

Michael J. Rush
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Education:

University of Colorado, Boulder (CU)	Ph.D. Civil Engineering M.S. Civil Engineering <i>Hydrologic Sciences Certificate</i>	In progress 2018
University of Minnesota, Twin Cities (UMN)	B.S. Physics <i>Spanish Studies Minor</i>	2014

Appointments:

Institute of Arctic & Alpine Research: Graduate Research Assistant
May 2016-March 2018

- Developed numerical models to understand subsurface flow and transport processes within montane catchments of the Boulder Creek watershed
- Facilitated community outreach events by leading workshops

CU Department of Civil Engineering: Teaching Assistant (CVEN 2121, CVEN 3111)
August 2015-May 2016

- Tutored students, conducted review lectures, designed homework assignments, managed graders, and wrote exams for introductory engineering courses

Vascular Solutions, Inc.: Medical Device Associate
June 2014-July 2015

- Product Management: conducted clinical literature reviews, performed risk analysis, maintained product labeling and promotional materials
- Sales Operations: generated weekly sales reports, analyzed sales trends, managed pricing contracts, supported field sales staff

UMN Department of Forestry Resources: Field Technician
May 2013- September 2013; May 2011-September 2011

- Surveyed wetlands throughout Minnesota by identifying vegetation and classifying hydrology for the National Wetland Inventory
- Navigated to waypoints using a Trimble device and entered data into a program called Terrasync

UMN Department of Physics: Teaching Assistant (PHYS 1302, PHYS 1202)
August 2013- December 2013; August 2012-December 2012

- Led laboratory sessions, coached students through problem-solving discussions, graded lab reports, and tutored students in various introductory physics courses

Zimmer Spine, Inc.: Quality Engineering Intern
May 2012-August 2012

- Supported regulatory compliance efforts by assessing design verification/validation activities and biocompatibility tests performed for spinal fusion and fixation systems

UMN Department of Physics: Undergraduate Research Assistant (NOvA Project)
September 2011-May 2012

- Managed small team and trained new student workers in assembling neutrino detector modules from PVC extrusions within tolerance specifications, evaluating module quality by running high-pressure leak tests, and modifying assembly process to mitigate flaws

Selected Honors:

Fulbright Student: J. William Fulbright Scholarship Board (2018)
CZO-SAVI International Scholar: NSF Science Across Virtual Institutes (2018)
Dean's Fellow: University of Colorado (2015-2016)
Bentson Scholar: University of Minnesota (2010-2014)
Presidential Scholar: University of Minnesota (2010-2014)

Conference & Seminar Presentations:

Global Change at Basin Scale and Water Management Challenges in Patagonia:
Land Use and Local Climate Effects on the Thermal Hydrology of a Forested Headwater Stream: a case study at Coyhaique Alto (2018)
Agua y Cuencas, Universidad de Aysén Seminario Internacional:
Hidrología de Cuencas: Colorado, E.E.U.U. (2018)
American Geophysical Union (AGU) Fall Meeting:
Modeling Aspect Controlled Formation of Seasonally Frozen Ground on Montane Hillslopes: a case study from Gordon Gulch, CO (2017)
North American Students of Cooperation (NASCO) Institute:
Water and Energy in Co-ops: Practical Permaculture (2017)

Community Outreach and Engagement Activities:

Feria de Artes y Oficios - Coyhaique, Chile: Presenter
Aguas de Aysén (2018)
Water Resources Book Club: Founder (2017)
Hydrologic Sciences Symposium: Steering Committee Member (2017)
Lens on Climate Change: Mentor (2016-2017)
Mountain Research Experience: Workshop Leader
Using Field Observations to Guide Model Parameters (2016)
Introduction to Field Science (2017)
Research Experience for Community College Students: Workshop Leader
Maintaining Field & Lab Notebooks (2016)
Portal to the Public: Science Ambassador
How does the Snow Control the Flow? (2016)

Volunteering:

Boulder Food Rescue: Volunteer (2015-2018)
Boulder Housing Coalition: Board Representative (2016-2017)

Languages:

English: Native
Spanish: Professional

Graduate Advisors:

Dr. Harihar Rajaram, University of Colorado Boulder
Dr. Brian Reid, Centro de Investigación en Ecosistemas de la Patagonia