

Dr. Roger Blue Stabbins

r.stabbins@nhm.ac.uk
+44 7552 921790

Natural History Museum
Cromwell Road, London
United Kingdom
SW7 5DB

Academic Positions

- 2025 – 2027 ESA Rosalind Franklin Science Knowledge Programme Fellow
The Natural History Museum, London, UK
Expediting Science-Readiness of EnfyS
- 2024 – 2025 PDRA, UK Space Agency Mars Exploration Grant
The Natural History Museum, London, UK
Exploring the Limits of Material Discrimination with CaSSIS Multiband Imaging
- 2023 – 2024 JSPS Postdoctoral Fellowship for Research in Japan
Department of Physics, Rikkyo University, Tokyo, Japan
Performance Optimization of the Martian Moons Exploration spacecraft Remote Sensing Imaging Systems
- 2023 – 2024 Honorary Research Fellow
Mullard Space Science Laboratory, University College London, UK
- 2019 – 2022 PDRA, UK Space Agency Aurora Grant
Earth Sciences Department, The Natural History Museum, London, UK
Geochemistry to Geology for the ExoMars 2020 Rover: Visible to Near-Infrared Spectral Variability

Education

- 2015 – 2022 PhD Planetary Science, UK Space Agency Aurora Studentship
Mullard Space Science Laboratory, University College London, UK
Spectral Imaging Simulations for Planetary Surface Exploration: Preparing for PanCam on the ExoMars Rover
- 2010 – 2014 MSci Physics, 1st Class Honours
Department of Physics & Astronomy, University College London, UK

Professional Roles and Memberships

- 2024 – Present Science Associate, ESA ExoMars TGO CaSSIS
Multispectral and Colour Investigations
- 2023 – Present Science Working Team Member, JAXA Martian Moons eXploration mission
Instrument simulation, calibration, operations planning, and image processing.
- 2022 – Present Science Team Member, ESA ExoMars EnfyS Infrared Spectrometer
Technical lead for defining performance requirements for Mars surface studies.
- 2015 – Present Science Team Member, ESA ExoMars PanCam Multispectral Imager
Instrument simulation, calibration, operations planning, and image processing.
- 2018 – 2019 Instrument Scientist, ESA ExoFit (ExoMars-like Rover Field Trials)
Rover operations, image processing software development, maintenance, and support.
- Summer 2018 Lead Convener, Building Habitable Worlds Early Career Meeting, MSSL
- Autumn 2016 Instrument Scientist, UK Space Agency MURFI (Mars Utah Rover Field Investigation)
Instrument field deployment, instrument operations support and image processing.
- 2015 – Present Royal Astronomical Society Fellow

Funding and Awards

- 2025 – 2026 ESA Rosalind Franklin Science Knowledge Programme Fellow
- 2024 – 2025 UK Space Agency Mars Exploration Post-Doctoral Research Associate
- 2023 – 2024 JSPS Postdoctoral Fellowship for Research in Japan

2019 – 2022	UK Space Agency Aurora Post-Doctoral Research Associate
2019	Mullard Space Science Laboratory Team Achievement Award
2017	ASB Student Travel Award, Astrobiology Society of Britain 7th Conference
2017	IUGG Student Travel Award, 1st IUGG Planetary Science Symposium, Berlin
2016	1 st Prize, Oral Presentation, RSPSoc Wavelength Early Career Annual Meeting
2016	1 st Prize, Poster Presentation, UK Planetary Forum 13 th Early Career Meeting
2015 – 2019	UK Space Agency Aurora Studentship
2013	Space Placement in Industry Network, Summer Internship Grant, RAL Space

Selected Publications & Technical Reports

Stabbins, et al, “Optimizing ExoMars Rover Remote Sensing Multispectral Science II: Choosing and Using Multispectral Filters for Dynamic Planetary Surface Exploration with Linear Discriminant Analysis” *Earth & Space Science*, 11, 10, e2023EA003398 (2024). Contribution: Conception, methods, software development, data processing, data analysis, manuscript writing.

Grindrod, **Stabbins**, et al, “Optimizing Exomars 2022 Rover Remote Sensing Multispectral Science: Cross-Rover Comparison using Laboratory and Orbital Data” *Earth & Space Science*, 9, e2022EA002243 (2022). Contribution: Conception, methods, software development, data processing, data analysis, manuscript writing.

Allender, **Stabbins**, et al, “The ExoMars Spectral Tool (ExoSpec): an image analysis tool for ExoMars 2020 PanCam imagery” Proc. SPIE 10789, *Image and Signal Processing for Remote Sensing XXIV*, 107890I (2018). Contribution: Methods, software development, data processing, and manuscript writing.

Coates et al, incl. **Stabbins**, "The PanCam instrument for the ExoMars rover" *Astrobiology*, 17, 6-7, (2017). Contribution: Methods, manuscript writing.

Selected Conference Presentations & Seminars

Oral	CaSSIS Science Team Meeting, Abu Dhabi, 28/1/2025
Oral (invited)	Research Seminar, Paris Observatory, France, 24/6/2024
Oral (invited)	MMX 6 th Science Working Team Meeting, Tokyo, 28–30/3/2023
Oral	American Geophysical Union Fall Meeting, Chicago, 12–16/12/2022

Teaching and Supervision

2017 – 2018	Supervisor, MSc Thesis, UCL, D. Bowden (PhD Leicester Uni. awarded 2022)
2016 – 2017	Supervisor, Work Experience Group Research Project
2015 – 2016	Teaching Assistant, UCL MSc Planetary Atmospheres and Space Env. & Orbits

Technical Skills

<i>Field</i>	Mineralogical multispectral imaging and IR Spectral reflectance.
<i>Laboratory</i>	Radiometric and geometric camera calibration and characterisation; spectral BRDF soil and bulk rock measurements.
<i>Computing</i>	Expert: <i>Python</i> , <i>IDL</i> , <i>ENVI</i> ; Experienced: <i>MATLAB</i> , <i>PBRT (Physically Based Rendering)</i> , <i>C++</i> ; User <i>Microsoft Office</i> , <i>github</i> , <i>Adobe Suite</i> , and <i>UNIX</i>

Selected Outreach

<i>Media</i>	Research feature in A&G Magazine, “Hunting for Biosignatures on Mars”, 1/8/2021 Radio + Podcast Interview, Radio St Austell Bay, 19/9/2020
<i>Workshops</i>	Roving-with-Rosalind, interactive activity, Great Exhibition Road Festival, 2022 Mission to Mars, Sutton Scholars, workshops for disadvantaged children, 2016–2018
<i>Talks</i>	Skype-a-Scientist, presentations/Q&A’s with international classrooms, Summer 2021 London International Youth Science Forum, 2/8/2016

References available on request.