

Curriculum Vitae¹ : Stephen J. Smartt MRIA

Name : Stephen J. Smartt **Nationality :** British/Irish joint

Current Professional Address : Astrophysics Research Centre
School of Maths and Physics
Queen's University Belfast
Belfast BT7 1NN
Northern Ireland, UK

Email: s.smartt@qub.ac.uk
Telephone : +44 (0)2890 971245
Homepage : <http://star.pst.qub.ac.uk/~sjs>

Employment History

Dates	Institution	Position
June 2011-present	Queen's University Belfast	Director of the Astrophysics Research Centre
2005-present	Queen's University Belfast	Professor
2005-2010	Queen's University Belfast	European Young Investigator (EURYI)
2004-2005	Queen's University	Lecturer and PPARC Advanced Fellow
2001-2004	University of Cambridge	PPARC Advanced Fellow
1999-2001	University of Cambridge	Postdoctoral researcher
1996-1999	Isaac Newton Group of Telescopes, Canary Islands	Support Astronomer

Education

Dates	Institution	Degree
2005	Queen's University Belfast	Postgraduate Certificate in Higher Education Teaching
1996	Queen's University Belfast	PhD in Astrophysics
1991	Queen's University Belfast	BSc in Physics and Applied Mathematics (1 st Class)

Fellowships and awards

Member of the Royal Irish Academy : elected March 16th 2012

European Research Council Advanced Grant : 2012-2017

NCU-Delta Young Astronomer Award (Taiwan) : November 2012

European Young Investigator Award (EURYI): 2005-2010

Philip Leverhulme Prize 2005: £50k

Particle Physics and Astronomy Research Council Advanced Fellowship: 2001-2005

¹ Last update Oct 2016

Professional memberships

Fellow of the Royal Astronomical Society

Fellow of the Higher Education Academy

Major Research Grants

Science and Technology Facilities Council Consolidated grant 2017-2020 : £4.8M.
PI of the Queen's institutional rolling grant (*under review*).

European Research Council Advanced Grant 2012-2017: €2.3M for Ultraluminous
supernovae : cosmic origins and evolution

*Science and Technology Facilities Council grant for ESO instrument Son of
Xshooter* : £0.1M. Initial contribution to the SOXS consortium

Science and Technology Facilities Council Consolidated grant 2014-2017 :
£0.38M. PI of the QUB submission for "UK Involvement in LSST Phase A"

Science and Technology Facilities Council Consolidated grant 2014-2017 : £1.7M.
Co-I on the Queen's institutional rolling grant

Science and Technology Facilities Council Rolling grant 2011-2014 : £1.8M. Co-I
on the Queen's institutional rolling grant. 1 postdoc and 1 technical officer awarded
for my group's supernova research, plus FEC, travel and equipment.

Science and Technology Facilities Council Rolling grant 2008-2011 : £2.15M. Co-I
on the Queen's institutional rolling grant. 1 postdoc awarded for my group's
supernova research, plus FEC, travel and equipment.

European Young Investigator Award (EURYI) 2005-2010 : £0.89M for The lives of
massive stars from birth to supernova

Particle Physics and Astronomy Research Council Rolling Grant 2005-2008 :
£1.4M. Co-I on the Queen's institutional rolling grant. 1 postdoc awarded for my
group's supernova research, plus 1 postdoc to work on ESO Large Programme
"FLAMES Survey of Massive stars", of which I was PI.

Particle Physics and Astronomy Research Council Standard Grant 2004-2005:
£32k for postdoctoral research assistant

Minor grants from Royal Society, EOARD, ESF : total of ~£10k

Publication summary

Refereed publications (Jan.1997- Oct 2016) : 220

Total Citations from ADS : 11771 (10524 from refereed papers).

H-index = 61 (60 from refereed papers)

Highlights : invited article in Annual Review of Astronomy and Astrophysics 2009; 8
letters in Nature; 3 reports in Science.

Full list linked from home page : <http://star.pst.qub.ac.uk/~sjs/>

Major leadership and project roles

- Director of the Astrophysics Research Centre, Queen's University Belfast (2011-2017)
- LSST:UK collaboration : lead of UK transients work-package and scientific point of contact for Transients science area.
- UK PI of SOXS : Son Of Xshooter spectrometer, selected by ESO as future instrument for NTT. Science Board member. (2016+)
- Science lead for Pan-STARRS2 transient surveys (2015+) : new survey with

- the Pan-STARRS twin telescope system²
- ATLAS science team member : data reduction, analysis and science responsibilities on NASA funded ATLAS project³
- PI of PESSTO⁴ : Public ESO spectroscopic survey of Transient Objects (2012-2017). I am PI and PESSTO Survey Director.
- Chair of Pan-STARRS1 Science Council, and Key Project science leader (2007 – present)
- PI of the “FLAMES Survey of Massive stars”, an ESO Large Programme on the VLT (2002-2007)

Panel and committee membership

- ESO User’s Committee (UK representative) 2015-2018
- Royal Society University Research Fellowships panel : formal member 2012-2014, adhoc member 2015-16.
- Liverpool Telescope Users Group Chair (2014+)
- Scientific Organising Committee for IAU Symposium on “SN1987A, 30 years later – cosmic rays and nuclei from supernovae and their aftermaths”
- Scientific Organising Committee for Symposium S14 at European Week of Astronomy and Space Science, July 2016
- Scientific Organising Committee “Galactic and extragalactic explosive transients”, Bormio workshop, Jan 2016
- RAS Specialist discussion meeting Organiser (with Paul O’Brien), Feb 2015
- ESO White Paper retreat : the VLT in the E-ELT era. Invitation to discuss future ESO strategy on the 2020s.
- Armagh Observatory and Planetarium Board of Governors (2012-present)
- Scientific Organising Committee and LOC Chair : GAIA-PESSTO GREAT Workshop, Feb 2014, Queen’s University Belfast
- Queen’s University Research Strategy Group 2013-present
- Scientific Organising Committee member : European Week of Astronomy and Space Science, Symposium on “Supernovae and GRBs” July 2013, Finland
- Scientific Organising Committee member : Massive stars from alpha to omega, Rhodes, June 2013
- Scientific Organising Committee member : ESO and Max Planck Annual workshop : September 2012 “Supernovae Illuminating the Universe: from Individuals to Populations”
- Scientific Organising Committee member : A Workshop on “Outstanding Problems in Massive Star Research --- the final stages” October, 2012. University of Minnesota
- Scientific Organising Committee member : European Week of Astronomy and Space Science, Symposium on “Theory and Observations of Core-Collapse Supernovae” July 2012, Rome
- Royal Society Discussion Meeting April 2012 : organiser, with P. O’Brien, K. Pounds, R. Wijers
- Armagh Observatory and Planetarium Board of Governors (2102+)
- Chair of Pan-STARRS Science Council (2007+)
- Scientific Organizing Committee member : IAU Symposium. 279, Nikko,

² <http://star.pst.qub.ac.uk/ps1threepi/psdb/>

³ fallingstar.com

⁴ www.pessto.org

- Japan 2011
- STFC Fellowships selection panel 2010
 - Theme Leader for UK's Next Generation Sky Surveys : the transient sky. A year of discussion on the national future of sky surveys, lead by Bob Mann (Edinburgh eSI) 2010-2011
 - Co-Chair of UK National Astronomy meeting parallel sessions : 2009, 2010, 2011
 - Scientific Reviewer for European Science Foundation 2007-2009
 - Scientific Organizing Committee member for international conference: Probing Stellar Populations out to the distant Universe, Cefalu 2008.
 - Chair of Scientific Organizing Committee : UK National Astronomy Meeting 2008
 - Member of the EURO-Virtual-Observatory Science Advisory Committee 2006-7
 - RAS Specialist Discussion meeting (co-organiser, with Paul Crowther) 2006
 - ESO panel member for the OPC 2005-2007
 - PPARC's Astronomy Advisory Panel 2004-2007
 - UK Panel for Allocation of Telescope Time 2001-2004
 - Hubble Space Telescope Cycle 12 Time Allocation Panel member.
 - Hubble Space Telescope Cycle 11 Time Allocation Panel member.

Recent Telescope Awards

2009-2016 (either as PI or my student/postdocs as PI under my supervision) : 190 hours on the VLT, 192hrs on Gemini North and South, 57hrs on the WHT and 165hrs on the Liverpool Tel. PESSTO is awarded 90N per year on the NTT 2012-2017 (total of 450N).

Major teaching roles

- 2010-2012 : Level 1 Physics coordinator
- 2010-2012 : Level coordinator and course lecturer for "Mathematics for physics". Major review and revision of mathematics provision for Level 1 MSci and Bsc Physics students. Course content reviewed and restructured.
- 2004-2012 : Level 4 "Stellar Structure and Evolution", course notes on-line <http://star.pst.qub.ac.uk/~sjs/teaching/>

Invited talks at conferences and workshops

May 2017	Invited review at the Confercen FOE: Fifty-One Erg - International Conference on the physics and observations of supernovae and supernova remnants" Corvallis, Oegon
May 2017	Invited participant at Munich Institute for Astro and particle phycsis programme on "Superluminous supernovae in the next decade", Max Planck Institute, Munich
Apr. 2017	Invited participant and speaker at "Workshop on Cas A" at the Princeton Center for Theoretical Science
Mar. 2017	Invited review at conference at Kavli Institute for theoretical physics, UC Santa Barbara "Phenomena, Physics and puzzles of massive stars and explosive outcomes", California
Feb. 2017	Invited review "The Golden age of extragalactic optical transient surveys", RAS discussion meeting, London.
Oct. 2016	Invited speaker and participant "The transient and variable sky in the era of gravitational wave astronomy", Royal Society meeting at Chicheley Hall.
Oct. 2016	Invited speaker at IceCube Science meeting, Mainz, Germany
Sept. 2016	Invited speaker at "Supernovae : the outliers" workshop at Max Planck MIAPP meeting Munich.
Sept. 2016	Invited speaker at "The 11 th international LISA symposium", University of Zurich
Oct. 2015	Invited speaker "Rainbows on the southern skies", ESO workshop, Munich.
Jun. 2015	Invited speaker : The impact of massive binaries throughout the Universe, Lorentz centre, Netherlands
Dec. 2014	Invited speaker: Astrophysical Multi-messenger Observatory Network, Berlin
Oct. 2014	Invited speaker : Transients Unsolved Mysteries Workshop, Eilat Israel
Aug. 2014	Invited speaker : Supernovae in the Local Universe, Coffs Harbour, Australia
Jun. 2014	STScI invited colloquium, after the Pan-STARRS science workshop "Science from Pan-STARRS1"
Jan. 2014	Invited speaker : Gamma-ray Burst - Magnetar thinkshop (GRBMAG14), Bormio, Italy
Oct. 2013	Invited speaker, LSST@Europe, Institute of Astronomy, Cambridge
Sept. 2013	Invited speaker "STFC Introductory school for new UK astrophysics PhD students", Queen Mary University of London.
Oct. 2012	Invited speaker "ESO Surveys Workshop", Munich
Oct. 2012	Invited speaker "A Workshop on Outstanding Problems in Massive Star Research --- the final stages September", Minnesota
Sept. 2012	Invited speaker "STFC Introductory school for new UK astrophysics PhD students", Univ. of Sussex
Sept. 2012	Invited speaker ESO@50 : 50 yrs of ESO, Munich
Sept. 2011	Invited speaker IAU Symposium 285 "New horizons in Time Domain Astronomy", Oxford
Aug. 2011	Invited talk at "Explosive ideas about massive stars", AlbaNova, Stockholm
Jun. 2011	Invited review "Supernovae and their Host Galaxies", Sydney
Dec. 2010	Invited talk at IoP workshop on " Radioactivity in Astrophysics", York
Aug, 2010	Invited talk at Royal Irish Academy/RAS meeting, Dublin
May 2010	Invited talk at "GAIA Science Alerts workshop", Cambridge
Sep. 2010	Invited talk at Lorentz Center workshop "Type Ia SN progenitors", Leiden
Mar. 2010	Invited talk at "Dutch National Astronomy Conference", Nijmegen
July 2010	Invited review at conference "Progenitors and environments of stellar explosions", IAP, Paris
May 2009	Invited talk at "E-ELT stellar populations workshop", Cambridge

Aug. 2009	Invited talk at conference "Stellar Death and Supernovae", KITP, Santa Barbara
Jan. 2009	Invited talk at workshop "Intermediate and massive stars" Strasbourg
Jun. 2008	Review at "Pagel's Universe: Galaxies and the Elements", RAS, London
Feb. 2008	Review at RAS Discussion meeting, "Super-AGB stars", London
Sept. 2006	Review at "Late Stages of Stellar evolution", Baja California, Mexico
Aug 2006,	Invited talk at IAU Discussion meeting "The UV Universe"
Mar 2006	Invited talk at UK's NAM Plenary session, University of Leicester
Sep. 2004	Invited talk "Chemical Abundances and Mixing in Stars", ESO conference, Arcetri
Jun. 2004	Invited talk at "1604 -2004: Supernovae as Cosmological Lighthouses"
Jun. 2002	Review at IAU Symposium, "A massive star odyssey", Lanzarote
Feb. 2002	Review at conference "Science with GranTeCan", Granada, Spain
Dec. 2001:	Invited talk at Royal Astronomical Society (RAS) General meeting
Oct. 2000:	Review at RAS specialist discussion meeting on Early-type stars
Sep. 1999:	Review at Roma-Trieste conference "The chemical evolution of the galaxy"

Invited seminars and colloquia (since 2006)

Princeton IAS (2006), University of Exeter (2006), University of Sheffield (2007), DARK University of Copenhagen (2007), University of Bristol (2006), University College Dublin (2007), University of Cambridge (2008), University of Oxford (2008), IAP Meudon (2008), University of Durham (2008), Stockholm University(2009), Liverpool John Moores (2008), University of Hertfordshire (2008), University of Nottingham (2009), Cardiff (2010), Univ. of Central Lancashire (2010), University of Warwick (2011), Geneva Observatory (2011), University of Leicester (2011), University College London (2012), University of Oxford (2014), University of Portsmouth (2014), Institut d'astrophysique de Paris (2015), University of Southampton (2015), University of Birmingham (2016), University of Stockholm (2016), Lund University (2016), Liverpool John Moores University (2016), Cardiff University (2016), Nijmegen University (2016), Univeristy College Cork (2017)

PhD students :

Current : Giacomo Terreran (2013-16)

Past : Darryl Wright (2015), Matt Nichol (2015), Ting-Wan Chen (2015), Matt McCrum (2014), Morgan Fraser (2011), Kate Maguire (2010), Dave Young (2009), Mark Crockett (2009), Ian Hunter (2008, joint supervisor), Maggie Hendry (2006), Justyn Maund (2005)

External examiner duties

- External Examiner for PhD thesis at University of Cambridge (Sept 2015)
- External Examiner for PhD thesis at LPNHE, Université Paris-Sud (October 2013)
- External Examiner for PhD thesis at University of Warwick (March 2011)
- External Examiner for PhD thesis committee at University of Padova (Mar 2010)
- External Examiner for PhD thesis at University of Sheffield (Nov. 2010)
- External Examiner for PhD thesis at University of Hertfordshire (Jan. 2009)
- External Examiner for PhD thesis at Liverpool John Moores University (Nov. 2008)
- External Examiner for PhD thesis at University College London (Dec. 2005)
- External Examiner for PhD thesis at University of Cambridge (Nov. 2004)
- External examiner on PhD thesis panel at IAC, Tenerife (May 2004).

- External Examiner for PhD thesis at University College London (Dec. 2003)
- External Examiner for PhD thesis at University College London (Feb. 2003)
- External examiner on PhD thesis panel at Université de Liège (Jan. 2002)

Public Understanding of Science

- BBC World Service : interviewed on the Discovery show, on “Black holes: a tale of cosmic death and rebirth”, 11th Oct 2016
- Podcast on Radio Cardiff on “The origins of black holes” 30th June 2016
- Q105 radio interview on UK joining LSST : 19th May 2016
- BBC Radio Ulster interview, UTV website video : on LIGO detection of gravitational waves : 14th February 2016
- Two pieces in “The Conversation” on gravitational waves and black holes, February 2016
- “Mercury and Einstein’s Gravity” : a day of public outreach and schools events to mark the 2016 transit of Mercury and a public lecture on gravitational waves (observing the transit at QUB, school visits and public talks).
- Michael West lectures : as Director of ARC I oversee the Michael West philanthropic donation and public lecture series (7 to date).
- Astronomy Ireland public lecture : 12th October 2015
- Nature News and Views article “A twist in the tale of gamma ray bursts”, July 2015
- STFC “Seeing the Universe in all its light” : Organiser at QUB, 2015
- Queen’s Annual Convocation Lecture 2013 “The origin of life in the centre of stars”
- Schools talks in 2013 : Holywood Primary School (Oct.), work experience mentoring (Dec).
- BBC Radio Ulster – Stargazing Live, Jan. 2013
- Nature News and Views article “Cosmic Explosions in the Young Universe”, Nov. 2012
- Interview in the Sunday Times (with J. Leake), Sept. 2012
- Schools talks in 2012 : Belfast Royal Academy (May), Holywood Primary School (October) Greenisland Primary School (December)
- Horizons in Physics, June 2012 (Schools lecture at Queen’s University)
- BBC Radio Ulster interview on Nature paper – supermassive black hole shreds star (May 2012)
- Interview on BBC1 Newsline, (6pm NI news show) on “Distant Supernovae”
- Irish Astronomical Association lecture, December 2011
- Cambridge University Astronomy Society, November 2011
- The Naked Scientists, podcast (25th Nov 2011 “Stars and supernovae”)
- BBC Radio Ulster interview on Space Shuttle retirement 8th July 2011
- [BBC Radio Ulster "What's next" contributor](#) June 2011
- BBC Radio Ulster interview on Gagarin 50th Anniversary of human spaceflight 13th April 2011
- BBC Radio interviews on astronomy at Queen’s : 31st March 2011
- Coordinator for Queen’s University support for Irish Astronomical Association public lectures and events. Member of IAA Council (2007 – present)
- Organiser of public lecture evening “The Great Cosmic Puzzle”, speakers Prof. Carlos Frenk (Durham), Prof. Chris Stubbs (Harvard), at Queen’s University Belfast, Sept. 2010
- Lecture at astronomy weekend : COSMOS 2010, Tullamore, Co. Offaly, July 2010
- Science Podcasts and journalism with sixth form students, in collaboration with Queen’s School of Education (2009)

- Public lecture - Trinity Science Week, Trinity College Dublin, May 2009
- BBC Radio interview on “Exploding stars and blackholes”, 30th July 2008
- Public talk – Irish Astronomical Association, Belfast, 2008
- Ulster Television – evening talk show guest on the National Astronomy week public lecture series, April 2008
- Public lecture for Astronomy Ireland, Trinity College, Dublin, September 2007
- Lecture for Secondary School World Space week , October 2007
- Sky at Night Magazine Article “Masterclass on supernovae”, March 2006
- Public talk – Irish Astronomical Association, Belfast, January 2006
- School teacher’s lecture “Sizing up our galaxy – stars and space travel”, Queen’s, June 2007
- BBC News 24 – interview on the most luminous supernovae (2006)
- School’s lecture for Horizons in Physics “The dark side of the Universe”, June 2006
- Public talk – East Antrim Astronomical Society, Ballyclare, 2005

Pre-2005 : approximately 20 talks at various astronomy societies, schools and widening University participation events. These include some national astronomy society meetings, such as the BA, Webb Society, the Society for Popular Astronomy and the European Astrofest in London.

University support and resource allocation

Partnership in the Pan-STARRS-1 Science Consortium 2009-2012: £340k of University funding to join as full partners

University Grant Return: the University runs a “reward” system, which returns a fraction of grant overheads to the applicants. In the last 3 years, my supernovae research group has received approximately £30k of University reward.

ESF Studentship 2005-2008: £45k for a 3-year PhD studentship

International Studentship 2007-2010: £60k for a strategic 3-year PhD studentship

Strategic collaboration studentship 2007-2010: £45 for a strategic 3-year PhD studentship for international collaborations with our partner Vanderbilt University in the US.