable quantum computing with ions.

Professor Matthias Keller. Novel scheme to prepare molecular nitrogen ions in ro-vibrational ground state.

Iacopo Vivarelli. Soft tagging algorithms for ATLAS in official reconstruction algorithm.

Other news

Quantum sensors for fundamental physics

Jacob Dunningham, Xavier Calmet and Matthias Keller were part of a successful bid led by Oxford University from STFC to set up the collaborative network "Quantum sensors for fundamental physics".

Grant Report

Submitted

PI/Co-I	Principal Funder	Funder Programme	Project Title	Overall Applied Amount (£)	Notes
Blyuss, Konstantin	MRC	MRC Immune-mediated inflammatory diseases: understanding common mechanisms	Role of stochastic variation in immune-mediated inflammatory disease	129,283	
De Santo	Royal Society	Apex Awards	Machine Learning and the Large Hadron Collider: The Epistemological Implications of Algorithmic Decision-Making in High Energy Physics	7,195	Co-I in Beatrice Fazi's bid (Media and Film)
Dalton, Alan	Innovate UK	Innovate - Open Grant Funding Competition: Round 3	Strain Sensor Integration for Wearables	151,534	
Dunningham, Jacob	EPSRC	EPSRC Early Career Fellowship	Graphically Accelerated Quantum Sensing: GPU accelerated simulation of quantum correlated sensors in high dimensions [External]	479,230	
Garraway, Barry	EPSRC	Int'l Centre-to-centre research collaboration, 2nd round	International centre-to-centre research collaboration: Advanced Quantum Sensor Applications	53,011	
Huber, Stephan	Leverhulme Trust	Leverhulme Trust Visiting Professorship	Visiting Professorship - Professor Shaaban Khalil	123,525	
Keller, Matthias	EPSRC	EPSRC Standard Research Grant	EPSRC Hub for Quantum Computing and Simulation	500,000	
Krueger, Peter	EPSRC	EPSRC Standard Research Grant	UK National Quantum Technology Hub in Sensors and Timing	408,949	

Krueger, Peter	Innovate UK	Innovate - Faraday Battery Challenge: innovation R&D, round 3	Magnetic Camera for On-board Non-destructive Testing of Electric Vehicle Lithium-ion	250,042	
Krueger, Peter	Innovate UK	Innovate - Faraday Battery Challenge: innovation R&D, round 3	The Fully Integrated Zero Emissions Road (FIZER)	229,470	
Krueger, Peter	Innovate UK	Innovate - Faraday Battery Challenge: innovation R&D, round 3	Printed sensors for EV battery current density imaging	25,519	
Peeters, Simon	Leverhulme Trust	Leverhulme Trust Visiting Professorship	Visiting Professorship - Professor Soo-Bong Kim	107,715	
Totero, Juan	UKRI	Route to all-optical control of neurocomputing devices for integrated machine learning applications	Route to all-optical control of neurocomputing devices for integrated machine learning applications	1,195,447	
Vivarelli	STFC		Sussex Experimental Particle Physics Capital Equipment 2019	18,000	
Wilkins, Stephen	Institute of Physics	IOP Public Engagement Grant Scheme	Guide Stars	1,000	
Wilkins, Stephen	Institute of Physics	IOP Public Engagement Grant Scheme	Sussex Curiosity Fairs	3,000	

Awarded

De Santo	Technopolis Ltd.	Consultancy	Evaluation of the UK's Investment in CERN	11,115	
De Santo	Durham University	DU IPPP Senior Experimental Fellowships 2018-2019	Search for New Physics at the Large Hadron Collider and its Future Upgrades	7,000	
Fialkov, Anastasia	Royal Society	Research Fellowship Enhancement Award	Traces of Primordial Star Formation in the 21-cm Signal [External]	164,795	
Hensinger, Winfried	EU	H2020 - FET Flagships	Microwave driven ion Trap quantum Computing	443,863	
Oliver, Seb	STFC	Innovation Partnership Fellowship	Innovation Partnership Fellow at University of Sussex	28,535	
Salvatore, Fabrizio	STFC		GridPP5	10,000	
Simm, Nicholas	Royal Society	Research Fellowship Enhancement Award	Log-correlated Gaussian fields and symmetry classes in random matrix theory	200,000	
Wilkins, Stephen	STFC	STFC Public Engagement Spark Awards	Guide Stars	1,000	
Wilkins, Stephen	STFC	STFC Public Engagement Spark Awards	Sussex Curiosity Fairs	4,000	

Department of Mathematics. Publications deposited in SRO in October, November, December 2018

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

Sussex Author	SRO ID	Status	Author(s)	Output Title	Volume Title
Blyuss, Konstantin	79268	Published	Al Basir, Fahad; Blyuss, Konstantin B; Ray, Santanu	Modelling the effects of awareness-based interventions to control the mosaic disease of <i>Jatropha curcas</i>	Ecological Complexity
Cagnetti, Filippo	80312	Published	Cagnetti, Filippo; Dal Maso, Gianni; Scardia, Lucia; Ida Zeppieri, Caterina	G-Convergence of free discontinuity problems	Annales de l'Institut Henri Poincaré (C) Non Linear Analysis
Düering, Bertram	80449	Published	Düring, Bertram; Torregrossa, Marco; Wolfram, Marie-Therese	Boltzmann and Fokker-Planck equations modelling the Elo rating system with learning effects	Journal of Nonlinear Science
Fatehi Chenar, Farzad	79784	Accepted	Fatehi Chenar, Farzad; Kyrychko, Yuliya; Molchanov, Robert; Blyuss, Konstantin	Bifurcations and multi-stability in a model of cytokine-mediated autoimmunity	International Journal of Bifurcation and Chaos
Giesl, Peter A	79305	Accepted	Giesl, Peter; Mohammed, Najla	Verification estimates for the construction of Lyapunov functions using meshfree collocation	Discrete & Continuous Dynamical Systems Ser. B
Giesl, Peter A	80036	Accepted	Bjoernsson, Hjortur; Hafstein, Sigurdur; Giesl, Peter; Scalas, Enrico; Gudmundsson, Skuli	Computation of the stochastic basin Of attraction by rigorous construction of a lyapunov function	Discrete and Continuous Dynamical Systems - Series B
Giesl, Peter A	80798	Accepted	Giesl, Peter	Construction of Finsler-Lyapunov functions with meshless collacation	ZAMM
Kiss, Istvan Z	79597	Published	Overbury, Peter; Kiss, István Z; Berthouze, Luc	Mapping structural diversity in networks sharing a given degree distribution and global clustering: Adaptive resolution grid search evolution with Diophantine equation-based mutations	Complex Networks & Their Applications VII
Kiss, Istvan Z	80219	Accepted	Bishop, A; Kiss, I Z; House, T	Consistent approximation of epidemic dynamics on degree-heterogeneous clustered networks	Complex Networks and Their Applications VII

Kiss, Istvan Z	80220	Accepted	Kiss, István Z; Miller, Joel C; Simon, Péter L	Fast variables determine the epidemic threshold in the pairwise model with an improved closure	Proceedings of Complex Networks 2018
Madzvamuse, Anotida	80629	Published	Rata, Scott; Suarez Peredo Rodriguez, Maria F; Joseph, Stephy; Peter, Nisha; Echegaray Iturra, Fabio; Yang, Fengwei; Madzvamuse, Anotida; Ruppert, Jan G; Samejima, Kumiko; Platani, Melpomeni; and 4 other(s)	Two interlinked bistable switches govern mitotic control in mammalian cells	Current Biology
Morrison, George	79856	Published	Morrison, George	Rotationally-symmetric solutions to a nonlinear elliptic system under an incompressibility constraint and related problems	Doctoral thesis (PhD)
Sarfaraz, Wakil	79452	Published	Sarfaraz, Wakil	The geometric influence of domain-size on the dynamics of reaction-diffusion systems with applications in pattern formation	Doctoral thesis (PhD)
Sherborne, Neil J	79084	Published	Sherborne, Neil	Non-Markovian epidemic dynamics on networks	Doctoral thesis (PhD)
Simm, Nicholas J	80246	Accepted	Deelan Cunden, Fabio; Mezzadri, Francesco; O'Connell, Neil; Simm, Nicholas	Moments of random matrices and hypergeometric orthogonal polynomials	Communications in Mathematical Physics
Styles, Vanessa M	79377	Published	Garcke, Harald; Lam, Kei Fong; Styles, Vanessa	Cahn--Hilliard inpainting with the double obstacle potential	SIAM Review
Taheri, Ali	79928	Published	Taheri, Ali; Morrison, George	On a class of stationary loops on $SO(n)$ and the existence of multiple twisting solutions to a nonlinear elliptic system subject to a hard incompressibility constraint	Boundary Value Problems
Taheri, Ali	80749	Published	Taheri, Ali; Morris, Charles	On the uniqueness and monotonicity of energy minimisers in the homotopy classes of incompressible mappings and related problems	Journal of Mathematical Analysis and Applications
Venkataraman, Chandrasekhar	79807	Published	Campillo-Funollet, Eduard; Venkataraman, Chandrasekhar; Madzvamuse, Anotida	Bayesian parameter identification for Turing systems on stationary and evolving domains	Bulletin of Mathematical Biology

Department of Physics. Publications deposited in SRO in October, November, December 2018

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

Sussex Author	SRO ID	Status	Author(s)	Output Title	Volume Title
Fritz, Christopher	79185	Published	Fritz, Christopher	Aspects of non-locality in gravity	Doctoral thesis (PhD)
Lerner, Giuseppe	79188	Published	Lerner, Giuseppe	Search for third generation scalar quarks in events with b-tagged jets with the ATLAS detector	Doctoral thesis (PhD)
Peeters, Simon JM	79189	Accepted	Araudruz, P A; Baldwin, M; Batygov, M; Beltran, B; Bina, C E; Bishop, D; Boorman, G; Boulay, M G; Broerman, B; Bromwich, T; and 3 other(s)	Design and construction of the DEAP-3600 dark matter detector	Astroparticle Physics
Byrnes, Christian T	79190	Published	Torrado, Jesús; Byrnes, Christian T; Hardwick, Robert J; Vennin, Vincent; Wands, David	Measuring the duration of inflation with the curvaton	Physical Review D
Byrnes, Christian T	79192	Published	Byrnes, Christian T; Hindmarsh, Mark; Young, Samuel Mark; Hawkins, Michael R S	Primordial black holes with an accurate QCD equation of state	Journal of Cosmology and Astroparticle Physics
Calmet, Xavier	79334	Published	Calmet, Xavier	[Review] Khalil Chamcham, Joseph Silk, John D. Barrow, Simon Saunders (2017) Philosophical and scientific perspectives on cosmology	Metascience
Abraham, Nicola L	79448	Published	Aaboud, M; Aad, G; Abbott, B; Abdinov, O; Abeloos, B; Abhayasinghe, D K; Abidi, S H; AbouZeid, O S; Abraham, N L; Abramowicz, H; and 18 other(s)	Observation of Higgs boson production in association with a top quark pair at the LHC with the ATLAS detector	Physics Letters B
Molnar, Daniel C	79453	Published	Molnar, Daniel	Tracing star formation and AGN activity at radio frequencies	Doctoral thesis (PhD)
Large, Matthew J	79489	Published	Jurewicz, Izabela; Garriga, Rosa; Large, Matthew J; Burn, Jake; Bardi, Niki; King, Alice A K; Velliou, Eirini G; Watts, John F; Hinder, Steven J; Muñoz, Edgar; and 0 other(s)	Functionalization of silver nanowire transparent electrodes with self-assembled 2-dimensional tectomer nanosheets	ACS Applied Nano Materials
Ross, Hannah E	79617	Published	Ross, Hannah	Simulating the 21-cm signal during the Cosmic Dawn	Doctoral thesis (PhD)

Rong, Yuanyang	79651	Published	Mahajan, Ankita; Bhattacharya, Swapan Kumar; Rochat, Sébastien; Burrows, Andrew D; Fletcher, Phillip J; Rong, Yuanyang; Dalton, Alan B; KcKeown, Neil B; Marken, Frank	Polymer of intrinsic microporosity (PIM-7) coating affects triphasic palladium electrocatalysis	ChemElectroChem
Krueger, Peter N	79653	Published	Boto, Elena; Meyer, Sofie S; Shah, Vishal; Alem, Orang; Knappe, Svenja; Kruger, Peter; Fromhold, T Mark; Lim, Mark; Glover, Paul M; Morris, Peter G; and 2 other(s)	A new generation of magnetoencephalography: room temperature measurements using optically-pumped magnetometers	NeuroImage
Krueger, Peter N	79654	Published	Paris-Mandoki, A; Shearring, J; Mancarella, F; Fromhold, T M; Trombettoni, A; Krüger, P	Superfluid flow above the critical velocity	Scientific Reports
Krueger, Peter N	79656	Published	Giampaolo, Salvatore Marco; Trombettoni, Andrea; Krüger, Peter; Macri, Tommaso	Many-body atomic speed sensor in lattices	Physical Review A
Calmet, Xavier	79662	Published	Calmet, Xavier	Vanishing of quantum gravitational corrections to vacuum solutions of general relativity at second order in curvature	Physics Letters B
Peccianti, Marco	79694	Published	Tomasino, Alessandro; Piccoli, Riccardo; Jestin, Yoann; Delprat, Sebastien; Chaker, Mohamed; Peccianti, Marco; Clerici, Matteo; Busacca, Alessandro; Razzari, Luca; Morandotti, Roberto	Ultra-broadband terahertz coherent detection via a silicon nitride-based deep sub-wavelength metallic slit	APL Photonics
Abraham, Nicola L	79859	Published	Abraham, Nicola	Search for Electroweak Supersymmetry in final states with three electrons or muons plus missing transverse momentum in 13 TeV proton-proton collisions at the Large Hadron Collider with the ATLAS Detector	Doctoral thesis (PhD)
Weidt, Sebastian	80037	Published	Webb, A E; Webster, S C; Collingbourne, S; Breaud, D; Lawrence, A M; Weidt, S; Mintert, F; Hensinger, W K	Resilient entangling gates for trapped ions	Physical Review Letters
Abraham, Nicola L	80060	Published	Abraham, N L; Allbrooke, B M M; Asquith, L; Cerri, A; Chavez Barajas, C A; De Santo, A; Jones, S; Lerner, G; Miano, F; Salvatore, F; and 11 other(s)	Search for flavour-changing neutral current top-quark decays $t \rightarrow qZ$ in proton-proton collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector	Journal of High Energy Physics
Abraham, Nicola L	80065	Published	The ATLAS Collaboration, ; Abraham, N L; Allbrooke, B M M; Asquith, Lily; Cerri, A; Chavez Barajas, C A; De Santo, A; Jones, S D; Lerner, G; Miano, F; and 11 other(s)	Search for exclusive Higgs and Z boson decays to $f\gamma$ and $Z\gamma$ with the ATLAS detector	Journal of High Energy Physics

Abraham, Nicola L	80070	Published	The ATLAS Collaboration, ; Abraham, N L; Allbrooke, B M M; Asquith, L; Cerri, A; Chavez Barajas, C A; De Santo, A; Jones, S; Lerner, G; Miano, F; and 10 other(s)	Search for long-lived charginos based on a disappearing-track signature in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector	Journal of High Energy Physics
Abraham, Nicola L	80071	Published	Abraham, N L; Allbrooke, B M M; Asquith, L; Cerri, A; Chavez Barajas, C A; De Santo, A; Jones, S; Lerner, G; Miano, F; Salvatore, F; and 11 other(s)	Search for flavor-changing neutral currents in top quark decays $t \rightarrow Hc$ and $t \rightarrow Hu$ in multilepton final states in proton-proton collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector	Physical review D
Abraham, Nicola L	80072	Published	Abraham, N L; Allbrooke, B M M; Asquith, L; Cerri, A; Chavez Barajas, C A; De Santo, A; Jones, S; Lerner, G; Miano, F; Salvatore, F; and 11 other(s)	Measurement of inclusive jet and dijet cross-sections in proton-proton collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector	Journal of High Energy Physics
Abraham, Nicola L	80074	Published	Abraham, N L; Allbrooke, B M M; Asquith, L; Cerri, A; Chavez Barajas, C A; De Santo, A; Jones, S; Lerner, G; Miano, F; Salvatore, F; and 10 other(s)	Search for squarks and gluinos in final states with jets and missing transverse momentum using 36.1 fb $^{-1}$ of $\sqrt{s} = 13$ TeV pp collision data with the ATLAS detector	Physical Review D
Abraham, Nicola L	80075	Published	Abraham, N L; Allbrooke, B M M; Asquith, L; Cerri, A; Chavez Barajas, C A; De Santo, A; Jones, S; Lerner, G; Miano, F; Salvatore, F; and 11 other(s)	Combined measurement of differential and total cross sections in the $H \rightarrow ZZ$ and the $H \rightarrow ZZ^* \rightarrow 4l$ decay channels at $\sqrt{s} = 13$ TeV with the ATLAS detector	Physics Letters B
Abraham, Nicola L	80077	Published	The ATLAS Collaboration, ; Abraham, N L; Allbrooke, B M M; Asquith, L; Cerri, A; Chavez Barajas, C A; De Santo, A; Jones, S D; Lerner, G; Miano, F; and 10 other(s)	Measurement of differential cross sections and W^+ / W^- cross-section ratios for W boson production in association with jets at $\sqrt{s} = 8$ TeV with the ATLAS detector	Journal of High Energy Physics
Abraham, Nicola L	80078	Published	Abraham, N L; Allbrooke, B M M; Asquith, L; Cerri, A; Chavez Barajas, C A; De Santo, A; Jones, S D; Lerner, G; Miano, F; Salvatore, F; and 10 other(s)	Measurement of jet fragmentation in 5.02 TeV proton-lead and proton-proton collisions with the ATLAS detector	Nuclear Physics A
Weidt, Sebastian	80082	Published	Randall, J; Lawrence, A M; Webster, S C; Weidt, S; Vitanov, N V; Hensinger, W K	Generation of high-fidelity quantum control methods for multilevel systems	Physical Review A
Abraham, Nicola L	80090	Published	Abraham, N L; Allbrooke, B M M; Asquith, L; Cerri, A; Chavez Barajas, C A; De Santo, A; Jones, S; Lerner, G; Miano, F; Salvatore, F; and 11 other(s)	Measurement of jet fragmentation in Pb+Pb and pp collisions at $\sqrt{s_{NN}} = 5.02$ TeV with the ATLAS detector	Physical Review C

Abraham, Nicola L	80105	Published	Abraham, N L; Allbrooke, B M M; Asquith, L; Cerri, A; Chavez Barajas, C A; De Santo, A; Jones, S D; Lerner, G; Miano, F; Salvatore, F; and 12 other(s)	Search for heavy resonances decaying to a photon and a hadronically decaying Z/W/H boson in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector	Physical Review D
Abraham, Nicola L	80106	Published	Abraham, N L; Allbrooke, B M M; Asquith, L; Cerri, A; Chavez Barajas, C A; De Santo, A; Jones, S D; Miano, F; Salvatore, F; Santoyo Castillo, I; and 10 other(s)	Measurements of $t\bar{t}$ differential cross-sections of highly boosted top quarks decaying to all-hadronic final states in pp collisions at $\sqrt{s} = 13$ TeV using the ATLAS detector	Physical Review D
Abraham, Nicola L	80107	Published	Abraham, N L; Allbrooke, B M M; Asquith, L; Cerri, A; Chavez Barajas, C A; De Santo, A; Jones, S; Lerner, G; Miano, F; Salvatore, F; and 11 other(s)	Measurement of the inclusive and fiducial $t\bar{t}$ production cross-sections in the lepton+jets channel in pp collisions at $\sqrt{s} = 8$ TeV with the ATLAS detector	European Physical Journal C: Particles and Fields
Abraham, Nicola L	80108	Published	The ATLAS Collaboration, ; Abraham, N L; Allbrooke, B M M; Asquith, L; Cerri, A; Chavez Barajas, C A; De Santo, A; Jones, S D; Lerner, G; Miano, F; and 11 other(s)	Search for charged Higgs bosons decaying via $H^\pm \rightarrow t \bar{t}$ in the t -jets and t -lepton final states with 36 fb ⁻¹ of pp collision data recorded at $\sqrt{s} = 13$ TeV with the ATLAS experiment	Journal of High Energy Physics
Abraham, Nicola L	80109	Published	Abraham, N L; Allbrooke, B M M; Asquith, L; Cerri, A; Chavez Barajas, C A; De Santo, A; Jones, S D; Lerner, G; Salvatore, F; Santoyo Castillo, I; and 9 other(s)	Search for supersymmetry in events with four or more leptons in $\sqrt{s} = 13$ TeV pp collisions with ATLAS	Physical Review D
Abraham, Nicola L	80111	Published	Abraham, N L; Allbrooke, B M M; Asquith, L; Cerri, A; Chavez Barajas, C A; De Santo, A; Jones, S D; Lerner, G; Miano, F; Salvatore, F; and 11 other(s)	Search for Higgs boson decays to beyond-the-Standard-Model light bosons in four-lepton events with the ATLAS detector at $\sqrt{s} = 13$ TeV	Journal of High Energy Physics
Abraham, Nicola L	80112	Published	Abraham, N L; Allbrooke, B M M; Asquith, L; Cerri, A; Chavez Barajas, C A; De Santo, A; Jones, S D; Lerner, G; Miano, F; Salvatore, F; and 11 other(s)	Observation of $H \rightarrow b\bar{b}$ decays and VH production with the ATLAS detector	Physics Letters B
Abraham, Nicola L	80113	Published	The ATLAS Collaboration, ; Abraham, N L; Allbrooke, B M M; Asquith, L; Cerri, A; Chavez Barajas, C A; De Santo, A; Jones, S J; Lerner, G; Miano, F; and 12 other(s)	Search for supersymmetry in final states with charm jets and missing transverse momentum in 13 TeV pp collisions with the ATLAS detector	Journal of High Energy Physics
Abraham, Nicola L	80114	Published	The ATLAS Collaboration, ; Abraham, N L; Allbrooke, B M M; Asquith, L; Cerri, A; Chavez Barajas, C A; De Santo, A; Jones, S D; Lerner, G; Miano, F; and 11 other(s)	Search for top-squark pair production in final states with one lepton, jets, and missing transverse momentum using 36 fb ⁻¹ of $\sqrt{s} = 13$ TeV pp collision data with the ATLAS detector	Journal of High Energy Physics

Abraham, Nicola L	80116	Published	Abraham, N L; Allbrooke, B M M; Asquith, L; Cerri, A; Shaw, K; Chavez Barajas, C A; De Santo, A; Jones, S; Lerner, G; Miano, F; and 11 other(s)	Search for top squarks decaying to tau sleptons in pp collisions at $\sqrt{s}=13$ TeV with the ATLAS detector	Physical Review D
Abraham, Nicola L	80129	Published	Abraham, N L; Allbrooke, B M M; Asquith, L; Cerri, A; Chavez Barajas, C; De Santo, A; Jones, S D; Lerner, G; Miano, F; Salvatore, F; and 11 other(s)	Search for resonances in the mass distribution of jet pairs with one or two jets identified as b- jets in proton-proton collisions at $\sqrt{s}=13$ TeV with the ATLAS detector	Physical Review D
Abraham, Nicola L	80130	Published	The ATLAS Collaboration, ; Abraham, N L; Allbrooke, B M M; Asquith, L; Cerri, A; Chavez Barajas, C A; De Santo, A; Jones, S D; Lerner, G; Miano, F; and 10 other(s)	Search for supersymmetry in final states with missing transverse momentum and multiple b- jets in proton-proton collisions at $\sqrt{s}=13$ TeV with the ATLAS detector	Journal of High Energy Physics
Abraham, Nicola L	80132	Published	The ATLAS Collaboration, ; Abraham, N L; Allbrooke, B M M; Asquith, L; Cerri, A; Chavez Barajas, C A; De Santo, A; Jones, S; Lerner, G; Miano, F; and 10 other(s)	Search for R-parity-violating supersymmetric particles in multi-jet final states produced in p-p collisions at $\sqrt{s}=13$ TeV using the ATLAS detector at the LHC	Physics Letters B
Abraham, Nicola L	80133	Published	Abraham, N L; Allbrooke, B M M; Asquith, L; Cerri, A; Chavez Barajas, C A; De Santo, A; Jones, S D; Lerner, G; Miano, F; Salvatore, F; and 11 other(s)	Prompt and non-prompt J/ψ elliptic flow in Pb+Pb collisions at $\sqrt{s_{NN}}=5.02$ TeV with the ATLAS detector	European Physical Journal C : Particles and Fields
Abraham, Nicola L	80134	Published	Abrahams, N L; Allbrooke, B M M; Asquith, L; Cerri, A; Chavez Barajas, C A; De Santo, A; Jones, S; Lerner, G; Miano, F; Salvatore, F; and 12 other(s)	Search for new phenomena using the invariant mass distribution of same-flavour opposite-sign dilepton pairs in events with missing transverse momentum in $\sqrt{s}=13$ TeV pp collisions with the ATLAS detector	The European Physical Journal C : Particles and Fields
Abraham, Nicola L	80136	Published	Abraham, N L; Allbrooke, B M M; Asquith, L; Cerri, A; Chavez Barajas, C A; De Santo, A; Jones, S; Lerner, G; Miano, F; Salvatore, F; and 11 other(s)	Study of the material of the ATLAS inner detector for Run 2 of the LHC	Journal of Instrumentation
Abraham, Nicola L	80142	Published	Abraham, N L; Allbrooke, B M M; Asquith, L; Cerri, A; Chavez Barajas, C; De Santo, A; Jones, S D; Lerner, G; Miano, F; Salvatore, F; and 12 other(s)	Measurement of the Higgs boson mass in the $H\rightarrow ZZ^*\rightarrow 4l$ and $H\rightarrow \tau\tau$ channels with $\sqrt{s}=13$ TeV pp collisions using the ATLAS detector	Physics Letters B
Abraham, Nicola L	80144	Published	Abraham, N L; Allbrooke, B M M; Asquith, L; Cerri, A; Chavez Barajas, C; De Santo, A; Jones, S; Lerner, G; Miano, F; Salvatore, F; and 11 other(s)	Search for Higgs bosons produced via vector-boson fusion and decaying into bottom quark pairs in $\sqrt{s}=13$ TeV pp collisions with the ATLAS detector	Physical Review D

Abraham, Nicola L	80145	Published	The ATLAS Collaboration, ; Abraham, N L; Allbrooke, B M M; Asquith, L; Cerri, A; Chavez Barajas, C A; De Santo, A; Jones, S D; Lerner, G; Miano, F; and 12 other(s)	Search for a heavy Higgs boson decaying into a Z boson and another heavy Higgs boson in the $l\bar{l}b\bar{b}$ final state in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector	Physics Letters B
Abraham, Nicola L	80146	Published	Abraham, N L; Allbrooke, B M M; Asquith, L; Cerri, A; Chavez Barajas, C; De Santo, A; Jones, S D; Lerner, G; Miano, F; Salvatore, F; and 11 other(s)	Search for a new heavy gauge boson resonance decaying into a lepton and missing transverse momentum in 36 fb^{-1} of pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS experiment	European Physical Journal C: Particles and Fields
Abraham, Nicola L	80147	Published	Abraham, N L; Allbrooke, B M M; Asquith, L; Cerri, A; Chavez Barajas, C; De Santo, A; Jones, S D; Lerner, G; Miano, F; Santoyo Castillo, I; and 11 other(s)	Searches for exclusive Higgs and Z boson decays into $J/\psi, \psi(2S),$ and $\psi(nS)$ at $\sqrt{s} = 13$ TeV with the ATLAS detector	Physics Letters B
Abraham, Nicola L	80148	Published	Abraham, N L; Allbrooke, B M M; Asquith, L; Cerri, A; Chavez Barajas, C; DeSanto, A; Jones, S D; Lerner, G; Miano, F; Salvatore, F; and 11 other(s)	Evidence for light-by-light scattering in heavy-ion collisions with the ATLAS detector at the LHC	Nature Physics
Abraham, Nicola L	80150	Published	The ATLAS Collaboration, ; Abraham, N L; Allbrooke, B M M; Asquith, L; Cerri, A; Chavez Barajas, C; DeSanto, A; Jones, S D; Lerner, G; Miano, F; and 11 other(s)	Observation of Higgs boson production in association with a top quark pair at the LHC with the ATLAS detector	Physics Letters B
Abraham, Nicola L	80151	Published	Abraham, N L; Allbrooke, B; Asquith, L; Cerri, A; Chavez Barajas, C; DeSanto, A; Jones, S D; Lerner, G; Miano, F; Salvatore, F; and 11 other(s)	Search for the Decay of the Higgs boson to charm quarks with the ATLAS experiment	Physical Review Letters
Abraham, Nicola L	80199	Published	Abraham, N L; Allbrooke, B M M; Asquith, L; Cerri, A; Chavez Barajas, C A; De Santo, A; Jones, S D; Lerner, G; Miano, F; Salvatore, F; and 11 other(s)	Search for pair production of heavy vector-like quarks decaying into high-pT W bosons and top quarks in the lepton-plus-jets final state in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector	Journal of High Energy Physics
Abraham, Nicola L	80202	Published	Abraham, N L; Allbrooke, B M M; Asquith, L; Cerri, A; Chavez Barajas, C A; De Santo, A; Jones, S D; Lerner, G; Miano, F; Salvatore, F; and 11 other(s)	Combination of searches for heavy resonances decaying into bosonic and leptonic final states using 36 fb^{-1} of proton-proton collision data at $\sqrt{s} = 13$ TeV with the ATLAS detector	Physical Review D
Abraham, Nicola L	80203	Published	Abraham, N L; Allbrooke, B M M; Asquith, L; Cerri, A; Chavez Barajas, C A; De Santo, A; Jones, S D; Lerner, G; Miano, F; Salvatore, F; and 11 other(s)	A measurement of the soft-drop jet mass in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector	Physical Review Letters

Abraham, Nicola L	80204	Published	Abraham, N L; Allbrooke, B M M; Asquith, L; Cerri, A; Chavez Barajas, C A; De Santo, A; Jones, S D; Lerner, G; Miano, F; Salvatore, F; and 11 other(s)	Measurements of b-jet tagging efficiency with the ATLAS detector using $t\bar{t}$ events at $\sqrt{s} = 13$ TeV	Journal of High Energy Physics
Abraham, Nicola L	80205	Published	Abraham, N; Allbrooke, B M M; Asquith, L; Cerri, A; Chavez Barajas, C A; De Santo, A; Jones, S D; Lerner, G; Miano, F; Salvatore, F; and 12 other(s)	Search for Higgs boson decays into pairs of light (pseudo)scalar particles in the $t\bar{t}j\bar{j}$ final state in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector	Physics Letters B
Calmet, Xavier	80208	Published	Calmet, Xavier; Latosh, Boris	Massive gravitational waves from black hole inspirals in quantum gravity	EPJ Web of Conferences
Loveday, Jonathan N	80214	Published	Eales, Stephen A; Baes, Maarten; Bourne, Nathan; Bremer, Malcolm; Brown, Michael J I; Clark, Christopher; Clements, David; de Vis, Pieter; Driver, Simon; Dunne, Loretta; and 16 other(s)	The causes of the red sequence, the blue cloud, the green valley, and the green mountain	Monthly Notices of the Royal Astronomical Society
Loveday, Jonathan N	80215	Published	Wang, L.; Norberg, P; Brough, S; Brown, M J I; da Cunha, E; Davies, L J; Driver, S P; Holwerda, B W; Hopkins, A M; Lara-Lopez, M A; and 4 other(s)	Galaxy and Mass Assembly (GAMA): The environmental dependence of the galaxy main sequence	Astronomy and Astrophysics
Loveday, Jonathan N	80217	Published	Amon, A; Blake, C; Heymans, C; Leonard, C D; Asgari, M; Bilicki, M; Choi, A; Erben, T; Glazebrook, K; Harnois-Déraps, J; and 9 other(s)	KiDS+2dFLenS+GAMA: testing the cosmological model with the EG statistic	Monthly Notices of the Royal Astronomical Society
Lynch, Peter J	80245	Published	Nufer, Sebastian; Lynch, Peter; Cann, Mariah; Large, Matthew J; Salvage, Jonathan P; Víctor-Román, Sandra; Hernández-Ferrer, Javier; Benito, Ana M; Maser, Wolfgang K; Brunton, Adam; and 0 other(s)	Carbon nanofoam supercapacitor electrodes with enhanced performance using a water-transfer process	ACS Omega
Thorne, Jacob	80282	Published	Thorne, Jacob	Electric field optimisation for cryogenic nEDM experiments	Doctoral thesis (PhD)
Wetzel, Benjamin RL	80347	Published	Wetzel, Benjamin; Kues, Michael; Roztock, Piotr; Reimer, Christian; Godin, Pierre-Luc; Rowley, Maxwell; Little, Brent E; Chu, Sai T; Viktorov, Evgeny A; Moss, David J.; and 2 other(s)	Customizing supercontinuum generation via on-chip adaptive temporal pulse-splitting	Nature Communications
Bason, Mark G	80359	Published	Heck, Robert; Vuculescu, Oana; Jakob Sørensen, Jens; Zoller, Jonathan; Andreasen, Morten G; Bason, Mark G;	Remote optimization of an ultra-cold atoms experiment by experts and citizen scientists	Proceedings of the National Academy of Sciences

			Ejlertsen, Poul; Eliasson, Ottø; Haikka, Pinja; Lausten, Jens S; and 9 other(s)		
Dunningham, Jacob A	80365	Published	Palge, Veiko; Dunningham, Jacob; Groote, Stefan; Liivat, Hannes	Relativistic entanglement of two particles driven by continuous product momenta	Physical Review A
Tripathi, Manoj	80437	Published	Tripathi, Manoj; Awaja, Firas; Bizão, Rafael A.; Signetti, Stefano; Iacob, Erica; Paolicelli, Guido; Valeri, Sergio; Dalton, Alan B; Pugno, Nicola Maria	Friction and adhesion of different structural defects of graphene	ACS Applied Materials & Interfaces
Tripathi, Manoj	80440	Published	Awaja, Firas; Tripathi, Manoj; Coraça-Huber, Débora; Speranza, Giorgio	Biocompatibility of different graphene oxide coatings on polymers	Materialia
Tripathi, Manoj	80443	Published	Tripathi, Manoj; Mahmood, Haroon; Novel, David; Iacob, Erica; Vanzetti, Lia; Bartali, Ruben; Speranza, Giorgio; Pegoretti, Alessandro; Pugno, Nicola	Nanoscale friction of graphene oxide over glass-fibre and polystyrene	Composites Part B: Engineering
Romer, Kathy K	80472	Published	Pagul, A; Sánchez, F, J; Salvador, A. I.; García-Bellido, J; Sanchez, E; Pujol, A; Frieman, J; Gaztanaga, E; Ross, A J; Sevilla-Noarbe, I; and 45 other(s)	Measuring linear and non-linear galaxy bias using counts-in-cells in the Dark Energy Survey Science Verification data	Monthly Notices of the Royal Astronomical Society
Bhargava, Sunayana	80473	Published	McClintock, T; Varga, T N; Gruen, D; Rozo, E; Rykoff, E S; Shin, T; Melchior, P; DeRose, J; Seitz, S; Dietrich, J P; and 92 other(s)	Dark Energy Survey Year 1 results: weak lensing mass calibration of redMaPPer galaxy clusters	Monthly Notices of the Royal Astronomical Society
Romer, Kathy K	80474	Published	Khain, T; Becker, J C; Adams, F C; Gerdes, D W; Hamilton, S J; Francon, K; Zullo, L; Sako, M; Napier, K.; Lin, Hsing Wen; and 54 other(s)	Dynamical analysis of three distant trans-Neptunian objects with similar orbits	Astronomical Journal
Romer, Kathy K	80475	Published	Troxel, M A; MacCrann, N; Zuntz, J; Krause, E; Dodelson, S; Gruen, D; Blazek, J; Friedrich, O; Samuroff, S; Prat, J; and 2 other(s)	Dark Energy Survey Year 1 results: cosmological constraints from cosmic shear	Physical Review D
Romer, Kathy K	80476	Published	Abbott, T M C; Abdalla, F B; Alarcon, A; Aleksic, J; Allam, S; Allen, S; Amara, A; Annis, J; Asorey, J; Avila, S; and 2 other(s)	Dark Energy Survey Year 1 results: cosmological constraints from galaxy clustering and weak lensing	Physical Review D
Romer, Kathy K	80477	Published	Elvin-Poole, J; Crocce, M; Ross, A J; Giannantonio, T; Rozo, E; Rykoff, E S; Avila, S; Banik, N; Blazek, J; Bridle, S L; and 2 other(s)	Dark Energy Survey Year 1 results: galaxy clustering for combined probes	Physical Review D

Romer, Kathy K	80479	Accepted	Prat, J; Sánchez, C; Fang, Y; Gruen, D; Elvin-Poole, J; Kokron, N; Secco, L F; Jain, B; Miquel, R; MacCrann, N; and 2 other(s)	Dark Energy Survey Year 1 results: galaxy-galaxy lensing	Monthly Notices Of The Ras
Sargent, Mark	80488	Published	Silverman, J D; Rujopakarn, W; Daddi, E; Renzini, A; Rodighiero, G; Liu, D; Puglisi, A; Sargent, M; Mancini, C; Kartaltepe, J; and 9 other(s)	The molecular gas content and fuel efficiency of starbursts at $z \sim 1.6$ with ALMA	Astrophysical Journal
Sargent, Mark	80489	Published	Silverman, J D; Daddi, E; Rujopakarn, W; Renzini, A; Mancini, C; Bournaud, F; Puglisi, A; Rodighiero, G; Liu, D; Sargent, M; and 12 other(s)	Concurrent starbursts in molecular gas disks within a pair of colliding galaxies at $z = 1.52$	Astrophysical Journal
Sargent, Mark	80490	Published	Wang, Tao; Elbaz, David; Daddi, Emanuele; Liu, Daizhong; Kodama, Tadayuki; Tanaka, Ichi; Schreiber, Corentin; Zanella, Anita; Valentino, Francesco; Sargent, Mark; and 5 other(s)	Revealing environmental dependence of molecular gas content in a distant X-ray cluster at $z=2.51$	Astrophysical Journal
Sargent, Mark	80491	Published	Zanella, A; Daddi, E; Magdis, G; Diaz Santos, T; Cormier, D; Liu, D; Cibinel, A; Gobat, R; Dickinson, M; Sargent, M; and 11 other(s)	The [C II] emission as a molecular gas mass tracer in galaxies at low and high redshift	Monthly Notices of the Royal Astronomical Society
Sargent, Mark	80492	Published	Saintonge, Amélie; Wilson, Christine D; Xiao, Ting; Lin, Lihwai; Hwang, Ho Seong; Tosaki, Tomoka; Bureau, Martin; Cigan, Phillip J; Clark, Christopher J R; Clements, David L; and 80 other(s)	JINGLE, a JCMT legacy survey of dust and gas for galaxy evolution studies - I. Survey overview and first results	Monthly Notices of the Royal Astronomical Society
Sargent, Mark	80493	Published	Delvecchio, I; Smolcic, V; Zamorani, G; Rosario, D J; Bondi, M; Marchesi, S; Miyaji, T; Novak, M; Sargent, M T; Alexander, D M; and 0 other(s)	SMBH accretion properties of radio-selected AGN out to $z \sim 4$	Monthly Notices of the Royal Astronomical Society
Banfi, Andrea	80507	Published	Banfi, Andrea; Bond, Andrew; Martin, Adam; Sanz, Verónica	Digging for top squarks from Higgs data: from signal strengths to differential distributions	Journal of High Energy Physics
Nation, Charlie	80630	Published	Nation, Charlie; Porras, Diego	Off-diagonal observable elements from random matrix theory: distributions, fluctuations, and eigenstate thermalization	New Journal of Physics

braham, Nicola L	80632	Accepted	Abraham, N L; Allbrooke, B M M; Asquith, L; Cerri, A; Chavez Barajas, C; DeSanto, A; Jones, S D; Lerner, G; Miano, F; Salvatore, F; and 11 other(s)	Search for squarks and gluinos in final states with hadronically decaying t -leptons, jets, and missing transverse momentum using pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector	Physical Review D
Wilkins, Stephen M	80644	Published	Tenneti, Ananth; Wilkins, Stephen M; Di Matteo, Tiziana; Croft, Rupert A C; Feng, Yu	A tiny host galaxy for the first giant black hole: $z = 7.5$ quasar in BlueTides	Monthly Notices of the Royal Astronomical Society
El-Menoufi, Basem M	80645	Published	Dillon, Barry; El-Menoufi, Basem Kamal; Huber, Stephan J; Manuel, Jonathan P	Rapid holographic phase transition with brane-localized curvature	Physical Review D
Sanz, Veronica	80669	Published	Croon, Djuna; Sanz, Verónica; White, Graham	Model discrimination in gravitational wave spectra from dark phase transitions	Journal of High Energy Physics
Sanz, Veronica	80670	Published	Ellis, John; Murphy, Christopher W; Sanz, Verónica; You, Tevong	Updated global SMEFT fit to Higgs, diboson and electroweak data	Journal of High Energy Physics
Bond, Andrew D	80674	Published	Bond, Andrew	Weakly coupled fixed points and interacting ultraviolet completions of vanilla quantum field theories; or, better asymptotically safe than asymptotically sorry	Doctoral thesis (PhD)
Eggemeier, Alexander	80679	Published	Eggemeier, Alexander	Challenges and prospects of probing galaxy clustering with three-point statistics	Doctoral thesis (PhD)
Peeters, Simon JM	80721	Published	, ; Aharmim, B; Ahmed, S N; Anthony, A E; Barros, N; Beier, E W; Bellerive, A; Beltran, B; Bergevin, M; Biller, S D; and 16 other(s)	Tests of Lorentz invariance at the Sudbury Neutrino Observatory	Physical Review D
Peeters, Simon JM	80722	Published	Waterfield, James; Sinclair, James; Peeters, Simon; White, Richard	Light pulse generating circuits and systems	Patent
Tripathi, Manoj	80753	Published	Tripathi, Manoj; King, Alice; Fratta, Giuseppe; Meloni, Manuela; Large, Matthew; Salvage, Jonathan P; Pugno, Nicola Maria; Dalton, Alan B	Laser-based texturing of graphene to locally tune electrical potential and surface chemistry	ACS Omega
Keller, Matthias K	80809	Accepted	Gardner, Amy; Softley, Timothy; Keller, Matthias	Multi-photon ionisation spectroscopy for rotational state preparation of $N+2$	Scientific Reports
Barrett, Adam B	80904	Accepted	Mediano, Pedro M; Seth, Anil; Barrett, Adam	Measuring integrated information: comparison of candidate measures in theory and simulation	Entropy
Mondal, Rajesh	81342	Published	Mondal, Bharadwaj, Iliev, Datta, Majumdar, Shaw and Sarkar	A method to determine the evolution history of the mean neutral Hydrogen fraction	Monthly Notices of the Royal Astronomical Society:Letters

