

Patrick C. McGuire

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Full-length CV: http://www.personal.reading.ac.uk/~gn916173/resume_PatrickCMcGuire.pdf



Educational Background:

Ph.D. Physics, U. of Arizona, 1994. *B.A.* Physics & Mathematics, U. of Chicago, 1989.

Selected Research Employment:

- 2017-: Land Surface Processes Computational Scientist, [Department of Meteorology, Dept. of Geography & Env. Science](#), and [NCAS, U. of Reading](#), Reading, UK, with [Pier Luigi Vidale](#), [Grenville Lister](#), [Tristan Quaife](#), [Joy Singarayer](#), & [Anne Verhoef](#).
- 2008-2019: Research Consultant, Applied Physics. Lab., Johns Hopkins U., CRISM Sci. Team.
- 2013-2016: Researcher (*Wissenschaftlicher Mitarbeiter*), [Inst. for the Geological Sciences, Planetary Sciences and Remote Sensing Group, Freie U.](#), Berlin, Germany.
- 2012-2013: Research Associate, Dept. of Chemical Engineering, West Virginia U.
- 2009-2011: (2010-2011: Senior Research Associate, 2009-2010: Research Scientist), [Department of Geophysical Sciences](#), U. of Chicago.
- 2008-2010: [Humboldt Research Fellow](#): [Inst. for the Geological Sciences, Planetary Sciences and Remote Sensing Group, Freie U.](#) and [DLR](#), Berlin, Germany.
- 2005-2008: [Robert M. Walker Senior Research Fellow in Experimental Space Science, McDonnell Center for the Space Sciences](#), a joint center between the [Dept. of Earth & Planetary Sciences](#) and the [Dept. of Physics](#), at [Washington U. in St. Louis](#), in the [Earth & Planetary Remote Sensing Lab](#).
- 2002-2005: [Ramon y Cajal Fellow, Center for Astrobiology](#) (Robotics Lab & Transdisciplinary Lab), Madrid, Spain.
- 2001-2002: Researcher (*Wissenschaftlicher Mitarbeiter*), Dept. of Computer Science, Technische Fakultät, U. Bielefeld, Germany, [Neuroinformatics/Robotics Group](#).
- 2000-2001: Researcher (*Wissenschaftlicher Mitarbeiter*) and scientific liaison between the research groups & the ZiF management; [Zentrum für Interdisziplinäre Forschung \(ZiF\)](#) (Center for Interdisc. Research), U. Bielefeld, Germany, Complex Sys. Research Year.
- 1996-2000: Post-doctoral Research Associate, Dept. of Astronomy, Steward Observatory, U. of Arizona, [Center for Astronomical Adaptive Optics](#).

Selected Teaching and/or Administrative Employment:

- 2019 & 2021: Demonstrator: [NCAS Climate Modelling Summer School](#), Cambridge, UK.
- 2020-2021: Support for the CSSP Brazil ACCLIMATE project at the UofR, for teaching Brazilian scientists how to access CMIP climate and weather data with ESMValTool.
- 2010-2011: Developed and taught the "Science of Sustainability" course in the [Graham School of Continuing Liberal and Professional Studies](#), U. of Chicago.
- 2009: Assisted the development of computational climate modeling software for common-core course on ["Global Warming: Understanding the Forecast"](#), Dept. Geophys. Sci., U. of Chicago.
- 2008: Instructor, Washington U. in St. Louis: "Earth's Atmosphere: Climate & Global Change".
- 2000-2001: Scientific liaison between the research groups & the ZiF management; [Zentrum für Interdisziplinäre Forschung \(ZiF\)](#) (Center for Interdisc. Research), U. Bielefeld, Germany, Complex Systems Research Year.

1997-1999: Astronomy & Planetary Sciences Instructor, [U. of Phoenix](#), Tucson Campus.
 1998: Adjunct Astronomy Instructor, [Pima Community College](#), Downtown Tucson Campus.

Selected Collaborations:

2023-: [CROPP](#) (Climate Resilience and fOod Production in Peru) project.
 2022-: [SPLICE](#) (Structure, Photosynthesis and Light In Canopy Environments) project.
 2021-: [Soil Parameter Model Intercomparison Project \(SP-MIP\)](#).
 2020-: CSSP China 'Next Generation Cities' project.
 2019-: TRENDY [Global Carbon Budget](#) project for the years 2019, 2021, & 2023.
 2018-: JLMP (Joint Land Modelling Programme) project of the UK.
 2018-: Cocoa & Climate group at the UofR; 2017-: with the [TAMSAT](#) group at the UofR.
 2017-: [NCAS & NCAS CMS](#) (Computational Modelling Services) at the UofR.
 2017-: [Land Surface Processes research cluster](#) at the UofR.
 2020-2021: CSSP China 'ACCLIMATE' project at the UofR.
 2018-2021: CSSP Brazil '[PORCELAIN](#)' project.
 2018-2020: [LANDWISE](#) project; 2018-2020: with the [CALIBRE](#) project.
 2005-2019: [Mars Reconnaissance Orbiter's CRISM Science Team](#).
 2007-2011: PI, "Exploring Mars for Habitability and Life" Grand Challenge proposal team.

Selected Honors:

Top-two contestant, [Weather Game](#) (weather prediction contest), UofR, Dept. of Meteorology: Autumn 2021, 2nd place; Spring 2022, 2nd place; Spring 2023, 2nd place.
[Outstanding Young Alumni Award](#), University High School, Normal, Illinois, 2012.
 NASA Group Achievement Award, as a member of the external science team for the CRISM hyperspectral imaging camera, on-board the Mars Reconnaissance Orbiter, 2011.
[NASA Tech Brief Award](#) for the New Technology Report (NTR): "[Using CTX image features to predict HiRISE-equivalent rock density](#)", with Navid Serrano *et al.* 2010.
 University of Chicago [Little Red Schoolhouse](#) Editing Champion, 1989.
 Valedictorian, University High School, Normal, Illinois, 1985.

Selected Professional Society Membership:

[American Geophysical Union](#), [International Soil Modeling Consortium](#)

Selected Committee and Professional Service:

Co-advisor (with Javier Amezcua Espinosa) for undergraduate dissertation project by Benedict Hyland on "Martian dust storms", Dept. of Meteorology, UofR, 2021-2022.
 Member of the organizing team, [NCAS Climate Modelling Summer School](#), (online) UK, 2021.
 NCAS Environmental Sustainability Group, 2021-2023.
 Assisted organizers, Dept. & Land-Surface seminars, Dept. of Meteorology, UofR, 2018-.
 Referee: [Geosci. Model Devel. \(GMD\)](#), 2022-. [Water](#), 2019-. [Atmosphere](#), 2019-. [Applied Sciences](#), 2019-. [Sensors](#), 2019-. [Nature Geoscience](#), 2018-. [Remote Sensing](#), 2018-.
 Editorial Board Member and Referee, [The Scientific World Journal \(Geology area\)](#), 2012-.
 Reviewer, [NASA Postdoctoral Program \(NPP\)](#), Earth & Planetary Science Panels, 2010-.
 Principal Organizer, '[FUB Internal GeoSymposium](#)' (FUB IGS), Dept. of Earth Sciences, Freie U. Berlin, 2015-2016.
 Principal Organizer, '[The Afternoon Balloons](#)' seminar series, Dept. of Earth Sciences, Freie U. Berlin, 2014-2015.

Publications: [Google Scholar citations](#): (on 12 February 2024: Citations=7910, h-index=31, i10-index=65); 68 refereed publications including 64 journal publications; 127 unrefereed (conference) publications.