# MIRIAMNIELSEN

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## Research Interests

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

## Education

**Columbia University**, M.A. Climate & Society — 2018

**Middlebury College**, B.A. Environmental Science and Creative Arts — 2014
Thesis: How online activism promotes environmental good (multimedia).
Minors: Computer Science, Chinese.

## Research Experience

Summer 2019 — **International Research Institute for Climate & Society (IRI)**, Associate
Systematic review of 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.
Advisor: Andrew Kruczkiewicz, IRI.
Designing and communicating SatWIN-ALERT project tools.
Advisor: Dr. Helen Greatrex, IRI.

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

## 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.

## Publications

***Submitted/in Preparation***

1. Kruczkiewicz, Andrew; Braun, Mélody; Greatrex, Helen; **Nielsen, Miriam**; Hoffman-Hernandez, Laura; Llamanzares, Brian; Flamig, Zachary; McClain, Shanna: Moving from Availability to Use of Flood Risk and Flood Monitoring Data to Inform Decision Making for Preparedness and Response. AGU Books, (*in Review 2018.*)

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## Invited Presentations

7. **Nielsen, Miriam**; Greatrex, Helen; Kruczkiewicz, Andrew, A systematic review of flash flood risk, vulnerability and impact. *American Meteorological Society Annual Meeting*, Boston, MA (*Upcoming January 2020*).
6. Kruczkiewicz, Andrew; **Nielsen, Miriam**, 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, Miriam**; Llamanzares, Brian, Global Flash Flood Risk. *NASA Goddard Space Flight Center*, Greenbelt, MD (August 2018).
4. **Nielsen, Miriam**; Llamanzares, Brian, Investigating Flash Flood Risk. *The World Bank*, Washington, DC (July 2018).
3. **Nielsen, Miriam**, Climate Change but make it Fashion. *PBS Nerd Night, VidCon*, Anaheim, CA (July 2018).
2. **Nielsen, Miriam**; Ashe, Jabril; Harrison, Michael, Taking Your Educational Videos to the Next Level. *SXSWedu*, Austin, TX (March 2018). [Link]
1. **Nielsen, Miriam**, Environmental Sustainability through a Creative Lens. *Rohatyn Center for Global Affairs Symposium*, Middlebury, VT (January, May 2014).

## Teaching & Outreach

***Middlebury College***

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

***Additional Activities***

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| 2019 | Guest Critic, NYU Climate and Design |

## Mentorships & Awards

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

## Technical Skills

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

## Relevant Coursework

***Graduate***

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

***Undergraduate***

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

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## Selected News & Media

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|---|---|
| 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] |

## Passions

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

*References Available upon Request*