



Royal  
Astronomical  
Society

### Thesis Prize Winners

The Michael Penston and Keith Runcorn (formerly the Blackwell) Thesis Prizes are awarded for the best doctoral thesis in astronomy or geophysics respectively.

<b>Year</b>	<b>Michael Penston Thesis Prize (Astronomy)</b>	<b>Keith Runcorn Thesis Prize (Geophysics)</b>
2023	<p>Winner: Georgina Dransfield (Birmingham) - Planetary systems unlike the Solar system's</p> <p>Runner-up: William Roper (Sussex) - A tale of birds and bug fixes: computational astrophysics in the Epoch of Reionisation</p>	<p>Winner: Jesse Coburn (Queen Mary University) - The Effective Mean-Free-Path of the Solar Wind</p> <p>Runner up: Dr. Joe McNeil (Open University) - Mounds in Chryse Planitia and Oxia Planum, Mars: an unrecognised archive of Noachian geology</p>
2022	<p>Winner: David Hosking (Oxford) - The decay of MHD turbulence and the primordial origin of magnetic fields in cosmic voids</p> <p>Runner-up: Nora Eisner (Oxford) - People Powered Planet Hunting with TESS</p> <p>Runner-up: Andrew Mummery (Oxford) - Illuminating Tidal Disruption Events with a Time Dependent Theory of Relativistic Accretion Discs</p>	<p>Winner: Peter Stephenson (Imperial) - Origin, evolution and impact of electrons at comet 67P</p> <p>Runner-up: James Ward (Leeds) - Analysis of Mantle Heterogeneity through Array Observations of Multipathing and its Expansion to a Global Scale</p>

2021	<p>Winner: Maria Vincenzi (Portsmouth) with a thesis entitled: Core-collapse contamination in photometric samples of Type Ia Supernovae</p> <p>Runner-up: Riccardo Bucicchio (Birmingham) with a thesis entitled: Topics in Bayesian population inference for gravitational wave astronomy</p> <p>Runner-up: Matthew Price (UCL) with a thesis entitled: Bayesian Variational Regularisation for Dark Matter Reconstruction with Uncertainty Quantification</p>	<p>Winner: Dr Juan Alday Parejo (Oxford)- Unravelling the isotopic imprints of Martian CO<sub>2</sub> and H<sub>2</sub>O using solar occultation observations from the Atmospheric Chemistry Suite onboard ExoMars Trace Gas orbitor</p> <p>Runner-up: Dr Nicolina Chrysaphi (Glasgow) - Fine structures of solar radio bursts: origins and radio-wave propagation effects</p>
2020	<p>Winner: Dr Jennifer Yik Ham Chan (UCL) 'All-sky Radiative Transfer and Characterisation for Cosmic Structures'</p> <p>Runner-up: Dr Luisa Lucie-Smith (UCL) 'Insights into cosmological structure formation with machine learning'.</p>	<p>Winner: Dr Thomas Kettlety - Microseismic and geomechanical investigation of injection-induced fault reactivation</p>
2019	<p>Winner: Dr Luke Pratley (UCL) 'Radio Astronomy Image Reconstruction in the Big Data Era'</p> <p>Runners up: Dr Cleo Loi (Cambridge) 'Magnetic Fields and Stellar Oscillations' and Dr Oliver Tattersall (Oxford) 'Testing Gravity with Black Holes'</p>	<p>Winner: Dr Muhammad Atif Nawaz (Edinburgh) 'Efficient Probabilistic Inversion of Geophysical Data'</p> <p>Runner up: Dr Hayley Allison (Cambridge) 'Understanding how low energy electrons control the variability of the Earth's electron radiation belts'</p>
2018	<p>Winner: Dr Alexandra Amon (Edinburgh) 'Cosmology with the Kilo-Degree Lensing Survey.'</p> <p>Runner up: Dr Antonella Palmase (UCL) 'Unveiling the unseen with the Dark Energy Survey: gravitational waves and dark matter'</p>	<p>Winner: Dr Ophelia Crawford (Cambridge) 'On the Viscoelastic Deformation of the Earth'.</p> <p>Runner up: Dr Fred Richards (Cambridge) 'Global Analysis of Predicted and Observed Dynamic Topography'</p>

2017	<p>Winner: Dr Sownak Bose (Durham) BEYOND LCDM: Exploring alternatives to the standard cosmological paradigm</p> <p>Runner up: Dr Ivan Cabrera-Ziri (LJMU) Constraining the Origin of Multiple Stellar Populations within Stellar Clusters</p>	<p>Winner: Dr Jenny Jenkins (Cambridge) The seismic signature of the Iceland mantle plume from crust to mid-mantle wind.</p> <p>Runners up: Dr Rohini Giles (Oxford) Jupiter's tropospheric composition and cloud structure from 5-<math>\mu</math>m spectroscopy. Dr Nadine Kalmoni (UCL) - The role of magnetospheric plasma instabilities in auroral and substorm dynamics</p>
2016	<p>Winner: Dr Justin Alsing (Imperial) Bayesian analysis of weak lensing</p> <p>Runners up: Dr Antonia Bevan (UCL) Dust- Affected Models of Characteristic Line Emission in Supernovae</p>	<p>Winner: Dr Rishy Mistry (Imperial) Magnetic reconnection exhausts in the solar wind.</p> <p>Runner up: Dr Robert Green (Cambridge) The structure and seismicity of Icelandic rifts</p>
2015	<p>Winner: Dr Matt Nicholl (Queen's University Belfast) Observations and modelling of super- luminous supernovae</p> <p>Runner up: Dr Alexandre Barreira (Durham University) Structure formation in modified gravity cosmologies</p>	<p>Winner: Dr Matteo Ravasi (University of Edinburgh) Reciprocity-based imaging using multiply scattered waves</p> <p>Runner up: Dr Callum Shakespeare (University of Cambridge) On the generation of waves during frontogenesis</p>
2014	<p>Winner: Dr Guido Pettinari (University of Sussex) The intrinsic bispectrum of the Cosmic Microwave Background</p> <p>Runners up: Dr David Harvey (University of Edinburgh ) Measuring the self-interaction cross-section of dark matter with astronomical particle colliders", and Dr Boris Leistedt (University College London) "Accurate Cosmology with Galaxy and Quasar Surveys"</p>	<p>Winner: Dr Hannah Christensen (née Arnold) (University of Oxford) Stochastic Parametrisation and Model Uncertainty</p> <p>Runner up: Dr Grace Nield (Newcastle University) The Effect of Late Holocene Ice-Mass Changes on Glacial Isostatic Adjustment in West Antarctica</p>

2013	<p>Winner: Dr Joseph Elliston (University of Sussex) Observable predictions of generalised inflationary scenarios</p> <p>Runner up: Dr Emma Chapman (University College London) The Epoch of Reionization (EoR)</p>	<p>Winner: Dr Richard Walters (University of Leeds) Geodetic observation and modelling of continental deformation in Iran and Turkey</p> <p>Runner up: Dr Alex Chartier (University of Bath) Ionospheric Specification and Forecasting</p>
2012	<p>Winner: Dr Adam Ingram (University of Durham) A physical model for the variability properties of X-ray binaries</p> <p>Runner up: Dr Stephen Feeney (University College London) Novel Algorithms for Early Universe Cosmology</p>	<p>Winner: Dr Sudipta Sarkar (University of Southampton) Glacial stratigraphy, gas-escape features and ocean fine-structures from multichannel high-resolution reflection seismic data offshore West Svalbard</p> <p>Runner up: Dr Nicholas Johnson (University of Edinburgh) Magnetotelluric studies of the crust and upper mantle in a zone of active continental breakup, Afar, Ethiopia</p>
2011	<p>Winner: Dr Ryan Cooke (University of Cambridge) Finding the First Metals</p> <p>Runners up: Dr Adrian Barker (University of Cambridge) Tidal Interactions between Planets and Stars and Dr David Sobral (University of Edinburgh) The Star-Formation History of the Universe</p>	<p>Winner: Dr David Kipping (University College London) The Transits of Extrasolar Planets with Moons</p> <p>Runner up: Dr David Andrews (University of Leicester) Planetary-Period Oscillations in Saturn's Magnetosphere</p>
2010	<p>Winner: Dr Duncan Forgan (University of Edinburgh) Probing Self-Gravitating Discs Using Smoothed Particle Hydrodynamics with Radiative Transfer</p> <p>Runner up: Dr Andrew Eyre (University of Oxford) On the Dynamics of Tidal Streams in the Milky Way Galaxy</p>	<p>Winner: Dr James Verdon (University of Bristol) Microseismic monitoring and geomechanical modelling of CO<sub>2</sub> storage in subsurface reservoirs</p> <p>Runner up: Dr Richard Morton (University of Sheffield) Magneto-seismology: The influence of the properties of solar waveguides on MHD wave propagation</p>
2009	<p>Winner: Dr Baojiu Li (University of Cambridge) Physical and Cosmological Implications of Modified Gravity Theories</p> <p>Runner up: Dr Emily Curtis (University of Cambridge) A</p>	<p>Winner: Dr David Halliday (University of Edinburgh) Surface Wave Interferometry</p> <p>Runner up: Dr Lasse B. N. Clausen (University of Leicester) Ultra-low frequency waves in the magnetosphere</p>

	Submillimetre Survey of Clustered Low-Mass Star Formation	
2008	<p>Winner: Dr Kevin Schawinski (University of Oxford) The Star Formation History of Early-type Galaxies</p> <p>Runner up: Dr Rita Tojeiro (University of Edinburgh) Analysing observables in structure formation theories</p>	<p>Winner: Dr David Jess (Queen's University Belfast) High-cadence observations of the solar atmosphere</p> <p>Runner up: Dr Remco de Kok (University of Oxford) Oxygen compounds, aerosols and condensate clouds in Titan's stratosphere</p>
2007	<p>Winner: Dr Joern Geisbuesch (University of Cambridge) Cosmology with Sunyaev-Zel'dovich Cluster Surveys</p> <p>Runner up: Dr Joseph Zuntz (Imperial College London) Cosmic Microwave Background Power Spectrum Estimation and Prediction with Curious Methods and Theories</p>	<p>Winner: Dr Leigh Fletcher (University of Oxford) Saturn's Atmosphere: Structure and Composition from Cassini/CIRS</p> <p>Runner up: Dr Dirk-Jan van Manen (University of Edinburgh) Time-reversal and Interferometry with applications to forward modeling of wave propagation and a chapter on receiver functions</p>
2006	<p>Winner: Dr Kate Land (Imperial College, London) Exploring anomalies in the Cosmic Microwave Background</p> <p>Runners up: Dr James Bolton (University of Cambridge) Exploring the ionisation state of the intergalactic medium with Lyman-alpha absorption and Dr Adam Moss (University of Manchester)</p>	<p>Winner: Dr Sophie Bassett (University of Durham) Modelling sea-level observations to investigate the source and magnitude of major meltwater pulses during termination 1</p> <p>Runner up: Dr James While (University of Leeds)</p>
2005	<p>Winner: Dr Haley Gomez (nee Morgan) (Cardiff University) The Origin and Evolution of Dust</p> <p>Runners up: Dr Jeanne Wilson (University of Oxford) A Measurement of the 8B Solar Neutrino Energy Spectrum at the Sudbury Neutrino Observatory and Dr Carrie Trundle</p>	<p>Winner: Dr Phillip Livermore (University of Leeds) Magnetic stability analysis for the geodynamo</p> <p>Runner up: Dr Trudi Hoogenboom (University of Leeds) Gravity and Topography Signatures of Venusian Coronae</p>

2004	<p>Winner: Dr Clive Dickinson (University of Manchester) Diffuse Galactic Radiation and its Application To CMB Observations</p>	<p>Winner: Dr Paul Williams (University of Oxford)</p> <p>Runner up: Dr James Wookey Modelling and interpreting seismograms for 3D Earth structure: A study of mid-mantle anisotropy</p>
2003	<p>Winner: Dr Samuel Leach (University of Sussex) Precision inflationary perturbations and cosmic microwave background anisotropies</p> <p>Runners up: Dr Chris Blake (University of Oxford) Large-scale structure via wide-area radio surveys and Dr Darren Madgwick (University of Cambridge) 2dF Galaxy Redshift Survey: Galaxy Spectra and Cosmology</p>	<p>Winner: Dr Clare Watt (British Antarctic Survey) Wave-particle interactions and anomalous resistivity in collisionless space plasmas</p>
2002	<p>Winner: Dr Mark Wright (University of Bristol) Probing the star-forming region W3(OH) with ground-state hydroxyl masers</p> <p>Runners up: Dr Loretta Dunne (Cardiff University) The First Statistical Survey of the Submillimetre Properties of Local Galaxies and Dr Ole Moeller (University of Cambridge) Numerical Methods for Gravitational Lensing</p>	<p>Winner: Dr Emma Bunce (University of Leicester) Large-scale current systems in the jovian magnetosphere</p> <p>Runners up: Dr Kathryn Hardacre (University of Edinburgh) Controls on Fault Network Evolution and Population Statistics – Insights from Field Studies and Numerical Modelling and Dr Claire Newman (University of Oxford) Modelling the dust cycle in the Martian atmosphere</p>
2000	<p>Winner: Dr Andrew Benson (University of Durham) Galaxy formation and clustering in a hierarchical universe</p> <p>Runners up: Dr Sara Ellison (University of Cambridge) and Dr Rob Hynes (University of Sussex) Observations of Low Mass X-ray Transients in Outburst</p>	<p>Winner: Dr Dave Skeet (University of Oxford) Equatorial and midlatitude circulation of Jupiter's atmosphere</p> <p>Runners up: Dr Mimi Hill (University of Liverpool) The Microwave Paleointensity Technique and its Application to Lava and Dr Dan Raymer (University of Leeds) The significance of salt anisotropy in seismic exploration</p>