

Benjamin G Burningham

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RESEARCH INTERESTS	• Developing tools for remote sensing exoplanetary atmospheres • Characterization of substellar and exoplanetary atmospheres • Brown dwarfs in large area surveys	
EMPLOYMENT	University of Hertfordshire, UK	
	Associate Professor	2022 –
	<i>Director of Outreach and Public Engagement (physics, astronomy & maths)</i>	2018 –
	Senior Lecturer	2021 – 2022
	<i>Vice-chancellor's Research Fellow</i>	2017 – 2021
	<i>Marie Curie Fellow (return)</i>	2016 – 2017
	NASA Ames Research Center, California, USA	
	<i>Marie Curie Fellow (outgoing)</i>	2014 – 2016
	University of Hertfordshire, UK	
	<i>Post-doctoral Research Fellow</i>	2006 – 2014
	Epic Ltd, UK	
	<i>Instructional designer (e-learning)</i>	2005 - 2006
EDUCATION	PhD Physics, University of Exeter, UK	May 2006
	“The use of colour-magnitude diagrams in studies of low-mass star formation”	
	Advisor: Prof. Tim Naylor	
	MSci. Astronomy, University College, London, UK	June 2001
	1 st Class Honours	
GRANTS	2026 UKRI-STFC small award PI £455,092	
	2023 UKRI-STFC small award PI £324,682	
	2021 NASA Exoplanet Research Program (w/ Faherty, AMNH, USA) - co-PI US\$513,930	
	2019 NSF grant (w/ Faherty AMNH, USA) - co-PI US\$559,774	
	2019 UH Campus & Community Life grant for mobile planetarium sound system PI £6000	
	2019 RAS small grant for summer student bursary - PI £1200	
	2017 Royal Society International Exchanges (w/ AMNH, USA) – PI £12,000	
	2017 UH Proof of Concept grant for astronomy at festivals - PI £6,000	
	2014 Marie Curie International Outgoing Fellowship – PI €379,665	
	2010 INAF/TNG very large program award to hire post-doctoral assistant – co-PI €50,000	
	2009 RAS small grant for summer student bursary - PI £1040	
	2009 Spitzer Director's Discretionary Time award – PI \$17,000	

POSTGRADUATE SUPERVISION	MSc(research) Kiera Charley “Assessing the Atmospheric Characterisation of Brown Dwarfs Using SPHEREx”	2026 –
	PhD Hayden Auble “Tracing the LT transition with atmospheric retrievals” (principal supervisor)	2025 –
	MSc(research) Sonam Mayani “Compositions of cool stars from high-resolution spectra”	2025 – 2026
	PhD V Kecskeméthy “Studies of clouds and chemistry in alien worlds with JWST” (principal supervisor)	2024 –
	PhD J. Gaarn “Retrieval analysis of wide-orbit substellar companions” (principal supervisor)	2019 – 2024
	PhD E. Gonzalez-Egea “Benchmarking the age activity relation of M dwarfs” (principal supervisor)	2019 – 2021
	PhD E. Gonzales “Atmospheric studies of ultracool subdwarfs” (co-supervisor w/ Faherty, AMNH)	2018 – 2020
	PhD N. Cook “ <i>M Dwarfs from the SDSS, 2MASS and WISE Surveys: Identification, Characterisation and Unresolved Ultracool Companionship</i> ” (co-supervisor)	2012 – 2016
	PhD D. Murray “ <i>Metal-poor T dwarfs in UKIDSS</i> ” (principal supervisor)	2008 – 2012
	MSc D.Murray “ <i>Ultracool subdwarfs in UKIDSS</i> ” (principal supervisor)	2007 – 2008
	PhD J. Gomes “ <i>Wide binary systems and implications for exoplanets</i> ” (co-supervisor)	2009 – 2012
	PhD Z. Zhang “ <i>Discovery and characterisation of ultracool dwarfs in large scale surveys</i> ” (co-supervisor)	2008 – 2012
POSTGRADUATE EXAMINATIONS	PhD External examiner Xueqing Chen (Edinburgh)	2026
	PhD Internal examiner Maksym Lisogorskyi (Herts)	2020
	PhD External examiner Jayesh Goyal (Exeter)	2019
	PhD External examiner Ryan Garland (Oxford)	2018
AWARDS	Royal Astronomical Society ‘A’ Group Achievement Award (UKIDSS consortium)	2012
TEACHING	L7 Stars to Planets	2022 –
	L6 Star Formation and Evolution	2022 –
	L6 Condensed Matter Physics lecturer	2021 – 2025
	L4 Experimental Physics	2018 –
	L7 Foundations of Data Science	2020 – 2021
	L4 Engineering Applications Of Mathematics	2017 – 2019
	L4 Further Applications for Mathematics	2017 – 2018
	L4 The Physical Universe	2008 – 2014
	L4 Introductory computing	2007 – 2008
	Private sector e-learning design, end users incl. Ministry of Defence, ConocoPhillips, Barclays, Department for Education	2005 – 2006

OUTREACH & PUBLIC ENGAGEMENT	“Cosmodrome” at WOMAD, UK	2019 – 2023
	<i>Project lead: repurposed the UK’s largest mobile planetarium as a micro-venue for astronomy and art shows, seminars, workshops, and music.</i>	
	“Cosmodrome” & “Coney Henge” at Noisily Festival	2018 – 2019
	<i>As above, and revived “Coney Henge” (see below)</i>	
	“Coney Henge” at Noisily Festival	2017
	<i>Project lead: Constructed portable “henge” art/science project as a mobile observatory space and provided live astronomy workshops</i>	
	Black Rock Observatory	2015 –2016
	<i>Crew member: An innovative mobile observatory touring art and music festivals in the western USA including: Burning Man, Lightning in a Bottle, Symbiosis</i>	
SERVICE	JWST Proposal Review Panel member	2024, 2025
	LSST Solar Neighbourhood Science Working Group co-chair	2017 – 2023
	NASA post-doctoral program external reviewer	2020
	NASA post-doctoral program panel member	2019
	NASA K2 Guest Observer Review Panel Chair (targets)	2018
	NASA K2 Guest Observer Review Panel Member (grants)	2018
	NASA K2 Guest Observer Review Panel Chair	2017
	LSST:UK point of contact for Solar Neighbourhood Science	2016 – 2017
	NASA K2 Guest Observe Review Panel Member	2016
	NSF (USA) Planetary Astronomy grant panel member	2015
	STRI representative - UH researcher career development Concordat Working Group	2011 – 2012
	Post-doc representative - UH Centre for Astrophysics Research management committee	2011 – 2012
	Centre for Astrophysics Research seminar series organizer	2008 – 2012
	UH Journal Club organiser and chair	2007 – 2008
CONFERENCE ORGANISATION	Regular refereeing articles for: ApJ, AJ, A&A, MNRAS	Since 2007
	Regular referee for observing & grant proposals (UK)	Since 2007
	“The Brown Dwarf to Exoplanet Connection in the Era of JWST”, splinter session @ Exoplanets IV, Las Vegas	2022
	SOC co-chair	
	“South East Exoplanet Meetings”	2019
	SOC chair and originator	
	• <i>Regional exoplanet meeting for South East UK</i>	
	• <i>Halted due to Covid19</i>	
	“Exoplanets and brown dwarfs: mind the gap”:	September 2013
	SOC and LOC chair	
	• <i>4-day meeting focusing on synergies and overlap between exoplanetary and substellar science</i>	
	• <i>~80 attendees from 5 continents</i>	
	“Understanding substellar atmospheres and populations: from brown dwarfs to exoplanets”	April 2009
	SOC chair	
	• <i>European Week of Astronomy and Space Science 2 day symposium</i>	
	• <i>50 – 100 attendees over two days</i>	
	• <i>6 press releases associated with meeting</i>	

PUBLIC LECTURES	<i>"Dissecting dots: exploring the diversity of alien worlds"</i>	15/1/2020
	Winchester Science Centre & Planetarium, UK	
	<i>"I'm not saying it's aliens"</i>	25/8/2019
	Shambala Festival, Northamptonshire, UK	
	<i>"I'm not saying it's aliens"</i>	4/5/2019
	Space Week, Hemel Hempstead, UK	
SCIENTIFIC TALKS	<i>"Dissecting dots: exploring the diversity of alien worlds"</i>	26/8/2018
	Shambala Festival, Northamptonshire, UK	
	<i>"The dizzying diversity of alien worlds"</i>	9/7/2017
	Noisily Festival, Leicestershire, UK	
	<i>"The difficulty of defining a planet"</i>	27/8/2015
	Burning Man, Black Rock City, Nevada, USA	
	CONFERENCES & ADVANCED SCHOOLS, INVITED:	
	European Week of Astronomy & Space Science, Cork, Ireland (2025-06-27)	
	CoolStars22, San Diego, (2024-06-25) – cancelled for medical reasons	
	CloudNineCon, Zoom, (2021-08-11)	
	BDEXOCON3, Delaware, USA (2019-10-22)	
	European Week of Astronomy & Space Science, Lyon, France (2019-06-27)	
	SEPnet Advanced Physics School, Hertfordshire, UK (2019-01-17)	
	Gaia and the Unseen: the brown dwarf question, Torino, Italy (2014-03-26)	
	Brown dwarfs come of age, Fuerteventura, Spain (2013-05-21)	
	Cool stars XVI (splinter), University of Washington, Seattle, USA, (2010-09-01)	
	UKIRT@30, Royal Observatory, Edinburgh (2009-09-16)	
	EWASS/JENAM symposium, University of Hertfordshire (2009-04-20)	
	STFC Astronomy Summer School, University of Hertfordshire (2008-09-04)	
	SEMINARS, INVITED:	
	Caltech (remote – 2022-01-04)	
	MPIA Heidelberg, Germany (remote – 2021-06-15)	
	UFRGS, Brazil, (remote – 2019-11-06)	
	Keele University, UK (2019-01-30)	
	University of Exeter, UK (2017-03-22)	
	UCSD, California, USA (2016-10-05)	
	NASA Ames Research Center, California, USA (2014-06-18)	
	Imperial College London (2011-11-16)	
	Fundación Galileo Galilei – INAF, Fundación Canaria, La Palma, Spain (2011-10-26)	
	Universidad de Chile, Santiago, (2011-09-15)	
	University of Sheffield, UK (2011-03-30)	
	Observatorio Nacional, Rio de Janeiro, Brazil, (2011-02-25)	
	Joint Astronomy Centre, Hilo, Hawaii, USA, (2010-11-11)	
	University of Leicester, UK (2009-12-02)	
	Institute for Astronomy, Honolulu, HI USA, (2009-02-13)	
	American Museum of Natural History, New York, USA (2009-01-12)	
	University of Exeter, UK (2008-11-06)	

CONFERENCES, CONTRIBUTED:

Other Worlds Laboratory (OWL) summer program, California, USA (2022-07-21)
Spectroscopy of Exoplanets, Windsor, UK (2018-07-11)
Bay Area Exoplanet Meeting #21, California, USA (2017-06-16)
Exoclimes 2016, Squamish, BC, Canada (2016-08-01)
Cool stars XVIV, Uppsala, Sweden (2016-06-06)
50 years of brown dwarfs, Ringberg Castle, Germany (2012-10-22)
“Opacities in Cool Stars and Exoplanets”, Windsor, UK (2012-07-2)
Cool stars XVII, 26th June 2012, Barcelona, Spain (2012-06-26)
Science from UKIDSS IV, Edinburgh, UK (2012-05-31)
EChO Workshop, 31st January 2012, Florence (2012-01-31)
VIKING galactic science meeting, University of Hertfordshire UK (2011-01-11)
Science from UKIDSS III, RAS, London (2011-01-06)
Recipes for Making Brownies, ESA/ESTEC, Netherlands (2009-09-09)
Science from UKIDSS II, Royal Astronomical Society, London, UK (2008-12-17)
Cool Stars XV, July 2008, University of St Andrews, UK (2008-07-24)
210th Meeting of the AAS, May 2007, Honolulu, (2007-06)
RAS National Astronomy Meeting, Preston, UK, (2007-03)
RAS National Astronomy Meeting, Dublin, Ireland (2003-04)