

Curriculum Vitae: James Scott Dunlop

Head of Institute and Professor of Extra-Galactic Astronomy
Institute for Astronomy, University of Edinburgh, Royal Observatory, Edinburgh EH9 3HJ.

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Date of Birth: 1st May 1962

Degrees

B.Sc. degree in Physics with 1st Class Honours (1984) University of Dundee, UK
Ph.D. in Astronomy (1988) University of Edinburgh, UK

Career since Graduation

1988 - 1992 Lecturer/Senior lecturer in Astrophysics, University of Central Lancashire, UK
1992 - 1994 Reader in Astrophysics, Liverpool John Moores University, UK
1995 - 2002 Reader in Astrophysics, University of Edinburgh, UK
2002 - 2007 Professor of Extragalactic Astronomy, University of Edinburgh, UK
2003 - 2007 Head of Institute, Institute for Astronomy, University of Edinburgh, UK
2007 - 2008 Tier 1 Canada Research Chair, University of British Columbia, Canada
2009 - Professor of Extragalactic Astronomy, University of Edinburgh, UK
2013 - Head of Institute, Institute for Astronomy, University of Edinburgh, UK

Awards/Fellowships

1984 - 1987 Robert Cormack Fellowship, Royal Society of Edinburgh.
2000 - 2003 PPARC Senior Fellowship.
2002 Scottish Science Award, Royal Society of Edinburgh
2003 Elected Fellow of the Institute of Physics (F Inst P)
2007 Elected Fellow of the Royal Society of Edinburgh (FRSE)
2007 Tier I Canada Research Chair, University of British Columbia, Canada
2008 Distinguished Science Professor Award, University of British Columbia, Canada
2009 - 2013 Wolfson Research Merit Award, The Royal Society
2010 - 2016 European Research Council (ERC) Advanced Grant
2014 Awarded George Darwin Lectureship by the Royal Astronomical Society
2016 Awarded the Herschel Medal by the Royal Astronomical Society
2016 Elected as a Fellow of the Royal Society (FRS)

Research Interests

Formation and Evolution of Galaxies; Cosmological Evolution of Active Galactic Nuclei; Quasar Host Galaxies and the Black-Hole:Spheroid Connection; Sub-mm Galaxies and the Cosmic History of Star Formation; Growth of the Galaxy Mass Function; Growth of the Black-Hole Mass Function; Extreme Redshift Galaxies and Re-ionisation; The Ages of Elliptical Galaxies.

Publication Summary

360 refereed papers that have now been cited over 28000 times (NASA ADS database).
84 refereed journal papers with over 100 citations. H-index = 93.

Recent and Current Grants

- PI of PPARC Grant for Extragalactic Astronomy & Cosmology at Edinburgh for £1,532,627 (2006 – 2009)
- PI of NSERC Discovery grant at UBC, Vancouver, Canada, for £50,000 (2008 – 2009)
- Co-I of STFC Grant for Extragalactic Astronomy & Cosmology at Edinburgh for £3,846,136 (2009 – 2015)
- Royal Society Wolfson Research Merit Award for £50,000 (2009 – 2013)
- ERC Advanced Grant for A Complete History of Massive Proto Galaxies for £1,853,804 (2010 – 2016)
- EU FP7 data exploitation grant ASTRODEEP, Edinburgh (+Paris & Rome) for £599,352 (2013 – 2016)
- PI of STFC Consolidated Grant for Astronomy & Astrophysics at Edinburgh for £3,455,098 (2015 – 2018)
- PI of STFC Consolidated Grant for Astronomy & Astrophysics at Edinburgh for £3,165,992 (2018 – 2021)

Committees

Member or chair of over 25 external peer review or policy committees. Examples include:

- Vice-chair of PPARC's Long Term Review panel on Astronomy in 1999/2000, which played a key role in the successful bid to the UK government to join ESO. This produced by far the largest increase in the UK astronomy budget for over 10 years. I presented the conclusions of this review at the Westminster Launch of PPARC's new strategy.
- PPARC Research Assessment Panel (RAP) (2000 – 2003)
- International Hubble Space Telescope Users Committee (2001 – 2003)
- UK ALMA Oversight Committee, member then Chair (2003 – 2005)
- UKIRT international review committee (2005)
- Chair, Gemini Telescopes International Science Committee (2005-2007)

Other evidence of research impact, recognition and leadership

- Over 50 invited talks at international symposia
- Over 60 invited lectures as guest lecturer at universities.
- Invited member, and frequently chair of Scientific Organising Committee for major international conferences on galaxy evolution and quasars.
- Awarded 150 orbits of Hubble Space Telescope time, and 300 hours of Spitzer Space Telescope time as PI, and over 500 nights of international ground-based telescope time.
- Creation and leadership of the SHADES consortium in sub-mm cosmology, leading directly to leadership of the SCUBA2 Cosmology Survey on the James Clerk Maxwell Telescope.
- First non-US PI of a major (300 hr) Spitzer legacy survey, which has revolutionised the legacy value of the UKIRT Ultra Deep Survey (UDS) for the study of galaxy evolution.
- Lead ESO PI of the 8-year UltraVISTA survey on ESO's VISTA survey telescope.
- Elected Leader of the Astronomy & Space Science theme within the Scottish Universities Physics Alliance 2005-2008 (SUPA: www.supa.ac.uk).
- Lead European investigator on CANDELS, the largest ever Hubble legacy project
- Awarded >100 orbits on Hubble in 2012 to take deepest ever image of the universe – HUDF12.
- Invited review for SCIENCE magazine on the Cosmic History of Star Formation
- Invited major book chapter on “Observing the First Galaxies”
- Invited to write major A&AR review article on the Cosmic History of Star Formation.

Post-Graduate Supervision

First supervisor for 17 PhD students, second supervisor for 15. All completed PhD students have progressed to a position in astronomical research.

Undergraduate Teaching

30 years experience as a University Lecturer, Reader and Professor. I have taught over 25 different undergraduate courses. Recent examples of courses taught include High-Energy Astrophysics, Radiation & Matter, Observational Astronomy, Astrophysical Cosmology, Galaxies Quasars and the Universe, The Origin and Evolution of the Chemical Elements, Special Relativity, Modern Optics, The Physics of Music.

Administrative Experience

- Course Leader for degree programmes in Astrophysics at Liverpool JMU (1992 - 1995)
- Course Leader Year-3 of Astrophysics degree at University of Edinburgh (1995 -1999)
- Admissions selector for University of Edinburgh Astrophysics degree (1997 - 2000)
- Director of Studies at University of Edinburgh (1996 - 2002)
- Convener of Dept. of Physics & Astronomy Publicity Committee (1999 - 2002)
- Conference Organizer for international workshop on the *Next Generation Space Telescope*, held at the Royal Observatory Edinburgh (Sep 2000)
- Conference Organizer for international workshop on *The Invisible Universe* held at the Royal Observatory Edinburgh (Sep 2002)
- Head of Institute for Astronomy at the Royal Observatory Edinburgh (2003 – 2007; 2013 –)

Invited presentations (examples).

1. *Old stellar populations in distant radio galaxies*, **Dunlop, J.S.**, 1999. In: *The Most Distant Radio Galaxies*, KNAW, Amsterdam, p.71-84, eds. Rottgering et al., Kluwer.
2. *The formation epoch of massive ellipticals, as traced by radio galaxies*, **Dunlop, J.S.**, 1999. In: *Galaxy Formation & Evolution at High z*, A.S.P. Conf. Ser. Vol. 193, p.133-144.
3. *The redshifts of bright sub-mm sources*, **Dunlop, J.S.**, 2001. In: *FIRSED2000*, *New Astronomy Reviews*, 45, p.609-616, eds. van Bemmell et al. Elsevier.
4. *Sub-mm clues to elliptical galaxy formation*, **Dunlop, J.S.**, 2001. In: *Deep Millimetre Surveys*, p.11-18, eds. Lowenthal, J.D. & Hughes, D.H., World Scientific.
5. *The host galaxies of radio-loud and radio-quiet quasars*, **Dunlop, J.S.**, 2001. In: *QSO Hosts and their Environments*, p.3-12, eds. Marquez, I. et al. Kluwer.
6. *The masses of AGN host galaxies & the origin of radio loudness*, **Dunlop, J.S.**, 2003. In: *The mass of galaxies at low and high redshift*, p.268, eds. Bender & Renzini, Springer.
7. *Quasar hosts and the black-hole spheroid connection*, **Dunlop, J.S.**, 2004. In: *Carnegie Obs. Astr. Ser. Vol. 1 – Coevolution of Black Holes and Galaxies*, p. 341-356, ed. Ho, CUP.
8. *Quasar Host Galaxies at high-redshift*, **Dunlop, J.S.**, 2004. In: *The Role of Mergers and Feedback in Galaxy Formation* (Max Planck Soc.) Ringberg, Germany (Nov 2004).
9. *Quasar Host Galaxies at low and high-redshift*, **Dunlop, J.S.**, 2005. In: *QSO Host Galaxies: Evolution & Environment* (Max Planck Soc.), Leiden, Netherlands (Aug 2005).
10. *Sub-mm surveys*, **Dunlop, J.S.**, 2007. In: *The Origin of Galaxies* (European Science Foundation), Obergurgl, Austria (Mar 2007).
11. *Galaxy formation and evolution: the far-IR/sub-mm view*, **Dunlop, J.S.**, 2008. In: *A Century of Cosmology* (INAF), Venice, Italy (Aug 2007).
12. *Galaxy formation and evolution: the far-IR/sub-mm view*, **Dunlop, J.S.**, 2008. In: *Panoramic Views of Galaxy Formation and Evolution*, Hayama, Japan (Dec 2007).
13. *Studying massive galaxy evolution in with UKIDSS UDS & UltraVista*, **Dunlop, J.S.**, 2008. In: *The First 2 Billion years of Galaxy Formation*, Aspen, USA (Feb 2008).
14. *Galaxy formation and evolution: the far-IR/sub-mm view*, **Dunlop, J.S.**, 2008. In: *Galaxies in Real Life and in Simulations*, Leiden (Sep 2008).
15. *On the nature of sub-millimetre galaxies*, **Dunlop, J.S.**, 2010. In: *Galaxy Evolution: Infrared to Millimeter Perspective*, Guillin, China (Oct 2010).
16. *Galaxies in the first billion years*, **Dunlop, J.S.**, 2011. In: *Young and Bright: Understanding High Redshift Structures*, Potsdam (Sep 2011).
17. *Observational Studies of First Light and Reionization*, **Dunlop, J.S.**, 2013. In: *Cosmology in the Era of Extremely Large Telescopes*, Chicago, USA (Jun 2013)
18. *The Cosmic History of Star Formation*, **Dunlop, J.S.**, 2013. In: *Galaxy Evolution over Five Decades*, Cambridge (Sep 2013)
19. *The Cosmic History of Star Formation*, **Dunlop, J.S.**, 2015. Darwin Prize Lecture, RAS, London (Jan 2015)
20. *Galaxies in the First Billion Years*, **Dunlop, J.S.**, 2015. Invited Plenary lecture at RAS National Astronomy Meeting (NAM2015), Llandudno (July 2015)

Organisation of International Conferences

1. Scientific Organising Committee (SOC), *At the Edge of the Universe*, Sintra, Portugal (Oct 2006)
2. Co-Chair of SOC, *The Origin of Galaxies*, Obergurgl, Austria (Mar 2007)
3. SOC, *Panoramic Views of Galaxy Formation and Evolution*, Hayama, Japan (Dec 2007)
4. Co-Chair of SOC, *The Evolution of Early Type Galaxies*, Royal Astronomical Society, London (Mar 2008)
5. Session Organiser/Chair: *24th Texas Symposium on Relativistic Astrophysics*, Vancouver, Canada (Dec 2008)
6. Co-Chair of SOC, *Origin of Galaxies: Lessons from the Distant Universe*, Obergurgl, Austria (Dec 2009)
7. SOC, *Galaxy Evolution: Infrared to Millimeter Perspective*, Guillin, China (Oct 2010)
8. SOC, *Watching Galaxies Grow Up*, Ringberg, Germany (Dec 2011)
9. SOC, *Galaxy Evolution over Five Decades*, Cambridge, UK (Sep 2013)
10. Chair of SOC, *The Formation & Growth of Galaxies in the Young Universe*, Obergurgl, Austria (Apr 2014)
11. Co-Chair of SOC, *The Spectral Energy Distribution of high-redshift galaxies*, Sesto, Italy (Jan 2015)
12. Co-Chair of SOC, *JWST at ROE*, Royal Observatory, Edinburgh (July 2016)