

ALICE ALPERT

MIT PhD candidate 2016

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Statement of purpose: Understand the policy process and advance the use of science to inform sound policy in the public interest

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| EDUCATION | Massachusetts Institute of Technology (MIT), Cambridge, MA Exp. 2016 PhD., <i>MIT/Woods Hole Oceanographic Institution (WHOI) Joint Program in Oceanography</i> <ul style="list-style-type: none">• 4.7/5.0 GPA; relevant coursework: Marine Policy, Science Writing, Science Policy Bootcamp, Ocean Law, Applied Statistics• Dissertation: “North Atlantic Sea Surface Temperatures during the Little Ice Age using Multi-Element Coral Paleothermometry”• Developing new method to estimate past temperature from coral skeletons to estimate global temperature sensitivity to climate change and create records of climate phenomena such as El Nino• Presented results at 5 conferences, one paper published, one paper submitted, supervised expedition to Bermuda |
| | Brown University, Providence, RI 2009 B.S., Geological Sciences magna cum laude with department honors, double major in Architectural Studies <ul style="list-style-type: none">• 3.92/4.0 GPA, Senior Honors Thesis: “Quartz as a paleo-wind proxy in the North Atlantic” |
| SELECTED HONORS & AWARDS | National Science Foundation Graduate Research Fellow, \$120,000 NSF 2011-2014 Ocean Ventures Fund recipient, \$15,000, WHOI 2012 Department of Geological Sciences senior award for research and academics, Brown University 2009 Phi Beta Kappa, Alpha Chapter of Rhode Island, Brown University 2009 Sigma Xi, Brown University Chapter 2009 |
| PROFESSIONAL | Long Term Ecological Research (LTER), Palmer Station, Antarctica 2009-2011 <i>Research assistant (2009-2010) and field team leader (2010-2011)</i> <ul style="list-style-type: none">• Supervised 2 research assistants in sample collection and assessment of microbial growth shifts• Presented poster to >12 groups of public visitors to educate about Antarctic research and climate science• Blogged in 27 posts describing impacts of climate change on Antarctic marine ecosystem Department of Geological Sciences, Brown University, Providence, RI 2006-2011 <i>Laboratory technician</i> <ul style="list-style-type: none">• Operated gas chromatograph and infrared spectrometer for organic and inorganic geochemical analyses The Energy and Resources Institute, Karnataka, India 2010 <i>Intern</i> <ul style="list-style-type: none">• Evaluated innovative water filtration system for purifying contaminated river water, met with stakeholders National Park Service Division of Interpretation, Yellowstone National Park, WY 2009 <i>Intern</i> <ul style="list-style-type: none">• Designed and performed 3 talks and guided walks per week about geology and ecology to >50 people• Educated and enriched broad audience using a variety of communication techniques |
| POLICY / COMMUNICATION | Broader Impacts Group, MIT & WHOI, Cambridge and Woods Hole, MA 2011- present <i>Co-founder, Co-President</i> <ul style="list-style-type: none">• Initiated organization to develop students’ oral, written, and graphic communication skills for >100 students• Spearheaded >20 events: 6 skills workshops by media and communication professionals, 4 outreach events to apply new skills, 5 events highlighting science careers outside of the lab, mediated panel discussion of faculty and industry members• Posters at Communicating Science Workshop (2013), Ocean Sciences Meeting (2014), Ocean Literacy Colloquium (2014) MIT Water, MIT, Cambridge MA 2015 <i>Water Summit panel lead</i> <ul style="list-style-type: none">• “Thriving Amid Change” summit for 300 attendees, managing budget \$30,000• Lead and moderated panel on facilitating partnerships for water resource management and adaptation Climate Feedback, Cambridge, MA 2014- 2015 <i>Contributor</i> <ul style="list-style-type: none">• Wrote comments for online publication on 6 media articles about climate change, describing factual errors and flawed arguments, providing additional information and scholarly references• Applying technical knowledge of climate science to reach broad audience and reduce misinformation William Mitchell College of Law Expert Witness Training Academy, Minneapolis, MN 2015 <i>Invited fellow</i> <ul style="list-style-type: none">• Honed communication skills in training for climate scientists to give expert witness testimony in trials and hearings |

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| | American Meteorological Society , Washington, DC | 2015 |
| | <i>NSF Student Fellow at Summer Policy Colloquium</i> | |
| | <ul style="list-style-type: none"> Funded to attend immersive training in science policy and introduction to future career paths | |
| | UN Environmental Programme , Geneva, Switzerland | 2013 |
| | <i>MIT student delegate</i> | |
| | <ul style="list-style-type: none"> Analyzed negotiation of UN treaty with 147 nations on use of mercury, blogged in 5 posts about treaty process and results Presented poster “Mercury Science Bulletin – Recent Findings from Scientific Research” at negotiation | |
| | Intergovernmental Panel on Climate Change AR5 , Cambridge, MA | 2012-2013 |
| | <i>Contributor</i> | |
| | <ul style="list-style-type: none"> Participated and contributed to MIT seminar on IPCC AR5 draft text Submitted 3 comments to IPCC on figures in Summary for Policy Makers | |
| | Congressional Visit Day, MIT Science Policy Initiative , Washington, DC | 2012 |
| | <i>MIT student delegate</i> | |
| | <ul style="list-style-type: none"> Trained in effective science communication to policymakers by Union of Concerned Scientists and AAAS Researched and drafted policy briefings, lobbied 7 members of US Congress to support R&D funding | |
| | Grassroots Campaigns , Berkeley, CA | 2004 |
| | <i>Canvasser</i> | |
| | <ul style="list-style-type: none"> Canvassed for the Democratic National Committee, interacting with residents from a variety of backgrounds | |
| SERVICE | Safety Committee, Department Marine Geology and Geophysics, WHOI | 2015-present |
| | <i>Student representative</i> | |
| | Department of Earth, Atmospheric, and Planetary Sciences, MIT | 2013-present |
| | <i>Peer mentor</i> | |
| PEER-REVIEWED PUBLICATIONS | “Comparison of equatorial Pacific sea surface variability and trends with Sr/Ca records from multiple corals,” Alpert, A., Cohen, A., Oppo, D., DeCarlo T., Gove, J., and Young, C., <i>Paleoceanography</i> , 2016. | |
| | “Coral Sr-U Thermometry,” DeCarlo T., Gaetani G., Cohen, A., Foster, G., Alpert, A., and Stewart, J., <i>Paleoceanography</i> , in review | |
| NON-ACADEMIC PUBLICATIONS | “Discovery at the Summer Policy Colloquium” <i>American Meteorological Society blog</i> , awaiting online publication | |
| | “Coral-current connections,” <i>Oceanus</i> magazine, October 20, 2014 | |
| | “Climate Codes,” <i>Natural History</i> magazine, July 1, 2013 | |
| | “Corralling coral in the Pacific,” <i>MIT Tech</i> newspaper, November 20, 2012 | |
| | “Mercury Science and Policy at MIT” http://mercurypolicy.scripts.mit.edu/blog/ | |
| | “Adventures with My Aunt Arctica” http://adventureswithmyauntarctica.blogspot.com/ | |
| CONFERENCES | American Geophysical Union Fall Meeting , San Francisco, CA | 2015 |
| | <ul style="list-style-type: none"> Oral presentation: “Comparison of Equatorial Pacific Sea Surface Variability and Trends with Sr/Ca Records from Multiple Corals” | |
| | Ocean Sciences Meeting , Honolulu, HI | 2014 |
| | <ul style="list-style-type: none"> Oral presentation: “Central Equatorial Pacific records of Pacific Equatorial Undercurrent variability: Testing the limits of coral proxies” Poster: “Broader Impacts Group: Student-led efforts to bring science communication into the graduate education process” | |
| | Graduate Climate Conference , Woods Hole, MA | 2013 |
| | <ul style="list-style-type: none"> Oral presentation: “Central Equatorial Pacific coral records of Equatorial Undercurrent Variability” | |
| | International Conference on Paleoceanography , Sitges, Spain | 2013 |
| | <ul style="list-style-type: none"> Poster: “Coral records of Equatorial Pacific variability” | |
| | American Geophysical Union Fall Meeting , San Francisco, CA | 2008 |
| | <ul style="list-style-type: none"> Poster: “Garnet Polycrystals in a Barrovian Sequence in Dutchess County, New York” | |
| | American Geophysical Union Fall Meeting , San Francisco, CA | 2007 |
| | <ul style="list-style-type: none"> Poster: “Global and Regional Controls on Alkenone Sea Surface Temperature and Productivity Records for the Pleistocene from the Arabian Sea.” | |
| SKILLS | Lab: Inductively Coupled Plasma Mass Spectrometer analysis of solids and solutions, Scanning Electron Microscopy, extraction and analysis of organic compounds using gas chromatography, flow cytometry | |
| | Field: SCUBA scientific diving certification, coral drilling and collection, small boat operation, water collection for carbon, nutrients | |
| | Technology: MATLAB, R, Microsoft Office, Adobe Illustrator | |
| | Teaching: 3 semesters as a teaching assistant for introductory level geology courses for a broad audience | |