Sinéad Louise Farrell
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Education

2007	PhD, Space & Climate Physics, University College London, London, U.K.
2002	MSci, Geological Sciences, University College London, London, U.K.

Professional Appointments

2020 – present	Associate Professor, Department of Atmospheric and Oceanic Science, University of Maryland, College Park, MD, 20742, USA.
2019 – present	Associate Professor, Department of Geographical Sciences, University of Maryland, 1157 LeFrak Hall, College Park, MD.
2014 – 2019	Associate Research Scientist, Earth System Science Interdisciplinary Center (ESSIC), University of Maryland, College Park, MD.
2011 – 2014	Assistant Research Scientist, ESSIC, University of Maryland, College Park, MD.
2009 – 2011	Research Associate, Cooperative Institute for Climate Studies (CICS), ESSIC, University of Maryland, College Park, MD.
2007 – 2009	National Research Council Resident Research Associate, NOAA/NESDIS Lab. for Satellite Altimetry, Silver Spring, MD, USA.
2006 – 2007	Post-doctoral Research Assistant, Centre for Polar Observation and Modelling, University College London, London, United Kingdom.

Science Team Membership

2018 - date:	**Copernicus Polar Ice and Snow Topography Altimeter (CRISTAL):** Mission Advisory Group (MAG) member
2017 - date:	**NASA/NOAA Ocean Surface Topography Science Team (OSTST)**
2012 - date:	**NASA ICESat-2 Science Team**
2010 - 2016:	**NASA Operation IceBridge (OIB) Science Team**
2007 - 2019:	**NOAA Ocean Remote Sensing (ORS) Sea Ice Science Team**
2010 - date:	**ESA CryoSat-2 Mission**: Science Investigator
2013 - 2016:	**ESA CryoSat Sea Ice Product Validation Project**: International Investigator

Recent Pertinent Invited Seminars

2020 Exploring Arctic Sea Ice with NASA's ICESat-2, *Jones Seminar on Science, Technology, and Society:* Thayer School of Engineering at Dartmouth, Dartmouth College, NH, USA. https://www.youtube.com/watch?v=c3hciY3w9Rs&feature=youtu.be

2020 Tracking the Decline of Polar Sea Ice – Four Decades of Satellite Observation. *Polar Science Seminar*: Scripps Institution of Oceanography, University of California San Diego, CA., USA.

2019 From ICESat to ICESat-2 via IceBridge: New Insights into a Changing Sea Ice Cover. *Invited Talk*: American Geophysical Union Fall Meeting 2019, San Francisco, CA.

2019 Sea Ice Change Visible from The Street. *Invited Panelist*: VisArts Gallery, Rockville, MD.

2019 Advances in Satellite and Airborne Altimetry over Arctic Sea Ice – Towards Improved Prediction. *Seminar*: NOAA Center for Satellite Applications & Research, College Park, MD.

2019 Observing the Arctic from Above - Tracking the Demise of the Sea Ice Cover with NASA Satellites & Aircraft. *Seminar*: NASA GSFC Geodesy & Geophysics Lab., Greenbelt, MD.

2018 The Younger, Thinner, Faster Arctic Sea Ice Cover - Tracking Change over Fifteen Years. *Keynote Speaker*: 25 Years of Progress in Radar Altimetry Symposium, The Azores, Portugal.

Ten Recent Publications

Farrell, S. L., Duncan, K., Buckley, E., Richter-Menge, J. and Li, R. (2020). Mapping Sea Ice Surface Topography in High Fidelity with ICESat-2, *Geophy. Res. Lett*., in review. Preprint at: https://doi.org/10.1002/essoar.10504391.1

Kern, M., R. Cullen, B. Berruti, J. Bouffard, T. Casal, M. R. Drinkwater, A. Gabriele, A. Lecuyot, M. Ludwig, R. Midthassel, I. Navas Traver, T. Parrinello, G. Ressler, E. Andersson, C. Martin Puig, O. Andersen, A. Bartsch, S. L. Farrell, et al. (2020), The Copernicus Polar Ice and Snow Topography Altimeter (CRISTAL) high-priority candidate mission, *The Cryosphere*, 14, 2235–2251, https://doi.org/10.5194/tc-14-2235-2020.

Kwok, R., T. Markus, N. Kurtz, A. Petty, T. Neumann, S. L. Farrell, G. F. Cunningham, et al. (2019), Surface height and sea ice freeboard of the Arctic Ocean from ICESat-2: Characteristics and early results, *J. Geophys. Res.,* 124. https://doi.org/10.1029/2019JC015486

Sallila, H., S. L. Farrell, J. McCurry, and E. Rinne (2019), Assessment of Contemporary Satellite Sea Ice Thickness Products for Arctic Sea Ice, *The Cryosphere*, 13, 1187-1213, 2019 https://doi.org/10.5194/tc-13-1187-2019

Shepherd, A., H. A. Fricker, S. L. Farrell (2018), Trends and Connections Across the Antarctic Cryosphere, *Nature*, 558, 223-232, https://doi.org/10.1038/s41586-018-0171-6

Allard, R. A., S. L. Farrell, D. A. Hebert, W. F. Johnston, L. Li, N. T. Kurtz, M. W. Phelps, et al. (2018), Utilizing CryoSat-2 Ice Thickness to Initialize a Coupled Ice-Ocean Modeling System, *Advances in Space Res.*, https://doi.org/10.1016/j.asr.2017.12.030

Skourup, H., S. L. Farrell, S. Hendricks, R. Ricker, T. W. K. Armitage, A. Ridout, O. B. Andersen, C. Haas and S. Baker (2017), An Assessment of State-of-the-Art Mean Sea Surface and Geoid Models of the Arctic Ocean: Implications for Sea Ice Freeboard Retrieval, *J. Geophys. Res.: Oceans*, 122, https://doi.org/10.1002/2017JC013176

McAdoo, D. C., S. L Farrell, S. W. Laxon, A. L. Ridout, H. J Zwally & D. Yi (2013), Gravity of the Arctic Ocean from satellite data with validations using airborne gravimetry: oceanographic implications, *J. Geophys. Res.*,*118*,917–930, https://doi.org/10.1002/jgrc.20080

Richter-Menge, J., and S. L. Farrell (2013), Arctic Sea Ice Conditions in Spring 2009 - 2013 Prior to Melt, Geophys. Res. Lett., 40, 5888-5893, https://doi.org/10.1002/2013GL058011

Farrell, S. L., D. McAdoo, S. Laxon, H. J. Zwally, D. Yi, A. Ridout, and K. Giles (2012), Mean Dynamic Topography of the Arctic Ocean, *Geophys. Res. Lett.*, *39*, L01601, doi:10.1029/2011GL050052

Advisors

PhD Advisor: Dr. Seymour W. Laxon, University College London, United Kingdom.
Postdoctoral Advisor: Dr. David C. McAdoo, NOAA Laboratory for Satellite Altimetry, MD, USA

Advisees (all University of Maryland, College Park, MD, USA)

Graduate Students: Ms. Oliwia Baney (2020 – date); Ms. Ellen Buckley (2017 – date);
Faculty Specialists: Mr. Kyle Duncan (2015 – date). Post-Doctoral Associates: Dr. Thomas Newman (2011 – 2016); Dr. Alek Petty (2014 – 2015) Faculty Assistants: Mr. Joshua McCurry (2017 – 2018); Ms. Marissa Dattler (2016 – 2017); Ms. Julia Ruth (2012-2014)

Teaching

2021 AOSC440/GEOG440: Polar Remote Sensing, University of Maryland
2020 – 2021 GEOG301: Advanced Environmental Systems, University of Maryland

Media & Public Outreach

Nature News, BBC News, Witness the Arctic, Arctic Today, Surfline, NBC Today Show, PBS NewsHour, NASA News, NASA Earth Observatory, NOAA YouTube.