

Curriculum Vitae

Dr. Rebecca Smethurst

Royal Astronomical Society Research Fellow, Department of Astrophysics, University of Oxford

Email: rebecca.smethurst@physics.ox.ac.uk

Web: rebeccasmethurst.co.uk

I currently hold a Royal Astronomical Society Research Fellowship at the University of Oxford. My research is focussed on nearby galaxy evolution studies; particularly the growth of supermassive black holes (SMBHs) and the processes responsible for the shut down of star formation in a galaxy. In particular I am interested in how this growth and subsequent feedback occurs in the absence of galaxy mergers. I am also working with SDSS-IV MaNGA data to determine whether feedback from growing SMBHs is responsible for the termination of star formation across the galaxy population, as has long been predicted by theoretical work without observational evidence. I am the Deputy Project Scientist for the long-running Galaxy Zoo project which asks members of the public to classify the morphologies of galaxies in large astronomical datasets. Alongside my research I am an enthusiastic science communicator; I run an award-winning astronomy YouTube channel, ‘Dr Becky’, with over 750,000 subscribers and 89 million total views. Each week I research, present and edit a video on an astronomy topic for the public; from the history of a scientific theory, to a round up of space news. This has led to many appearances on national television and radio explaining the latest space news stories to the public. I have also written two public science books, ‘Space: 10 Things You Should Know’, and ‘A Brief History of Black Holes’.

Employment

October 2022 - present

Royal Astronomical Society Research Fellow: *The contribution of non-merger processes to SMBH growth*
University of Oxford

October 2018 - September 2022

Junior Research Fellow: *Searching for Observational Evidence of AGN Feedback*
Christ Church, University of Oxford

January 2017 - October 2018

Sixty Symbols Research Fellow: *Galaxy Evolution: Inside-out or Outside-In?*
University of Nottingham

Achievements & Awards

Royal Astronomical Society Winton Award 2022 for research by a post-doctoral fellow in astronomy whose career has shown the most promising development

Institute of Physics Mary Somerville Medal & Prize 2020 - awarded for exceptional early career contributions to public engagement in physics through the ‘Dr Becky’ YouTube channel

Caroline Herschel Prize Lectureship 2020 - awarded for achievements in both research and science communication, with lecture title: “Supermassive black holes: the ultimate galaxy killers?”

University of Oxford Vice Chancellor’s Public Engagement with Research Award 2019 - awarded for efforts in public engagement with the ‘Dr Becky’ YouTube channel

Student supervision experience

01/10/24 - present - Sophie Jewell, PhD, postgraduate, Wolfson College

01/10/23 - 30/06/24 - Natalia Puczek, MPhys project, Christ Church

01/10/19 - 05/11/23 - Tobias Géron, PhD, postgraduate, St. Cross College

01/10/21 - 30/06/22 - Kay Giang, MPhys project, Exeter College

01/10/19 - 20/06/20 - Thomas Plews, MPhys project (1st class), Brasenose College

Leadership

Galaxy Zoo Collaboration Deputy Project Scientist

Head of LOC & Co-chair SOC, MaNGA Team Meeting, Oxford, April 2019

SOC member for .Astronomy 8, 9, 11, as part of the .Astronomy “Brain Trust”, June 2016-present

Astrophysics Colloquium Organisation University of Nottingham, June 2017- June 2018

SOC member Galaxy Zoo 10th Anniversary Conference, Oxford, July 2017

Invited Talks

Colloquium at the Institute of Astronomy, University of Cambridge, November 2024
Colloquium at the Dunlap Institute of Astronomy, University of Toronto, October 2024
3 talks at the European Astronomical Society Meeting, Padova, July 2024
Invited talk at SDSS Collaboration Meeting (virtual), August 2021
RAS National Astronomy Meeting - July 2015-2023
Invited talk at ADASS (virtual), Granada, Spain, November 2020
Caroline Herschel Prize Lecture, November 2020
Talk at the SDSS-IV MaNGA Collaboration Meeting, Oxford, April 2019
Hendrik de Waard Foundation Lecture, Groningen, November 2018
Colloquium at the Kapteyn Institute, Groningen, November 2018
Invited review talk at the SDSS-IV MaNGA Collaboration Meeting, Campeche, Mexico, Dec 2017
Talk at the Hidden Monsters conference, Dartmouth, USA, August 2016
Talk at the Galaxy Pathways conference, Santa Catalina Island, USA, August 2016
Thesis talk at the American Astronomical Society meeting 227, Orlando, USA, January 2016

Recent Notable Science communication

'Dr Becky' YouTube channel engaging over 4 million unique viewers every 3 months
Co-host of the Royal Astronomical Society's 'Supermassive Podcast' (#1 Astronomy Podcast in the UK)
Regular appearances on TV and radio (BBC Breakfast, BBC Radio 5 Live, BBC Radio 1, Channel 4 News)
New Scientist Live, Manchester, March 2022
Royal Institute Guest Lecture 2021
University of Oxford 'Stargazing' Virtual Open Day 2021
'Oxford @ Home' Lecture 2021
Caroline Herschel Prize Lecture 2020
Hendrik de Waard Foundation Lecture, Groningen, November 2018

Teaching experience

Postgraduate Lecture Series on Public Speaking, Oxford, March 2019-2024
Undergraduate Laboratory Demonstrator, University of Oxford, January 2014 - June 2016

Undergraduate admissions experience

December 2021, 2020 - Virtual Undergraduate admissions interviews, Physics, Oriel College
December 2019 - Undergraduate admissions interviews, Physics, Oriel College
December 2014 - Undergraduate admissions interviews, Physics, St. Catherine's College

Education

Doctorate of Philosophy, Pembroke College, University of Oxford
October 2013 - January 2017
1st class Master of Physics, St. Aidan's College, University of Durham
October 2008 - June 2012
Bolton School Girls' Division, September 1998 - August 2008
