

## EDUCATION

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### 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

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- 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

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- 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 (Sept. 2024b). "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**, 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 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: AGUFGM. 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: AGUFGM. 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: AGUFGM. 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

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| <p><b>Center for Western Weather and Water Extremes</b><br/> <b>Scripps Institution of Oceanography, University of California San Diego</b><br/>         Postdoctoral Scholar</p> <ul style="list-style-type: none"> <li>– Atmospheric Rivers in Southeast Alaska</li> <li>– National Science Foundation Award: 2052972</li> <li>– Khutí Project: Understanding Natural Hazards and Supporting Community Response</li> </ul> | <p>San Diego, CA<br/>         August 2022–present</p>                 |
| <p><b>National Center for Atmospheric Research</b><br/>         Advanced Student Program Colloquium</p> <ul style="list-style-type: none"> <li>– The Science of Seasonal to Subseasonal Predictions</li> <li>– Group Leads: Aneesh Subramanian and Mike DeFlorio</li> <li>– Used python to perform S2S hindcast evaluation on Atmospheric Rivers in Western US</li> </ul>  | <p>Boulder, CO<br/>         July 2021</p>                             |
| <p><b>Jet Propulsion Laboratory</b><br/>         Intern Earth Sciences Division</p> <ul style="list-style-type: none"> <li>– Regional Climate Model Evaluation Systems</li> <li>– Mentor: Duane Waliser</li> <li>– Used python to help implement software for comparing regional climate models</li> <li>– Maintained the website with HTML and CSS (<a href="http://rcmes.jpl.nasa.gov">rcmes.jpl.nasa.gov</a>)</li> </ul>  | <p>Pasadena, CA<br/>         October 2015 –September 2017</p>         |
| <p><b>California State University Los Angeles</b><br/>         Graduate Assistant Geosciences Lab</p> <ul style="list-style-type: none"> <li>– Assisted students with GIS needs</li> </ul>   | <p>Los Angeles, CA<br/>         October 2015 –June 2016</p>           |
| <p><b>University of Colorado</b><br/>         Research Assistant Department of Geography</p> <ul style="list-style-type: none"> <li>– Post-fire vegetation regrowth</li> <li>– Performed geospatial analysis with remote sensing imagery</li> <li>– Experience in python and IDRISI</li> </ul>   | <p>Colorado Springs, CO<br/>         September 2014 –January 2015</p> |
| <p><b>Colorado Springs Fire Department</b><br/>         GIS Technician Division of the Fire Marshal</p> <ul style="list-style-type: none"> <li>– Created maps and surveyed wildfire mitigation project areas</li> <li>– Collected weekly fuels samples to measure fire risk</li> <li>– Created and maintained web map for Wildland Urban Interface</li> </ul>  | <p>Colorado Springs, CO<br/>         July 2013 –January 2014</p>      |

## 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

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- **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

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

## LANGUAGES

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

## PEER REVIEW

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- *Journal of Geophysical Research - Atmospheres* April 2021, March 2023, August 2023, April 2024
- *Journal of Climate* January 2024
- *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, April 2021

## SCHOLARSHIPS AND AWARDS

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- 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

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• Co-chair of the CW3E Justice, 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