Deanna Nash

Website: dlnash.github.io
Email: dnash@ucsd.edu
GitHub: github.com/dlnash

Education

University of California Santa Barbara — Santa Barbara, CA
Ph.D. in Geography, Advisor: Leila Carvalho — 2017–June 2022

- Dissertation: "Dynamics of Atmospheric Rivers in High Mountain Asia: Influences on Precipitation, Lightning and Landslides"

California State University, Los Angeles — Los Angeles, CA
M.A. in Geography, GPA: 4.0 — 2015–2017

- Thesis: "Atmospheric River Contributions to Extratropical Poleward Moisture Transports and Atmospheric Water Cycle"

University of Colorado Colorado Springs — Colorado Springs, CO
B.A. in Geography, GPA: 3.8 — 2010–2014

- Emphasis in Geospatial Science with Certification in Geographic Information Systems
- Thesis: "Examining post-fire landscape change using remote sensing"
- UCCS Department of Geography Honors with highest distinction

University of Granada — Granada, Spain
Study Abroad — 2011–2012

University of Costa Rica — San Jose, Costa Rica
Study Abroad — 2014–2014

Publications

Nash, **Deanna**, Leila M. V. Carvalho, Jon Rutz, and Charles Jones (2023). "Influence of the freezing level on Atmospheric Rivers in High Mountain Asia: WRF case studies of orographic precipitation extremes". In: *Climate Dynamics*. DOI: http://dx.doi.org/10.1007/s00382-023-06929-x.

Nash, **Deanna**, Jon Rutz, and Aaron Jacobs (2023a). "Atmospheric Rivers In Southeast Alaska: Meteorological Conditions Associated With Extreme Precipitation". In: *Journal of Geophysical Research: Atmospheres (in review)*.

Murray, Alan T, Leila Carvalho, Richard L Church, Charles Jones, Dar Roberts, Jing Xu, Katelyn Zigner, and **Deanna Nash** (2021). "Coastal Vulnerability under Extreme Weather". In: *Applied Spatial Analysis and Policy* 14.3, pp. 497–523. ISSN: 1874-4621. DOI: 10.1007/s12061-020-09357-0.

Nash, **Deanna**, Leila M. V. Carvalho, Charles Jones, and Qinghua Ding (2021). "Winter and spring atmospheric rivers in High Mountain Asia: climatology, dynamics, and variability". In: *Climate Dynamics*. ISSN: 1432-0894. DOI: 10.1007/S00382-021-06008-Z.

Nash, **Deanna** and Leila Carvalho (2020). "Brief Communication: An electrifying atmospheric river–understanding the thunderstorm event in Santa Barbara County during March 2019". In: *Natural Hazards and Earth System Sciences* 20.7, pp. 1931–1940. DOI: 10.5194/nhess-20-1931-2020.

Nash, **Deanna**, Duane Waliser, Bin Guan, Hengchun Ye, and F Martin Ralph (2018). "The role of atmospheric rivers in extratropical and polar hydroclimate". In: *Journal of Geophysical Research: Atmospheres* 123.13, pp. 6804–6821. DOI: 10.1029/2017JD028130.

Nash, **Deanna**, Hengchun Ye, and Eric Fetzer (2017). "Spatial and Temporal Variability in Winter Precipitation across the Western United States during the Satellite Era". In: *Remote Sensing* 9.9, p. 928. DOI: 10.3390/rs9090928.

Presentations

Nash, **Deanna** (July 2023a). “Atmospheric Rivers and the Climate Crisis: Changes in Extreme Precipitation in the Western U.S. (invited oral)”. In: *Global Leadership Institute Future Leaders Summer Program*. La Jolla, CA.

Nash, **Deanna** (May 2023b). “Extremes in the Atmosphere, Disasters on Land: Using Dynamically Downscaled Climate Reanalysis To Understand Atmospheric River-Induced Extreme Precipitation In Southeast Alaska (invited oral)”. In: *Center for Land-Surface Hazards Modeling Expo*. Virtual.

Nash, **Deanna**, Nina Oakley, Jon Rutz, and Aaron Jacobs (Jan. 2023). “Atmospheric Rivers in Southeast Alaska: Meteorological Conditions Associated With Historic Landslides and Flooding (poster)”. In: *AMS 103rd Annual Meeting*. Denver, CO.

Nash, **Deanna**, Jon Rutz, and Aaron Jacobs (Sept. 2023b). “Atmospheric Rivers in Southeast Alaska: Meteorological Conditions Associated With Extreme Precipitation (invited oral)”. In: *University of Alaska Southeast Natural History Seminar*. Sitka, AK.

Nash, **Deanna** (Aug. 2022). “Influence of Zero-degree Line on Atmospheric Rivers in High Mountain Asia: WRF Case Studies of Orographic Precipitation Extremes (oral)”. In: *Asia Oceania Geosciences Society*. Virtual.

Nash, **Deanna**, Leila M V Carvalho, and Charles Jones (Oct. 2022). “Influence of Zero Degree Line on Atmospheric Rivers in High Mountain Asia: WRF Case Studies of Orographic Precipitation (oral)”. In: *International Atmospheric River Conference*. Santiago, Chile.

Nash, **Deanna**, Nikos Mastrantonas, William Schedftic, Alex K. Mitchell, Janak R. Joshi, Michael J. DeFlorio, Aneesh C. Subramanian, and Judith Berner (Mar. 2022). “Subseasonal predictions during the 2017 Oroville Dam Crisis: Role of atmospheric rivers and antecedent synoptic conditions”. In: International Research Institute for Climate and Society Workshop on Sub-seasonal to Seasonal Climate Forecasting for Water Management in the Western U.S. Virtual.

Nash, **Deanna** and Leila V Carvalho (Dec. 2021). “Simulating and evaluating hazardous atmospheric river-related precipitation in High Mountain Asia”. In: AGU Fall Meeting. New Orleans, LA.

Nash, **Deanna** and Leila V Carvalho (Dec. 2020a). “Winter and Spring Atmospheric Rivers in High Mountain Asia: Climatology, Dynamics and Variability”. In: AGU Fall Meeting. Virtual.

Nash, **Deanna** and Leila V Carvalho (Oct. 2020b). “Winter and Spring Atmospheric Rivers in High Mountain Asia: Climatology, Dynamics and Variability”. In: International Atmospheric Rivers Conference. Virtual.

Nash, **Deanna** and Leila V Carvalho (Oct. 2019a). “An Electrifying Atmospheric River: Understanding the Thunderstorm Event in Santa Barbara County during March 2019”. In: Earth Research Institute Climate Meeting. Santa Barbara, CA.

Nash, **Deanna** and Leila V Carvalho (Dec. 2019b). “Atmospheric Rivers and Precipitation in High Mountain Asia”. In: AGUFM. San Francisco, CA.

Nash, **Deanna** and Leila V Carvalho (Apr. 2019c). “Impacts on High Mountain Asia Precipitation”. In: American Association of Geographers Annual Meeting. Washington D.C.

Nash, **Deanna** and Leila V Carvalho (May 2019d). “Synoptic-scale atmospheric circulation anomalies associated with winter atmospheric rivers in High Mountain Asia”. In: Earth Research Institute Climate Meeting. Santa Barbara, CA.

Nash, **Deanna** and Leila V Carvalho (Dec. 2018a). “Atmospheric Rivers Impact on High Asia Mountain Precipitation”. In: AGUFM. Washington D.C.

Nash, **Deanna** and Leila V Carvalho (Oct. 2018b). “What is the impact of Atmospheric Rivers on High Mountain Asia Preciptiation?” In: NOAA’s 43rd climate Diagnostic and Prediction Workshop. Santa Barbara, CA.

Nash, **Deanna**, Duane Edward Waliser, Bin Guan, Hengchun Ye, and F Martin Ralph (June 2018). “The Role of Atmospheric Rivers in Extratropical and Polar Hydroclimates”. In: International Atmospheric River Conference. La Jolla, CA.

Nash, **Deanna** (Feb. 2017). “Atmospheric River Contributions to Extratropical Poleward Moisture Transports and Atmospheric Water Cycle”. In: CSULA Research Symposium. Los Angeles, CA.

Nash, **Deanna**, Duane Edward Waliser, Bin Guan, Hengchun Ye, and F Martin Ralph (Dec. 2017a). “Atmospheric River Importance to Extratropical Climate and Hydrology”. In: AGUFM. New Orleans, LA.

Nash, **Deanna**, Duane Edward Waliser, Bin Guan, Hengchun Ye, and F Martin Ralph (Apr. 2017b). “How water vapor transport influences precipitation efficiency over high latitudes”. In: American Association of Geographers Annual Meeting. Boston, MA.

Nash, **Deanna** (Feb. 2016). “Examining Atmospheric Rivers and Aerosols over California”. In: CSULA Research Symposium. Los Angeles, CA.

Nash, **Deanna** and Aaron Trefler (Aug. 2016). “Using Satellite Observations to Explore Water Storage and Precipitation”. In: Satellites and Education Conference. Los Angeles, CA.

Nash, **Deanna** and Hengchun Ye (Dec. 2016a). “Spatial and Temporal Variability in Precipitation Characteristics in the Western United States”. In: AGUFM. San Francisco, CA.

Nash, **Deanna** and Hengchun Ye (Oct. 2016b). “Variability in Precipitation Characteristics in the Western United States”. In: American Pacific Coast Geographers conference. Portland, OR.

Nash, **Deanna** and Cerian Gibbes (May 2014). “Examining post-fire landscape change using remote sensing”. In: International Fire Conference. Missoula, MT.

Experience

Center for Western Weather and Water Extremes — San Diego, CA
Scripps Institution of Oceanography, University of California San Diego — August 2022–present
Postdoctoral Scholar

- Atmospheric Rivers in Southeast Alaska
- National Science Foundation Award: 2052972
- Khutí Project: Understanding Natural Hazards and Supporting Community Response

National Center for Atmospheric Research — Boulder, CO
Advanced Student Program Colloquium — July 2021

- The Science of Seasonal to Subseasonal Predictions
- Group Leads: Aneesh Subramanian and Mike DeFlorio
- Used python to perform S2S hindcast evaluation on Atmospheric Rivers in Western US

Jet Propulsion Laboratory — Pasadena, CA
Intern Earth Sciences Division — October 2015 –September 2017

- Regional Climate Model Evaluation Systems
- Mentor: Duane Waliser
- Used python to help implement software for comparing regional climate models
- Maintained the website with HTML and CSS (rcmes.jpl.nasa.gov)

California State University Los Angeles — Los Angeles, CA
Graduate Assistant Geosciences Lab — October 2015 –June 2016

- Assisted students with GIS needs

University of Colorado — Colorado Springs, CO
Research Assistant Department of Geography — September 2014 –January 2015

- Post-fire vegetation regrowth
- Performed geospatial analysis with remote sensing imagery
- Experience in python and IDRISI

Colorado Springs Fire Department Colorado Springs, CO
GIS Technician Division of the Fire Marshal July 2013 –January 2014

- Created maps and surveyed wildfire mitigation project areas
- Collected weekly fuels samples to measure fire risk
- Created and maintained web map for Wildland Urban Interface

City of Colorado Springs Colorado Springs, CO
GIS Technician Information Technology January 2014 –June 2014

- Developed maps for different city divisions
- Worked in a versioned geodatabase environment
- Experience in python, geocoding, topology editing, linear referencing, and other geoprocessing tools

Teaching

- **Instructor of Record** at University of California Santa Barbara Summer 2020
  Introduction to Meteorology (GEOG110)
- **Session Lead** at University of California Santa Barbara Library Collaboratory Spring 2019
  Ecodatascience session on Python dask and xarray
- **Instructor of Record** at University of California Santa Barbara Summer 2018
  Waves and Tides in the Ocean (GEOG165)
- **Teaching Associate** at California State University Los Angeles Spring 2017
  Introduction to Physical Geography (GEOG1600)
- **Teaching Associate** at California State University Los Angeles Fall 2016
  Introduction to Physical Geography (GEOG1600)

Skills

- **Modeling Software:** Advanced Research Weather Research and Forecasting Model
- **Geospatial Software:** ArcGIS and QGIS
- **Remote Sensing Software:** IDRISI and ENVI
- **Language:** Spanish (intermediate)

Languages

- **Python:** advanced
- **R:** advanced
- **Matlab:** advanced
- **bash:** advanced
- **IDL:** intermediate
- **HTML and CSS:** intermediate

Projects

See full list of projects on dlnash.github.io

- Pyclivac (python, 2020)
  Developed a series of python programs and tutorials for beginner climate scientists

Peer Review

- *Journal of Geophysical Research - Atmospheres* April 2021, March 2023
- *Portuguese Polar Program (PROPOLAR) Project Proposals* April 2021
- *Earth System Science Data* March 2021
- *Environmental Research Communications* June 2020

- *Quarterly Journal of the Royal Meteorological Society* October 2019
- *Portuguese Polar Program (PROPOLAR) Project Proposals* August 2019

Scholarships and Awards

- UCSB Department of Geography Excellence in Research Award 2022
- New Frontiers Graduate Fellow - NSF awards OCI-0725070 and ACI-1238993 2021–22
- NASA Earth and Space Science Fellowship #80NSSC18K1412 2018–21
- AAG Climate Specialty Group Student Paper Competition: 2nd place April 2019
- Regents Fellowship UCSB 2017–18
- NASA DIRECT-STEM MIRO #NNX15AQ06A 2015–17
- CSULA Gamma Theta Upsilon Scholarship 2016–17
- John David Rees Research Scholarship 2016–17
- UCCS Letters, Arts, and Sciences Research Grant 2013–14
- UCCS Women in Geography Award 2013–14
- UCCS Honors Scholarship Program 2010–14
- UCCS Reach Your Peak Scholarship Program 2010–14
- UCCS Deans and Presidents List 2010–14

Service

- Member of the CW3E Justice, Equity, Diversity, and Inclusion Task Force Winter 2023–present
  Center for Western Weather and Water Extremes, Scripps Institute of Oceanography, UCSD
- Advanced Graduate Student Mentor Fall 2021–Spring 2022
  UCSB Graduate Scholars Program
- oSTEM Mentor Winter 2021–Spring 2021
  out in STEM UCSB chapter
- Alumnae Advisory Committee Recruitment Advisor Fall 2019–Fall 2022
  CA Zeta chapter of Pi Beta Phi
- Chair of the Graduate Advisory Committee Fall 2019–June 2022
  Geography Department, UCSB
- Chair of the Lounge Committee Fall 2019–Spring 2020
  Geography Department, UCSB
- Member of the Events Committee Fall 2017 –Fall 2019
  Department of Geography, UCSB
- Geography Awareness Week Elementary School Outreach Fall 2018, ’19, ’20
  Geography Department, UCSB
- President of the Lambda Pi Chapter of Gamma Theta Epsilon Honor Society Spring 2016 –Spring 2017
  Department of Geography, CSULA
- Member of the Theta Chi Chapter of Gamma Theta Epsilon Honor Society Spring 2014
  Department of Geography, UCCS
- Member of the Colorado Epsilon Chapter of Pi Beta Phi Fall 2011 –Spring 2014
  University of Colorado Colorado Springs