

EDUCATION

University of California Santa Barbara

Ph.D. in Geography, Advisor: Leila Carvalho

Santa Barbara, CA

2017–June 2022

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

California State University, Los Angeles

M.A. in Geography, GPA: 4.0

Los Angeles, CA

2015–2017

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

University of Colorado Colorado Springs

B.A. in Geography, GPA: 3.8

Colorado Springs, CO

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

Study Abroad

Granada, Spain

2011–2012

University of Costa Rica

Study Abroad

San Jose, Costa Rica

2014–2014

PUBLICATIONS

- Nash, Deanna**, Jon Rutz, and Aaron Jacobs (2024b). “Atmospheric Rivers In Southeast Alaska: Meteorological Conditions Associated With Extreme Precipitation”. In: *Journal of Geophysical Research: Atmospheres*. DOI: <https://doi.org/10.1029/2023JD039294>.
- Wang, Zhibiao, Qinghua Ding Ding, Renguang Wu, Thomas J. Ballinger, Bin Guan, Deniz Bozkurt, **Deanna Nash**, Ian Baxter, Dániel Topál, Zhe Li, Gang Huang, Wen Chen, Shangfeng Chen, Xi Cao, and Zhang Chen (2024). “Role of atmospheric rivers in shaping long term Arctic moisture variability”. In: *Nature Communications*. DOI: <https://doi.org/10.1038/s41467-024-49857-y>.
- 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>.
- 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 2024a). "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** (Oct. 2024b). "Atmospheric Rivers in San Diego: Historical Flooding in January 2024 and Increasing Drought Resilience (invited oral)". In: *UC San Diego Community Advisory Board Meeting*. La Jolla, CA.
- Nash, Deanna**, A. Jacobs, and J. Rutz (Aug. 2024a). "Differentiating between impactful and non-impactful Atmospheric River events in Southeast Alaska (oral)". In: *Virtual Alaska Weather Symposia*. Boise, ID.
- Nash, Deanna**, A. Jacobs, and J. Rutz (Dec. 2024b). "Differentiating between impactful and non-impactful Atmospheric River events in Southeast Alaska (poster)". In: *AGU Fall Meeting*. Washington, D.C.
- Nash, Deanna**, A. Jacobs, and J. Rutz (Sept. 2024c). "Differentiating between impactful and non-impactful Atmospheric River events in Southeast Alaska (showcase)". In: *National Weather Association Annual Meeting*. Irving, TX.
- Nash, Deanna**, J. Rutz, J. Cordeira, S. Battula, X. Zou, and F.M. Ralph (Jan. 2024). "Inland-Penetrating Atmospheric Rivers and Hydrometeorological Impacts in Colorado (poster)". In: *AMS 104th Annual Meeting*. Baltimore, MD.
- Nash, Deanna**, J. Rutz, J. Cordeira, F.M. Ralph, K. Sanders, and E. Walter (May 2024a). "Historical Precipitation Contribution of Inland-Penetrating Atmospheric Rivers in the Upper Yampa (invited oral)". In: *Yampa Basin Rendezvous*. Steamboat Springs, CO.
- Nash, Deanna**, J. Rutz, J. Cordeira, F.M. Ralph, K. Sanders, and E. Walter (Oct. 2024b). "Inland-Penetrating Atmospheric Rivers and Hydrometeorological Impacts in Colorado (oral)". In: *20th Cyclone Workshop*. Manoir St Sauveur Qc, Canada.
- Nash, Deanna**, J. Rutz, J. Cordeira, F.M. Ralph, K. Sanders, and E. Walter (Sept. 2024c). "Inland-Penetrating Atmospheric Rivers and Hydrometeorological Impacts in Colorado (oral)". In: *National Weather Association Annual Meeting*. Irving, TX.
- Nash, Deanna**, J. Rutz, J. Cordeira, F.M. Ralph, K. Sanders, and E. Walter (July 2024d). "Inland-Penetrating Atmospheric Rivers and Hydrometeorological Impacts in Colorado (oral)". In: *21st Conference on Mountain Meteorology*. Boise, ID.
- Nash, Deanna**, J. Rutz, J. Cordeira, F.M. Ralph, K. Sanders, and E. Walter (June 2024e). "Inland-Penetrating Atmospheric Rivers and Hydrometeorological Impacts in Colorado (oral)". In: *International Atmospheric River Conference*. San Diego, CA.
- Nash, Deanna**, J. Rutz, J. Cordeira, Z. Zhang, F.M. Ralph, K. Sanders, and E. Walter (Dec. 2024). "Inland-Penetrating Atmospheric Rivers and Hydrometeorological Impacts in Colorado (oral)". In: *AGU Fall Meeting*. Washington, D.C.
- Nash, Deanna**, Jon Rutz, and Aaron Jacobs (Jan. 2024a). "Atmospheric Rivers in Southeast Alaska: Differentiating Between Impactful and Non-impactful Events (poster)". In: *AMS 104th Annual Meeting*. Baltimore, MD.
- 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**, J. Cordeira, B. Kawzenuk, S. Bartlett, L. Bosart, C. Castellano, A. Cobb, C. Hecht, T.Y. Hsu, J. Kalansky, T. Leicht, A. Mitchell, B. Moore, and Zou X. (Oct. 2023). "Climatological Perspective and Synoptic Analysis of Landfalling Atmospheric Rivers in California during December 2022 and January 2023 (invited oral)". In: *Geological Society of America Connects*. Pittsburgh, PA.
- 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. 2023). "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 Schedtftic, 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: AGU FM. 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: AGU FM. Washington D.C.
- Nash, Deanna** and Leila V Carvalho (Oct. 2018b). "What is the impact of Atmospheric Rivers on High Mountain Asia Precipitation?" 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

Scripps Institution of Oceanography, University of California San Diego
Postdoctoral Scholar

San Diego, CA

August 2022–present

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

National Center for Atmospheric Research

Advanced Student Program Colloquium

Boulder, CO

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

Intern Earth Sciences Division

Pasadena, CA

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

Graduate Assistant Geosciences Lab

Los Angeles, CA

October 2015 –June 2016

- Assisted students with GIS needs

University of Colorado

Research Assistant Department of Geography

Colorado Springs, CO

September 2014 –January 2015

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

Colorado Springs Fire Department

GIS Technician Division of the Fire Marshal

Colorado Springs, CO

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

GIS Technician Information Technology

Colorado Springs, CO
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
<i>Introduction to Meteorology (GEOG110)</i> | Summer 2020 |
| • Session Lead at University of California Santa Barbara Library Collaboratory
<i>Ecodatascience session on Python dask and xarray</i> | Spring 2019 |
| • Instructor of Record at University of California Santa Barbara
<i>Waves and Tides in the Ocean (GEOG165)</i> | Summer 2018 |
| • Teaching Associate at California State University Los Angeles
<i>Introduction to Physical Geography (GEOG1600)</i> | Spring 2017 |
| • Teaching Associate at California State University Los Angeles
<i>Introduction to Physical Geography (GEOG1600)</i> | Fall 2016 |

SKILLS

- **High Performance Computing:** cluster management tools like Slurm and PBS
- **Git and Github:** create and manage versions of code repositories
- **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

PEER REVIEW

- | | |
|--|--|
| • <i>Journal of Geophysical Research - Atmospheres</i> | April 2021, March 2023, Aug 2023, April 2024, Feb 2025 |
| • <i>Journal of Climate</i> | Jan 2024 |
| • <i>Earth System Science Data</i> | March 2021 |
| • <i>Environmental Research Communications</i> | June 2020 |
| • <i>Quarterly Journal of the Royal Meteorological Society</i> | Oct 2019 |
| • <i>Portuguese Polar Program (PROPOLAR) Project Proposals</i> | Aug 2019, April 2021 |

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

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