

Michael (Mike) Sierks

msierks@ucsd.edu
8810 Shellback Way Attn: NH 427
<https://scripps.ucsd.edu/profiles/msierks>

Research Interests: Climate Change Impacts, High-Impact Weather, Climate Dynamics, Hydroclimate, Water Resources

EDUCATION

Scripps Institution of Oceanography

Ph.D. in Oceanography, Advisor: Dr. F.M. Ralph

La Jolla, CA

2016-2022

University of North Carolina, Chapel Hill

M.Sc. in Environmental Engineering

Chapel Hill, NC

2014-2015

University of California San Diego

B.Sc. in Environmental Engineering

La Jolla, CA

2008-2013

PROFESSIONAL APPOINTMENTS

Scripps Institution of Oceanography

Graduate Student Researcher

La Jolla, CA

2016-Current

University of California San Diego

Interim Assistant Resident Dean - Sixth College

La Jolla, CA

2015-2016

Scripps Institution of Oceanography

Undergraduate Research Assistant

La Jolla, CA

2012-2013

PUBLICATIONS

- [1] W. Chapman, A. C. Subramanian, S.-P. Xie, **M. Sierks**, F. M. Ralph, and Y. Kamae, "Monthly modulations of enso teleconnections: Implications for potential predictability in north america", *Journal of Climate*, pp. 1-71, Mar. 2021.
- [2] B. Hatchett, [...], **M. Sierks**, and [...], "Observations of an extreme atmospheric river storm with a diverse sensor network", *Earth and Space Science*, Jul. 2020.
- [3] **M. Sierks**, J. Kalansky, F. Cannon, and F. Ralph, "Characteristics, origins, and impacts of summertime extreme precipitation in the lake mead watershed", *Journal of Climate*, Apr. 2020.

NON-REFEREED PUBLICATIONS

- 1. **M. Sierks**, D. Eppehimer, E. Fard, J. Kemper, C. Morrisett, J. Sturtevant, A. Willis, and L. Jennings, "Climate adaptation planning to support ecosystems and people in the Gila River Watershed, Arizona", *Southwest Climate Adaptation Science Center*, Mar. 2021.
- 2. C. Truettner, [...], **M. Sierks**, and [...], "Bimodal Precipitation Variation Measured in Intra-Annual Tree-Ring Isotope Chronologies from Southern Nevada, USA", *University of Nevada, Reno*, Aug. 2021.
- 3. **M. Sierks**, P. Kolsky, "Rainwater Harvesting: Diversifying the Irrigation Supply of the Coker Arboretum", *University of North Carolina at Chapel Hill*, May 2015.

PEER-REVIEWED CONFERENCE PAPERS

1. A. Jakubisin, W. Chapman, and **M. Sierks**, "Sustainability and the Student Affairs Professional", *National Association of Student Personnel Administrators Annual Conference*, Mar. 2015.

SELECTED CONFERENCES

1. **M. Sierks**, M.D. Dettinger, W. Chapman, and F.M. Ralph, "Assessing Vulnerability and Adaptive Management Under Climate Change Scenarios: Lessons from California's Largest Reservoir", *AGU Fall Meeting 2020*, 2020.
2. **M. Sierks**, J. Kalansky, F. Cannon, and F.M. Ralph, "Summertime Rossby Wave Breaking in the Eastern North Pacific: Links to Extreme Weather in the North American Monsoon Region", *American Meteorological Society Annual Meeting 2020*, 2020.
3. **M. Sierks**, J. Kalansky, F. Cannon, and F.M. Ralph, "Characteristics and Origins of Extreme Summertime Precipitation in the Lake Mead Watershed", *American Meteorological Society Annual Meeting 2019*, 2019.
4. A. Michaelis, [...], **M. Sierks**, and [...], "Predictability of Various Dynamical Features during the 13–15 February 2019 Atmospheric River Event", *American Meteorological Society Annual Meeting 2020*, 2020.

AWARDS

Southwest Climate Adaptation Science Center NRWD Fellowship	2019–2020
UCSD School for Global Policy and Strategy Science Policy Fellowship	2018–2020
UCSD Alumni Association Outstanding Senior Award	2013
NCAA Mountain Pacific Sports Federation Men's Volleyball All-Academic Team	2011
UCSD Provost Honors 6x	2010–2012

SELECTED INVITED TALKS, TEACHING, & SEMINARS

1. **M Sierks**, "Climatology and Impacts of Extreme Summertime Precipitation in the NAM Tier II region", *National Weather Service Las Vegas, Monsoon Training Day 2021 – June 10, 2021* **Invited Speaker**.
2. **M Sierks**, and K Voss, "Atmospheric River and Adaptive Management Strategies", *Colorado Mountain College, SUS440 – February 7, 2020* **Guest Lecturer**.
3. **M Sierks**, and K Voss, "Climate Change Impacts on Snowpack and Ski Resorts", *Steamboat Ski Resort – February 6, 2020*.
4. **M Sierks**, and K Voss, "Atmospheric River Field Science and Logistics", *Colorado Mountain College, SUS331 – February 5, 2020* **Guest Lecturer**.
5. **M Sierks**, R Keeling, "Transient Climate Response", *UC San Diego, SIO117 – Dec. 4, 2019* **Guest Lecturer**.
6. **M Sierks**, J Kalansky, and FM Ralph, "Characteristics and Origins of Extreme Summertime Precipitation in the Lake Mead Watershed", *Western States Water Council/California Department of Water Resources Sub-Seasonal to Seasonal (S2S) Precipitation Forecasting Workshop – May 24, 2019*.
7. **M Sierks**, J Kalansky, F Cannon, and FM Ralph, "Characteristics and Origins of Extreme Precipitation in the Lake Mead Watershed", *Southwest Extreme Precipitation Symposium – March 2019* **Invited Speaker**.

TEACHING & MENTORING EXPERIENCE

- **Intern Program Supervisor** at Scripps Institution of Oceanography
Center for Western Weather and Water Extremes (20 interns) Summer 2020, 2021
- **Teaching Assistant/Guest Lecturer** at UC San Diego
Physical Basis of Global Warming (SIO 117) Fall 2019

CURRENT PROJECTS

1. **M. Sierks**, M.D. Dettinger, W. Chapman, and F.M. Ralph, "Assessing Vulnerability and Adaptive Management Under Climate Change Scenarios: Lessons from California's Largest Reservoir", *TO BE SUBMITTED 2022*.
2. **M. Sierks**, D. Pierce, W. Chapman, M.D. Dettinger, and FM Ralph, "Seasonally Anchored Bias Correction of CMIP 5 Hydrological Simulations", *TO BE SUBMITTED 2022*.

TECHNICAL SKILLS

- **Languages:** Bash, LaTeX
- **Modeling Tools:** NetCDF, CDO, NCO
- **Development Tools :** Jupyter Suite
- **Scientific Visualization & Analysis:** Python, NCL, Matlab