ADRIA K. SCHWARBER

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Education

University of Maryland | College Park, Maryland — 2013 - Present
M.S. Atmospheric and Oceanic Science, May 2016
Ph.D. Atmospheric and Oceanic Science, Expected October 2018

University of Louisville | Louisville, Kentucky
B.A. Chemistry, Political Science *(cum laude)* — 2008 - 2013
Study Abroad: KIIS Program on Benjamin Gilman Scholarship (Summer 2010)
Study Aboard: Ritsumeikan Asia Pacific University on Boren Scholarship (2010-2011)

Research Experience

University of Maryland | College Park, MD | August 2013 - Present
***Graduate Research Assistant* at the Joint Global Change Research Institute |Dissertation Title: *Short-Term Climate Response in Models and Implications for Understanding Short-Lived Climate Forcers* |Advisors: Dr. Steven J. Smith and Dr. Corinne Hartin**

Project 1: Changes in Climate Sensitivity over Time *(in-prep publication)*
- Elucidate the role short-lived climate forcers, like methane and black carbon, have in modifying climate in the near-term by examining the temporal and spatial evolution of the climate response in complex models and *in-situ* observations
- Draw conclusions about regions primarily impacted by short-lived climate forcers, like North America and Arctic, which have significant interest to decision-makers

Project 2: Characterization of Unforced Variability in CMIP5 Models *(in-prep publication)*
- Statistically analyzed complex model data to evaluate how realistic complex models are compared to paleoclimate reconstructions and *in-situ* observations using R and CDO programming languages
- Robustly assessed complex model variability at time periods and regional levels important to human systems

Project 3: Evaluating Climate Emulation: Unit Testing of Simple Climate Models *(publication)*
- Provide a comprehensive assessment of model performance by evaluating the fundamental responses of several simple climate models in R, C++, and python programming languages
- Identified biases in some model responses, which have implication for decision science, and recommend a standard set of validation test for any simple model

Project 4: A simple object-oriented and open source model for scientific and policy analyses of the global climate system-Hector v1.0 *(publication)*
- Supported an interdisciplinary team of scientists and collaborated with end users to identify needed components within Hector, an open-source simple climate model (C++)

***Virtual Student Foreign Service Intern*, USAID Office of Global Climate Change | September 2015 - June 2016**
- Supported the USAID Office of Global Climate Change by cataloging resources and integration competencies by sector for 10 hour per week

University of Louisville | Louisville, KY | 2008 - 2013
***Quality Assurance Intern*, Nuplex Resins Inc. | May 2013 - August 2013**
- Independent working environment focusing on polymer paint development and testing for 40 hours per week
- Orally presented polymer testing results to colleagues and supervisors, including a literature review on polymer science

***Undergraduate Researcher*| Advisor: Dr. Mark Noble | Thesis: "Investigation of Protonation of $[Mo_2(NTo)_2(S_2P(OEt)_2)_2(SO)(SBz)(O_2CMe)]_2$" | January 2012 - June 2013**
- Preparation (inorganic wet lab techniques) and characterization (NMR, UV-Vis spectroscopy) of molybdenum-sulfur complexes for application in air quality management

Communication and Teaching

***Academic Enhancements* | University of Maryland | 2017 – Present**

- UMD Communicating Science Graduate Workshop Series Certificate Student, 6-week workshop culminating in media products
- Science in the Classroom Volunteer (AAAS) annotating primary scientific literature for use in K-12 classrooms
- Selected Storyteller at the Story Collider DC: The (Un)Beaten Path, a storytelling non-profit that seeks to transform the way we think about science
- Selected attendee at several climate science Congressional Visit Days *(selected by AMS, AGU, UCAR)*, a day to provide Members of Congress scientific information on climate science
- Selected attendee at the AAAS Catalyzing Advocacy in Science and Engineering Workshop *(funded by AAAS)*, an entry-level program organized to educate graduate students about the role of science in policy-making and the federal policy-making process
    - Independently sought opportunities to improve science communication skills and demonstrated eagerness to learn
    - Translated and synthesized scientific information for a variety of audiences in an engaging way

***STEM Communication Volunteerism* | University of Maryland | 2015 - Present**
- Selected presenter at the Earth Optimism Teen Event (Smithsonian National Museum of Natural History)
- Science Fair Judge (Prince George's Area Science Fair Judge, Cherokee Lane Elementary Science Fair, etc.)
- Maryland Day (Tornado-in-a-Bottle Volunteer) and USA Science and Engineering Festival (Urban Heat Island Volunteer)
    - Engaged young people in science learning through hands-on demonstrations and extracurricular experiences

***Sustainability Work* | University of Maryland | 2016 - 2017**
- University Sustainability Council, Graduate Student Representative | Appointed
- Supported UMD iSchool faculty in community-based green initiatives and design of transdisciplinary projects
- AOSC Green Office Representative for the Office of Sustainability | Achieved Bronze Level Certification
    - Supported and organized sustainability activities at various levels on campus, including the Climate Action Plan 2.0.

Model United Nations Activities
- AAAS Science Diplomacy pre-conference workshop| Washington, D.C | 2018
- Inter-University Climate Change Negotiation Simulation | Washington, D.C | 2015
- Japan Model United Nations Kyushu Branch | Kyushu, Japan | 2010 - 2011
- All-Japan Model United Nations | Tokyo, Japan | December 2010
    - Negotiated with diverse teams in simulations of real-world negotiations on issues of biodiversity (The International Year of Biodiversity) and climate change (Paris Climate Negotiations), among others

***Graduate Teaching Assistant*, Graduate Level Atmospheric Dynamics | University of Maryland | September 2015 - December 2015**
- Independently prepared weekly class resources, such as study guides, and assisted with examination preparation for 20 graduate students

***Master Tutor*, Math Resource Center | University of Louisville | August 2009 - June 2013**
- Tutor mathematics to students via drop-in assistance and obtained College Reading and Learning Association Certification

***Organic Laboratory Teaching Assistant* | University of Louisville | August 2011 - June 2013**
- Prepare learning materials for student and explain organic chemistry mechanisms, lab techniques, and instrumentation

Leadership and Advocacy

***Graduate Student Government*, Vice President for Legislative Affairs, Interim President, Vice President for Academic Affairs, Representative | July 2014 - July 2018**
- Elected to an Executive-level position to represent over 10,000 graduate students at the University of Maryland
- Serve on University-level committees and investigate University, Graduate School, and GSG policies pertaining to the academic and professional development of graduate students with University Administrators
- Coordinate monthly Assembly meetings by identifying key speakers and distributing materials to > 30 elected members
- Coordinated speakers and students for Science Advocacy Day, a University-wide graduate student opportunity to call state and federal representatives in support of science funding and science-based decision making

***Graduate Research Appreciation Day*, Chair | November 2016 - May 2018**
- Led a team to successfully execute Graduate Research Appreciation Day, the largest Graduate-student-only, on-campus conference to elevate graduate research at the University of Maryland *(Budget of approx. $28,000 with 200 attendees)*
- Managed event funding sources and coordinated stakeholders, including developing infrastructure supporting future events

Honors and Awards

AOSC-sponsored American Geophysical Union Annual Meeting Travel Grant | 2018
AOSC Ann Wylie Green Fund Scholarship *($1,088)* | 2018
UMD Ann G. Wylie Dissertation Fellowship *($15,000)* | 2017
Graduate Climate Conference Travel Grant | 2017
UMD Jacob A. Goldhaber Travel Grant | 2016
AOSC-sponsored American Meteorological Society Annual Meeting Travel Grant | 2015
AOSC Departmental Excellence in Graduate Student Service Award | 2015
Society for Risk Analysis Travel Grant | 2014
Graduate Research Assistantship at the Joint Global Research Institute | 2013
UMD Dean's Fellowship | 2013
Fulbright Research Grant Alternate to Japan | 2013
UofL Honors Scholar | 2013
David L. Boren Scholar to Ritsumeikan Asia Pacific University in Japan *($20,000)* | 2010
Benjamin A. Gilman Scholar to Japan *($3,500)* | 2010
UofL Competitive Academic Grant | 2008 and 2009
UofL Trustee's Scholarship *(covered full tuition*) | 2008

Technical Skills

Programming Languages	**R, Command Line, CDO, Python, familiar with Python**
Operating Systems	**Windows, Linux, Macintosh**
Software	**LaTEX, Microsoft Office, svn Github, Panoply, Adobe Creative Suite**

Publications

1. ***Schwarber A***, SJ Smith, CA Hartin, and RP Link. 2018. "*Changes in Climate Sensitivity over Time.*" *Manuscript in preparation*.

2. ***Schwarber A***, SJ Smith, CA Hartin, and RP Link. 2018. "*Characterization of Variability in Complex Models.*" *Manuscript in preparation*.

3. ***Schwarber A***, SJ Smith, CA Hartin, *BA Vega-Westhoff, R Sriver*. 2018. "*Evaluating Climate Emulation: Unit Testing of Simple Climate Models*." *Submitted.*

4. Hartin CA, PL Patel, ***A Schwarber***, RP Link, and B Bond-Lamberty. 2015. "*A simple object-oriented and open source model for scientific and policy analyses of the global climate system-Hector v1.0*." *Geoscientific Model Development* 8(4):939-955. doi:10.5194/gmd-8-939-2015.

Selected Conferences and Presentations

1. American Geophysical Union Annual Meeting, December, 2018 "*Characterization of Model Variability in CMIP5*" (TBD)
2. American Geophysical Union Annual Meeting, December, 2017 "*Simple Climate Model Evaluation Using Fundamental Impulse Tests*" (Poster)
3. Graduate Climate Conference, November, 2017 "*Simple Climate Model Evaluation Using Fundamental Impulse Tests*" (Poster)
4. American Geophysical Union Virtual Poster Session, May, 2017 "*Investigating Short-Term Climate Reponses in Stylized CMIP5 Experiments*" (Poster)
5. American Association for the Advancement of Science Annual Meeting, February 15-20, 2017 "*Investigating Short-Term Climate Reponses in Stylized CMIP5 Experiments*" (Poster)
6. American Geophysical Union Virtual Poster Session, December, 2016 "*Investigating the Short-Term Reponses of Climate in Stylized CMIP5 Experiments*" (Poster)
7. American Meteorological Society Annual Meeting, January 10-14, 2016 "*Transient Climate Sensitivity of Simple Climate Models*" (Oral presentation)
8. Society for Risk Analysis Annual Meeting, December 7-14, 2014 "*Quantifying Human Health Effects from Climate Change in an Integrated Assessment Model*" (Poster)

Professional Affiliations

American Association for the Advancement of Science | American Geophysical Union | American Meteorological Society | Geological Society of America | Earth Science Women's Network | 500 Women Scientists- DC Pod