

MIRIAM NIELSEN

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Education

- 2020-Present **PhD, Earth & Environmental Science, Columbia University.**
Advisors: Kate Marvel & Benjamin Cook
- 2018 **M.A, Climate & Society, Earth & Environmental Sciences, Columbia University.**
- 2014 **B.A, Environmental Science and Creative Arts, Middlebury College.**
minors: Computer Science, Chinese

Research Experience

- Red Cross Red Crescent Climate Centre
- 2020 **Science Consultant.**
Prepared an impact-based forecasting methodology for use by National Hydro-Meteorological Services with technical guidance on early action for disasters.
- UNICEF
- 2020 **Data Analyst.**
Developed a near-global monthly calendar of country-level seasonal events and hazards for all countries where UNICEF has an operational presence (approximately 150 countries).
- International Research Institute for Climate & Society (IRI)
- 2019 **Research Associate.**
Systematic review of flash flood and related hazard vulnerability. Developed a database of flash flood events and risk response. The project is aligned with NASA and the Group on Earth Observations (GEO) 2017-2019 work program for the Initiative for Global Flood Risk Monitoring.
Advisors: **Andrew Kruczkiewicz**, IRI, Red Cross, and **Helen Greatrex**, The Pennsylvania State University
- NASA Disasters Program
- 2018 **Research Intern.**
Analysis of global flash flood risk and response.
Advisors: **Shanna McClain**, NASA Headquarters and **Andrew Kruczkiewicz**, IRI, Red Cross

Industry Experience

- PBS Digital Studios
- 2017-Present **Writer & Co-Host, Hot Mess.**
Researching and communicating climate change for an online audience. Primarily covering stories about how climate change is affecting us and how we are adapting.
- Vox Media
- 2015-2017 **Lead Science Director, The Verge.**
Creative and editorial director for science video content. Research, write, direct, and host videos for multiple platforms. Launched “Verge Science” on Facebook and “Space Craft” on YouTube. Post Production supervisor for the first 360 video interview with First Lady Michelle Obama.

CBS News

2014-2015 **Associate Producer.**

Producer, writer, and editor of original video news packages and interviews for CBSNews.com and CBSN. Coordinator between network shows including Evening News with Scott Pelley, 60 Minutes, CBS Sunday Morning, and Face the Nation and the digital products.

Publications

In Conference Proceedings

- 2020 Miriam Nielsen, Helen Greatrex, and Andrew Kruczkiewicz. A systematic review of flash flood risk, vulnerability and impact. In *100th American Meteorological Society Annual Meeting*. AMS, 2020.
- 2020 Andrew Kruczkiewicz, Miriam Nielsen, Helen Greatrex, Kara Siahann, Shanna N McClain, and Juan Bazo. Early warning early action for flash flood disasters. In *100th American Meteorological Society Annual Meeting*. AMS, 2020.
- 2018 Andrew Kruczkiewicz, Helen Greatrex, Melody Braun, Zac Flamig, Miriam Nielsen, Brian Llamanzares, Dustin Caniglia, Hassan Ahmadul, Calum Baugh, and Erin Coughlan. Forecast-based financing for flash floods: Challenges and opportunities. *AGUFM*, volume 2018, pages PA22A-17, 2018.

Invited Presentations

- Nov. 2019 Nielsen, M., Kruczkiewicz, A., Greatrex, *Early Warning, Early Action for Flash Floods*, Tropical Meteorology, Hydrology, and Disasters Mitigation Forum, Hainan, China.
- May 2019 Nielsen, M., Kruczkiewicz, A., *Experiencing Discrepancies in "Reputable Data" in the Disaster Management Cycle*, United Nations Group of Experts on Geographical Names: First Session, NY, NY.
- Aug. 2018 Nielsen, M., Llamanzares, B., *Global Flash Flood Risk*, NASA Goddard Space Flight Center, Greenbelt, MD .
- Jul. 2018 Nielsen, M., Llamanzares, B., *Investigating Flash Flood Risk*, The World Bank and Mercy Corps, Washington, DC.
- Jul. 2018 Nielsen, M., *Climate Change but Make it Fashion*, PBS Nerd Night, Vidcon, Anaheim, Ca.
- Mar. 2018 Nielsen, M., Ashe, J., Harrison, M., *Taking Your Educational Videos to the Next Level*, SXSWedu, Austin, TX.
- Jan., May 2014 Nielsen, M., *Environmental Sustainability through a Creative Lens*, Rohatyn Center for Global Affairs Symposium, Middlebury, VT.

Fellowships & Awards

- 2020 **Dean's Fellow**, Columbia University
- 2012 **Mellon Foundation Research Grant**, Middlebury College

Relevant Coursework

Graduate.

- Quantitative Models
- Carbon Cycle
- Geophysical Fluid Dynamics
- Environmental Data Analysis
- Atmospheric Science
- Climate Dynamics & Variability
- Regional Climate Dynamics
- Biological Oceanography

Undergraduate.

- GIS & Remote Sensing
- Data Structures

- Ecology and Evolution
- Oceanography
- Biological Statistics
- Differential equations
- Computer Architecture
- Mathematical Computing
- Computer Vision
- Information Visualization

Selected News Media

- Jun. 2018 *Hot Mess PBS*, "Why don't we hear about the Ozone Hole anymore?" (**Writer, Host**). [Video]
- Mar. 2018 *State of the Planet*, "Miriam Nielsen Wants to Share Science with the Masses" (**Interview**). [Article]
- May 2017 *Earthjustice*, "Young Director Raises Funds for Earthjustice through Project for Awesome" (**Interview**). [Article]

Technical Skills

- Programming Languages Python, MATLAB, R, HTML 5, CSS, \LaTeX
- Software Tools arcGIS, qGIS, Adobe Creative Suite, Git, IRI Data Library, Google Earth Engine

Teaching & Outreach

Middlebury College

2013 **Mathematical Foundations of Computing**, Teaching Assistant.

2012–2014 **Introduction to Computing**, Teaching Assistant.

Additional Activities

2019 **Climate and Design**, *Guest Critic for Final Thesis Presentations*, New York University.

Passions

ultimate frisbee ▪ cycling ▪ photography ▪ hiking ▪ blueberries ▪ music making.

References Available upon Request