Katherine (Katie) Dagon

National Center for Atmospheric Research
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EDUCATION

Harvard University — Cambridge, MA
Ph.D., Earth and Planetary Sciences — 2017
A.M., Earth and Planetary Sciences — 2015
Advisor: Dr. Daniel Schrag

Brown University — Providence, RI
B.S., Mathematics-Physics, graduation with Honors — 2010
Advisor: Dr. Brad Marston

PROFESSIONAL APPOINTMENTS

National Center for Atmospheric Research — Boulder, CO
Project Scientist I, Climate and Global Dynamics — 2019-present
Advanced Study Program (ASP) Postdoctoral Fellow — 2017-2019

Harvard University — Cambridge, MA
Graduate Research Assistant, Department of Earth and Planetary Sciences — 2011-2017

United Technologies — South Windsor, CT
NASA-UTC Internship Program — 2010

Brown University — Providence, RI
Undergraduate Research Assistant, Department of Physics — 2009-2010

State of Connecticut Department of Energy and Environmental Protection — Hartford, CT
Seasonal Resource Assistant — 2007, 2008, & 2010-2011

PEER-REVIEWED PUBLICATIONS

Cheng, W., D.G. MacMartin, **K. Dagon**, B. Kravitz, S. Tilmes, J.H. Richter, M.J. Mills, and I.R. Simpson (2019), Soil Moisture and Other Hydrological Changes in a Stratospheric Aerosol Geoengineering Large Ensemble, *Journal of Geophysical Research: Atmospheres*, 124, https://doi.org/10.1029/2018JD030237.

Kravitz, B., D.G. MacMartin, S. Tilmes, J.H. Richter, M.J. Mills, W. Cheng, **K. Dagon**, A.S. Glanville, J.-F. Lamarque, I.R. Simpson, J.J. Tribbia, and F. Vitt (2019), Comparing Surface and Stratospheric Impacts of Geoengineering with Different SO_2 Injection Strategies. *Journal of Geophysical Research: Atmospheres*, 124, 7900-7918, http://dx.doi.org/10.1029/2019JD030329.

Dagon, K., and D.P. Schrag (2019), Quantifying the Effects of Solar Geoengineering on Vegetation, *Climatic Change*, 153, 235-151, http://dx.doi.org/10.1007/s10584-019-02387-9.

Dagon, K., and D.P. Schrag (2017), Regional Climate Variability under Model Simulations of Solar Geoengineering. *Journal of Geophysical Research: Atmospheres*, 122, 12106-12121, http://dx.doi.org/10.1002/2017JD027110.

Dagon, K., and D.P. Schrag (2016), Exploring the Effects of Solar Radiation Management on Water Cycling in a Coupled Land-Atmosphere Model. *Journal of Climate*, 29, 2635-2650, http://dx.doi.org/10.1175/JCLI-D-15-0472.1.

Tobias, S.M., **K. Dagon**, and J.B. Marston (2011), Astrophysical Fluid Dynamics via Direct Statistical Simulation. *The Astrophysical Journal*, 727, 127, http://dx.doi.org/10.1088/0004-637X/727/2/127.

SELECTED AWARDS & FELLOWSHIPS

Andrew Slater Award, NCAR Land Model Working Group Meeting	2019
NCAR Advanced Study Program Postdoctoral Fellowship	2017
Presidential Management Fellowship Finalist	2017
Certificate of Teaching Excellence, Bok Center for Teaching & Learning	2014, 2016
Duff Family Endowed Graduate Support Fund, Harvard University	2013-2014
Graduate Consortium Fellowship, Harvard University Center for the Environment	2012-2013
Brown University Undergraduate Research and Teaching Award	2009

INVITED TALKS & SEMINARS

Lawrence Berkeley National Laboratory	Berkeley, CA
National Energy Research Scientific Computing Center Seminar	November 2019
Pennsylvania State University	State College, PA
Department of Meteorology and Atmospheric Science Colloquium	February 2019
American University	Washington, DC
Department of Environmental Science Seminar	February 2019
Indiana University	Bloomington, IN
Department of Earth and Atmospheric Sciences Colloquium	January 2019
Pennsylvania State University	State College, PA
Department of Geography Seminar	January 2019
University of Washington	Seattle, WA
Department of Atmospheric Sciences Seminar	July 2018

SELECTED CONFERENCE PRESENTATIONS

Dagon, K., B.M. Sanderson, R. Fisher, and D.M. Lawrence, A Machine Learning Approach to Quantify Land Model Parameter Uncertainty. *American Geophysical Union Fall Meeting*, San Francisco, CA, oral presentation, December 2019.

Dagon, K., R. Fisher, D.M. Lawrence, and B.M. Sanderson, Machine Learning for Parameter Estimation in CLM5. *CESM Land Model Working Group Meeting*, Boulder, CO, oral presentation, February 2019.

Dagon, K., R. Fisher, D.M. Lawrence, and B.M. Sanderson, Reducing Uncertainty in Land Surface Models. *American Geophysical Union Fall Meeting*, Washington, DC, oral presentation, December 2018.

Dagon, K., R. Fisher, D.M. Lawrence, and B.M. Sanderson, Moving Towards a Global Biogeophysical Parameter Optimization for CLM5. *Community Earth System Model Workshop*, Boulder, CO, oral presentation, June 2018.

Dagon, K., and D.P. Schrag, Effects of Solar Geoengineering on Vegetation: Implications for Biodiversity and Conservation. *American Geophysical Union Fall Meeting*, New Orleans, LA, oral presentation, December 2017.

Dagon, K., and D.P. Schrag, Regional Climate Variability under Model Simulations of Solar Geoengineering. *Gordon Research Conference: Climate Engineering*, Newry, ME, poster presentation, July 2017.

Dagon, K., Soil Moisture-Climate Coupling under Model Simulations of Solar Geoengineering. *Community Earth System Model Workshop,* Breckenridge, CO, oral presentation, June 2016.

TEACHING EXPERIENCE

National Center for Atmospheric Research — Boulder, CO
Instructor, Community Terrestrial Systems Model Tutorial — 2019

Harvard University — Cambridge, MA
Teaching Fellow, Department of Earth and Planetary Sciences — 2013-2016

- The Consequences of Energy Systems (graduate level, Fall 2015 and Fall 2016)
- The Climate-Energy Challenge (undergraduate level, Fall 2014, Fall 2015 and Fall 2016)
- The Fluid Earth (undergraduate level, Spring 2013)

Brown University — Providence, RI
Teaching Assistant, Department of Mathematics — 2009
Math Peer Tutor, Brown University Tutoring Program — 2008

ACADEMIC SERVICE AND LEADERSHIP

Co-Chair, Gordon Research Seminar on Climate Engineering *(to be held in 2020)* — 2019 -
Physics of Climate Executive Committee, American Physical Society — 2019 -
Postdoctoral Fellows Networking Committee, National Center for Atmospheric Research — 2017-2019
Physics of Climate Program Committee, American Physical Society — 2017-2018
Plants and Climate Seminar Series Organizer, Harvard University — 2015-2016
Agassiz Visiting Lecturer Committee, Harvard University — 2013-2014
Summer School on Geoengineering Organizing Committee, Harvard University — 2013
Harvard Graduate Consortium on Energy and Environment — 2012-2015
Journal Reviewer: Geoscientific Model Development, Atmospheric Chemistry and Physics, Journal of Hydrometeorology

MENTORING

UCAR Next Generation Fellowship Research Mentor — 2019 -
NCAR SOARS Internship Program Community Mentor — 2018
Harvard College Women's Center WISTEM Mentor — 2016-2017
Intel Science Research Program High School Student Mentor — 2014-2015
Harvard Graduate Women in Science and Engineering Mentoring Program — 2011-2013
Brown University Women's Launch Pad Mentoring Program — 2009-2010

PUBLIC ENGAGEMENT

NCAR Traveling Climate Exhibit Scientific Team, Boulder, CO — 2019
USA Science and Engineering Festival Volunteer, Washington, DC — 2018
Project Bridge Colorado Science Day at the State Capitol, Denver, CO — 2018
Twin Peaks Charter Academy Guest Scientist, Longmont, CO — 2017
NCAR Super Science Saturday Volunteer, Boulder, CO — 2017-2019
Harvard GSAS Science Policy Group Trip, Washington, DC — 2016
There's a Scientist in My Classroom! Guest Lecturer, Danvers, MA — 2014
Science in the News Event Organizer and Lecturer, Boston, MA — 2013-2016

SCIENCE WRITING

Dagon, K., "Engineering the Earth to Fight Climate Change," *Science in the News Blog*, 25 October 2016, http://sitn.hms.harvard.edu/flash/2016/engineering-earth-fight-climate-change.

Dagon, K., "Climate Change 2016: Make America Hot Again," *Science in the News Blog*, 9 August 2016, http://sitn.hms.harvard.edu/flash/2016/climate-change-2016-make-america-hot.

Dagon, K., "Science by the Pint," *The Plainspoken Scientist*, Student Blog Series, 18 July 2016, http://blogs.agu.org/sciencecommunication/2016/07/18/science-by-the-pint.

Dagon, K., "Pausing to Talk About Climate Change," *Science in the News Blog*, Special Edition on Climate Change, 30 June 2014, http://sitn.hms.harvard.edu/flash/2014/pausing-to-talk-about-climate-change.

SELECTED WORKSHOPS AND SHORT COURSES

Earth Science Women's Network Leadership Workshop 2019
National Center for Atmospheric Research and University of Colorado, Boulder, CO

CMIP6 Hackathon 2019
National Center for Atmospheric Research, Boulder, CO

CGD-CISL Python Tutorial and Hackathon 2019
National Center for Atmospheric Research, Boulder, CO

Rising Voices 7 Workshop: Building Relationships and Practices for Intercultural Science 2019
National Center for Atmospheric Research, Boulder, CO

The Community WRF-Hydro Modeling System Training Workshop 2018
National Center for Atmospheric Research, Boulder, CO

UCAR/NCAR Equity and Inclusion (UNEION) 101 Training Series 2018
National Center for Atmospheric Research, Boulder, CO

Earth Educators' Rendezvous Preparing for an Academic Career Workshop 2018
University of Kansas, Lawrence, KS

The Functionally Assembled Terrestrial Ecosystem Simulator (FATES) Tutorial 2018
National Center for Atmospheric Research, Boulder, CO

Low Environmental Impact Solar Radiation Management Experiments Workshop 2016
Institute for Advanced Sustainability Studies, Potsdam, Germany

Active Learning in the Sciences Teaching Seminar 2015
Derek Bok Center for Teaching and Learning, Cambridge, MA

Community Land Model (CLM) Tutorial 2014
National Center for Atmospheric Research, Boulder, CO

ComSciCon-local Communicating Science Workshop 2014
Harvard University, Cambridge, MA

Shaping Policy with Science, Graduate Student Council Short Course 2014
Harvard University, Cambridge, MA

Fourth Interdisciplinary Summer School on Geoengineering 2013
Harvard University, Cambridge, MA

Global Climate Coalition at UNFCCC COP15 2009
University of Copenhagen, Copenhagen, Denmark

PROFESSIONAL AFFILIATIONS

American Geophysical Union, American Physical Society, Earth Science Women's Network

TECHNICAL SKILLS

Languages: Bash, C, Fortran, HTML, LaTeX, Objective C/C++
Modeling Tools: NetCDF, HDF4/5, HPC, Machine Learning, Open MPI, NCAR CESM/CLM
Development Tools: Git/GitHub, Subversion, Jupyter Notebooks
Scientific Visualization & Analysis: Python, NCL/NCO, R, Matlab, Keras, TensorFlow