

DANIEL CUSWORTH

11 Everett Street #NG2, Cambridge, MA 02138
(805) 405 - 6515 ◊ dcusworth@fas.harvard.edu

EDUCATION

Harvard University *September 2013 - present*
Ph.D: Atmospheric Chemistry
S.M: Applied Mathematics with Secondary Field in Computer Science and Engineering

University of California, Los Angeles *March 2012*
B.S: Mathematics and Atmospheric & Oceanic Sciences

EXPERIENCE

Legendary Entertainment Applied Analytics *September 2016 - May 2017*
Graduate Student Internship *Boston, MA*

- Developed dynamic statistical models to predict box office performance from critic reviews.
- Performed social network analyses to understand interactions between Reddit users and films.

School of Engineering and Applied Sciences *July 2013 - Present*
Graduate Student Research Assistant *Cambridge, MA*

- Conducted model simulations to connect air pollution to surface solar radiation. Analyzed the effect of enhanced solar radiation on regional hydrology.
- Quantified the contribution of agricultural fires to air quality in Northern India using physical models. Constrained pollution estimates using data scraped from Indian governmental websites.
- Developed Bayesian inverse methods to determine magnitude of methane emissions leaking from oil and gas production.

The Cadmus Group, Inc. *October 2012 - July 2013*
Research Analyst *Waltham, MA*

- Collected, organized, and analyzed lead and copper drinking water concentrations reported by states to EPA. Contributed to health assessment reports of several drinking water contaminants. Graphically designed official EPA reports and publications.

Jet Propulsion Laboratory *January 2012 - August 2012*
Student Intern - NASA DEVELOP Program *Pasadena, CA*

- Lead a group of three student interns. Predicted how future carbon dioxide emission reductions could be observed from satellites using a lagrangian dispersion model. Presented findings at NASA Headquarters.
- Identified the size and extent of stormwater pollution in the Los Angeles Basin using synthetic aperture radar from the ENVISAT satellite. Presented findings to the Southern California Coastal Water Research Project.

PUBLICATIONS

Cusworth, D.H., Mickley, L.J., Sulprizio, M.P., Liu, T., Marlier, M.E., DeFries, R.S., *Influence of agricultural fires on urban air pollution in Delhi, India.*, in preparation

Liu, T., Marlier, M.E., DeFries, R.S., Westervelt, D.M., Xia, K.R., Fiore, A.M., Mickley, L.J., Cusworth, D.H., Milley, G., *Contributions of agricultural burning to air pollution in three Indian cities: Delhi, Bengaluru, and Pune*, Atmos. Environ., in review

Cusworth, D.H., L.J. Mickley, E.M. Leibensperger, and M.J. Iacono, *Aerosol trends as a potential driver of regional climate in the central United States: Evidence from observations*, Atmos. Chem. Phys. Discuss., doi:10.5194/acp-2017-208,2017

TECHNICAL SKILLS

Programming: R, Python, MATLAB, Unix, L^AT_EX

Design/Video: Photoshop, Illustrator, InDesign, Premiere, After Effects

Languages: Portuguese (professional proficiency), Spanish (limited proficiency)

TEACHING AND RESEARCH FELLOWSHIPS

- Teaching Fellow, Great Papers in Earth Sciences - Harvard University *Spring 2017*
- Teaching Fellow, Environmental Modeling - Harvard University *Fall 2014*
- NSF Graduate Research Fellowship Program - Honorable Mention *2015*
- Alan Howard Foundation Fellowship *2013 - 2014*