MIRIAMNIELSEN

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Research Interests

climate variability • hydroclimate • modelling • climate-ecosystem interactions • attribution science • risk assessment • science communication

Education

M.A., **Columbia University** 2018
Climate & Society, Department of Earth and Environmental Sciences

B.A., **Middlebury College** 2014
Environmental Science and Creative Arts, *High Honors*
Minors: Computer Science, Chinese

Research Experience

2018 – 2019 **International Research Institute for Climate & Society (IRI)**, Research Associate
Systematic review of flash flood and related hazard vulnerability. Developing 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 &
Dr. Helen Greatrex, The Pennsylvania State University.

Summer 2018 **NASA Disasters Program**, Research Intern
Analysis of global flash flood risk and response.
Advisors: Dr. Shanna McClain, NASA &
Andrew Kruczkiewicz, IRI, Red Cross.

Industry Experience

2017 – Present **PBS Digital Studios**, Writer & Co-host of 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.

2015 – 2017 **The Verge**, Lead Science Director
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.

2014 – 2015 **CBS News**, 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.

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Publications

Submitted/in Preparation

3. Berrang-Ford, L., Haddaway, N. R., Callaghan, M., Fischer, P., Lesnikowski, A., Mach, K., ... Lesnikowski, A. Global Adaptation Mapping Initiative. (*In preparation, planned submission April-May 2020*)
2. **Nielsen, M.**, Greatrex, H., Kruczkiewicz, A. A Systematic Review of Flash Flood Risk. (*In preparation, planned submission February 2020*).
1. Kruczkiewicz, A., Braun, M., Greatrex, H., **Nielsen, M.**, Hoffman-Hernandez, L., Siahaan, K., Padilla, L., Llamanzares, B., Flamig, Z., McClain, S. Moving from Availability to Use of Flood Risk and Flood Monitoring Data to Inform Decision Making for Preparedness and Response. AGU Books, (*Accepted 2019*).

Invited Presentations & Conference Activity

8. **Nielsen, M.**, Greatrex, H., Kruczkiewicz, A. A Systematic Review of Flash Flood Risk, Vulnerability, and Impact. *American Meteorological Society Annual Meeting*, Boston, MA (*Upcoming January 2020*).
7. **Nielsen, M.**, Kruczkiewicz, A., Greatrex, H. Early Warning, Early Action for Flash Floods. *Tropical Meteorology, Hydrology, and Disasters Mitigation Forum*, Hainan, China (November 2019).
6. **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 (May 2019).
5. **Nielsen, M.**, Llamanzares, B. Global Flash Flood Risk. *NASA Goddard Space Flight Center*, Greenbelt, MD (August 2018).
4. **Nielsen, M.**, Llamanzares, B. Investigating Flash Flood Risk. *The World Bank* and *Mercy Corps*, Washington, DC (July 2018).
3. **Nielsen, M.**, Climate Change but Make it Fashion. *PBS Nerd Night, VidCon*, Anaheim, CA (July 2018).
2. **Nielsen, M.**, Ashe, J., Harrison, M. Taking Your Educational Videos to the Next Level. *SXSWedu*, Austin, TX (March 2018). [Link]
1. **Nielsen, M.**, Environmental Sustainability through a Creative Lens. *Rohatyn Center for Global Affairs Symposium*, Middlebury, VT (January, May 2014).

Teaching & Outreach

Middlebury College

2013	Teaching Assistant, Mathematical Foundations of Computing
2012 – 2014	Teaching Assistant, Introduction to Computing

Additional Activities

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

Technical Skills

Programming:	Python, `MATLAB`, R, HTML, CSS, LaTeX
Software/Tools:	arcGIS, qGIS, Adobe Creative Suite, Git, IRI Data Library, Google Earth Engine

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Relevant Coursework

Graduate

Quantitative Models	Climate Dynamics & Variability
Carbon Cycle	Regional Climate Dynamics
Biological Oceanography	Environmental Data Analysis

Undergraduate

GIS and Remote Sensing	Data Structures
Ecology and Evolution	Computer Architecture
Oceanography	Mathematical Computing
Biological Statistics	Computer Vision
Differential equations	Information Visualization

Selected News & Media

June 2018	*Hot Mess PBS*, "Why Don't We Hear About the Ozone Hole Anymore?" (**Writer, Host**). [Video]
March 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]

Mentorships & Awards

2019	Union of Concerned Scientists Advocacy Mentorship
2015 & 2016	Vidcon Creator Mentorship
2012	Mellon Foundation Research Grant

Passions

ultimate frisbee • cycling • photography • hiking • blueberries • music making

References Available upon Request