

# ELISE M. MYERS

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## EDUCATION

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<b>Columbia University – Lamont Doherty Earth Observatory</b>	<b>New York, NY</b>
<b>Ph.D.</b> student in Earth and Environmental Sciences (Oceanography & Microbial Ecology)	June 2020
<i>Designated Dean's Fellow</i>	2016 – 2020
<i>Supported by Provost's Diversity Fellowship</i>	2016 – 2017
<b>Princeton University</b>	<b>Princeton, NJ</b>
<b>M.A.</b> student in Ecology and Evolutionary Biology (Mathematical Biology & Geochemistry)	June 2016
<i>Supported by Centennial Fellowship in the Natural Sciences and Engineering</i>	2014 – 2016
<i>Supported by NSF Training Grant in the mathematics of water and water-related issues</i>	2015 – 2016
<b>Massachusetts Institute of Technology</b>	<b>Cambridge, MA</b>
<b>S.M.</b> in Earth, Atmospheric and Planetary Sciences (Biogeochemistry)	Sept. 2014
<i>Thesis: "Complex Lipids in Microbial Mats and Stromatolites of Hamelin Pool, Shark Bay, AUS"</i>	
<b>S.B.</b> in Earth, Atmospheric and Planetary Sciences (Geochemistry/Geology)   GPA 4.3/5.0	June 2014
<i>Supported by Ronald E. McNair (1977) Scholarship Fund</i>	2013 – 2014
<i>Supported by SanDisk Scholarship Foundation</i>	2013 – 2013
<i>Semester of Sedimentary Geology at Universidad Complutense de Madrid   GPA 7.9/10 ("Remarkable")</i>	Jan. '12 – June '12

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## RESEARCH/WORK EXPERIENCE

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<b>Sediments and Microbial Persistence in the Hudson River   Juhl Laboratory</b>	<b>New York, NY</b>
<ul style="list-style-type: none"><li>Use in situ measurements, experimental manipulations, mathematical dynamics of microbes, and fluid dynamic models to determine how microbes aggregate and persist on particles</li><li>Create a calibration for satellite data of sediment/particle load in water bodies</li></ul>	Sept. '16 – present
<b>Dynamic Models of Microbial Interactions   Independent/Levin Laboratory</b>	<b>Princeton, NJ</b>
<ul style="list-style-type: none"><li>Create mathematical models of mutualistic/commensal microbial interactions</li><li>Increase model scale and incorporate physical stability to predict community formation</li></ul>	Sept. '15 – present
<b>Terrestrial Microbial Community Variation   Pringle &amp; Tarnita Laboratories</b>	<b>Princeton, NJ</b>
<ul style="list-style-type: none"><li>Collected and analyzed soil samples from MPala Research Station for carbon and nitrogen</li><li>Surveyed and analyzed vegetation in various herbivore exclosure plots via transects</li></ul>	Nov. '14 – June '15
<b>Long Term Fate of the Land Carbon Sink   Hedin &amp; Medgivy Laboratories</b>	<b>Princeton, NJ</b>
<ul style="list-style-type: none"><li>Modeled the long-term fate of the land carbon sink based on the dynamics of individuals</li><li>Incorporated a disturbance regime to predict the implications of human influence</li></ul>	Sept. '14 – June '15
<b>Environmental Stewardship   Chevron Environmental Management Company</b>	<b>San Ramon, CA</b>
<ul style="list-style-type: none"><li>Rewrote Standard Operating Procedures for internal Greenhouse Gas Emissions reporting</li><li>Served on a team to develop a major capital project on conservation and mitigation banking</li></ul>	June '14 – Aug. '14
<b>Intact Polar Lipids in Microbial Mats Thesis   MIT Summons Laboratory</b>	<b>Cambridge, MA</b>
<ul style="list-style-type: none"><li>Extracted and analyzed a variety of lipid biomarkers via gas and liquid chromatography mass spectrometry</li></ul>	Sept. '13 – Aug. '14
<b>Hydrogeology Consultant   Chevron Environmental Technology Company</b>	<b>San Ramon, CA</b>
<ul style="list-style-type: none"><li>Analyzed the efficacy of in-situ chemical oxidation as a remediation technology in different geologic environments (ex. varying lithology and subsurface gradients)</li><li>Mapped connections between internal and external remediation advocacy organizations</li></ul>	June '13 – Aug. '13
<b>Biogeochemical Niche Research   MIT Parsons/Alm Laboratory</b>	<b>Cambridge, MA</b>
<ul style="list-style-type: none"><li>Collected and analyzed stratified lake bacterial community samples</li><li>Ran DNA extraction, worked on PCR library construction, and ran iron assays</li></ul>	Sept. '12 – June '13
<b>Natural Disaster Logistics &amp; Response   MIT Humanitarian Response Lab</b>	<b>Santiago, Chile &amp; Cambridge, MA</b>
<ul style="list-style-type: none"><li>Compiled Twitter/Facebook data and interviews with humanitarian organizations directors to see changes in disaster relief logistics following the 2007 earthquake and tsunami in Chile</li></ul>	Jan. '13 – June '13

<b>Environmental Toxicology &amp; Wastewater   Caribbean Environmental Health Institute</b>	<b>Castries, St Lucia</b>
<ul style="list-style-type: none"> <li>• Conducted audits and waterborne fecal coliform tests for various business types</li> <li>• Created standard environmental guidelines in 15 Caribbean nation states</li> </ul>	June '12 – Aug. '12
<b>Geophysics for Locating Aquifers   MIT Earth Resources Laboratory</b>	<b>Castries, St Lucia</b>
<ul style="list-style-type: none"> <li>• Used sounding, soil resistivity, self-polarization of soils and local geologic features to locate the best places for aquifer drilling</li> </ul>	Jan. '12
<b>Tropical Biodiversity and Resource Conservation   Jatun Sacha Research Station</b>	<b>San Cristobal Island, Ecuador</b>
<ul style="list-style-type: none"> <li>• Aided germination, managed and distributed endemic and native plants from the nursery</li> <li>• Aided in systematic eradication of invasive species</li> </ul>	June '11 – Aug '11

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## TEACHING EXPERIENCE

<b>Teaching Assistant: Animal Behavior   Princeton Dept. Ecology &amp; Evolutionary Biology</b>	<b>Princeton, NJ</b>
<ul style="list-style-type: none"> <li>• Taught three, one-hour precepts per week; graded assignments; and hosted reviews</li> </ul>	Jan. '15 – May '15
<b>Teaching Assistant: Principles of Chemistry   MIT Experimental Study Group</b>	<b>Cambridge, MA</b>
<ul style="list-style-type: none"> <li>• Taught two, one-hour recitations per week; hosted reviews, office hours, and problem solving sessions; graded problem sets and exams; and proctored exams</li> </ul>	Sept. '11 – June '13
<b>Seminar XL Head Chemistry Facilitator   MIT Office of Minority Education</b>	<b>Cambridge, MA</b>
<ul style="list-style-type: none"> <li>• Designed a semester-long curriculum for a team of five facilitators of Freshman Chemistry</li> <li>• Taught two, 90-minute recitation/problem-solving sessions per week to six freshmen</li> </ul>	Sept. '11 – Dec. '12

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## LEADERSHIP

<b>Princeton Latino Graduate Student Association   Campus Community Outreach Chair '15-'16</b>
<ul style="list-style-type: none"> <li>• coordinated events with other underrepresented minority campus groups to foster a unified community</li> <li>• represented LGSA at student government and administrative meetings</li> </ul>
<b>Theoretical Ecology Lab Tea   Coordinator Fall '15</b>
<ul style="list-style-type: none"> <li>• coordinated presenters, publicized, and managed the website for weekly theoretical ecology talks</li> </ul>
<b>Princeton Ecology &amp; Evo. Biology Dept.   Professional Development Workshop Coordinator '14-'16</b>
<ul style="list-style-type: none"> <li>• coordinated two series of workshops: 1) connecting students to campus-based career service resources and working on how to establish a personal brand; 2) sessions with alumni in various academic and non-academic jobs</li> </ul>
<b>MIT Presidential Advisory Cabinet   '13-'14</b>
<ul style="list-style-type: none"> <li>• Served as one of four undergraduate advisers to MIT's president, Rafael Reif</li> </ul>
<b>MIT MedLinks   President '13-'14   Treasurer &amp; Training Coordinator '11-'13</b>
<ul style="list-style-type: none"> <li>• Coordinated all aspects of a program of 140 student health and wellness liaisons for MIT Medical</li> <li>• <b>Met with MIT administrators; served on various panels</b> to represent the needs of MIT students; coordinated multi-round selection of candidates; <b>conducted training</b> for 65 new members each year</li> </ul>
<b>MIT Office of Engineering Outreach Program   Middle School Mentor '11-'13</b>

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## SKILLS

### Technical Software

MATLAB, Python, Mathematica, NIST 11 Mass Spectral Library, Microsoft Office, Avis for Broadcasting News Systems

### Laboratory Skills

Liquid & Gas Chromatography Mass Spectrometry, High-Performance Liquid Chromatography

Column Packing, sonicator, derivatization, rotary evaporator

DNA Extraction, PCR library creation, iron assay, autoclave

Gel Electrophoresis, Flexirubin Testing, centrifuge, bacterial plating, live cell staining, microscopy

### Languages

Fluent: English, Spanish | Conversational: Portuguese