

## CAILEY B. CONDIT – Curriculum Vitae

Department of Earth and Space Sciences  
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<b>Assistant Professor</b> Department of Earth and Space University of Washington, Seattle, WA	January 2020- Present
<b>NSF Postdoctoral Research Fellow</b> Department of Earth, Atmospheric and Planetary Science Massachusetts Institute of Technology, Cambridge, MA	July 2018 – Dec. 2019
<b>Wiess Postdoctoral Research Fellow</b> Department of Earth, Environmental, and Planetary Sciences Rice University, Houston, TX	July 2017 – July 2018

### ***EDUCATION***

<b>University of Colorado Boulder   Boulder, CO</b> PhD, Department of Geological Sciences	2011 – 2017
<b>Middlebury College   Middlebury, VT</b> BA, Geology, <i>Cum Laude</i>	2007 – 2011

### ***PUBLICATIONS***

- French, M.E. and **Condit, C.B.** (2019), Slip partitioning along an idealized subduction plate boundary at deep slow slip conditions. *Earth and Planetary Science Letters*, 528
- Johnson, Jena. E., Webb, S.E., **Condit, C.B.**, Beukes, N.J., Fischer, W.W., (2019) Effects of Metamorphism and Metasomatism on Manganese Mineralogy: Examples from the Transvaal Supergroup. *South African Journal of Geology* <https://doi.org/10.25131/sajg.122.0034>
- Condit, C.B.**, Mahan, K.H., Curtis, K.C., Möller, A., (2018) Dating metasomatism: monazite and zircon growth during amphibolite facies albitization. *Minerals Special Issue "Application of Electron Microprobe Methods in Trace Element Analysis and Geochronology"* 8 (5), 187, [doi.org/10.3390/min8050187](https://doi.org/10.3390/min8050187)
- Condit, C.B.**, Mahan, K.H. (2018) Fracturing, fluid flow, and shear zone development: relationships between chemical and mechanical processes in Proterozoic mafic dikes from southwestern Montana, USA. *Journal of Metamorphic Geology*, 10.1111/jmg.12289
- Brownlee, S., Schulte-Pelkum, V., Raju, A., Mahan, K., **Condit, C.**, Orlandini, O., (2017) Characteristics of deep crustal seismic anisotropy from a compilation of rock elasticity tensors and their expression in receiver functions. *Tectonics*, 10.1002/2017TC004625
- Condit, C.B.**, Mahan, K.H., Ault, A.K., Flowers, R.M., (2015). Foreland-directed propagation of high-grade tectonism in the deep roots of a Paleoproterozoic collisional orogen, SW Montana, USA. *Lithosphere* 7, 625–645. 10.1130/L460.1
- Johnson, Joshua. E., West, D.P., **Condit, C.B.**, Mahan, K.H. (2014) Strain localization in the Spanish Creek mylonite, Northern Madison Range, SW Montana. *Rocky Mountain Geology*, 49, 2, 25-48

### ***PUBLICATIONS in Prep or Review***

- Condit, C.B.**, Guevara, V.E., Delph, J.R., French, M.E., (In Revision) Slab dehydration in warm subduction zones at depths of episodic slip and tremor. *EPSL*
- Condit, C.B.**, French, M.E., Hayels, J., Yeung, L., Y., Lee, C-T. A., (In Revision) Fluid sources and stress state at the base of the subduction seismogenic zone. *G3*
- Condit, C.B.**, Mahan, K. H., Schulte-Pelkum, V. Orlandini, O., (In Prep). Deformation mechanisms and development of steady state microstructures in amphibole-rich lower crust. for *JGR Solid Earth*
- Condit, C. B.**, Pec, M., Chin, E. J., Mitroi, T., (in Prep). Experimental constraints on calcic-amphibole strength and deformation mechanisms. For *GRL*

### **GRANTS and AWARDS**

- 2017 NSF-EAR Postdoctoral Research Fellowship (\$174,000)
- 2017 Wiess Postdoctoral Research Fellowship, Rice University
- 2016 Graduate Dissertation Completion Fellowship, Graduate School, University of Colorado
- 2014 Spetzler Award for Research, CU Department of Geological Sciences (\$2000)
- 2012 Waldrop Memorial Scholarship, CU Department of Geological Sciences (\$2000)
- 2012 Geological Society of America (GSA) Student Research Grant Award (\$2500)
- 2012 Stone-Holberg Scholarship for Excellence in Structural Geology, Rocky Mountain Association of Geologists (\$3500)
- 2012 Harrison Scholarship, Tobacco Roots Geological Society (\$750)
- 2012 Colorado Scientific Society Research Grant (\$1000)
- 2012 NSF Graduate Research Fellowship Honorable Mention
- 2011 Vermont Geological Society Award for Excellence in Geological Sciences Presentation

### **INVITED TALKS**

- Goldschmidt: The Lithospheric Mantle as Earth's Link between Surface and Deep Processes, *planned* June, 2020
- Marine Geology and Geophysics Seminar, UW, *planned* April, 2020
- University of Idaho, Department Seminar, Feb. 2020
- University of Wisconsin, Week Lecture, Nov. 2019
- Lamont-Doherty Earth Observatory, Geodynamics Seminar, Nov. 2019
- GSA: Structural Geology in the 21st Century: Rheology of Naturally Deformed Rocks, Sept. 2019
- Scripps Institute of Oceanography, June 2019
- MIT COG3 Seminar, April 2019
- Skidmore College, Strock Lecture, February 2019
- AGU: Flow and Fracture: Mixed Brittle-Viscous Behavior Throughout the Lithosphere, Dec. 2018
- Woods Hole Oceanographic Institute, November 2018
- University of Massachusetts, November 2018
- Appalachian State University, October 2018
- University of Washington, April 2018
- Pomona College, March 2018
- Texas Tech University, November 2017
- Sonoma State University, February 2017
- Rice University, January 2017
- University of Northern Colorado, October 2016
- Middlebury College, September 2014

### **THESES and FIELD TRIP GUIDES**

- Condit, C. B.** (2017) Fluid Enhanced Deformation and Metamorphism in Exhumed Lower Crust from the Northern Madison Range, Southwestern Montana, USA. University of Colorado Boulder PhD dissertation. p. 324
- West, D.P., Jr., and **Condit, C. B.**, (2016), Stratigraphy, structure, and plutonism in the Wiscasset-Dresden region of mid-coastal Maine: in Berry, Henry N., IV, and West, David P., Jr., editors, Guidebook for field trips along the Maine coast from Maquoit Bay to Muscongus Bay: New England Intercollegiate Geological Conference, p. 165-182.
- Condit, C.B.** (2011). Igneous petrogenesis and superimposed deformation of the Blinn Hill plutonic complex, East-Central Maine. Middlebury College Undergraduate Thesis. p. 76.

### **TEACHING**

- Member of the NSF-funded [Tectonics-On Ramps](#) working group Spring 2019
- Seminar Co-Instructor** | Rice University  
Quantifying Rock Microstructures (ESCI 524) Spring 2018
- Course Instructor** | University of Colorado  
Structural Geology (GEOL 3120) Fall 2016
- Teaching Assistant** | University of Colorado  
Introduction to Field Geology (GEOL 2700) Spring 2015, 2016 and Fall 2015  
Structural Geology (GEOL 3120) Fall 2011 and Fall 2012  
Petrology (GEOL 3020) Spring 2012
- Teaching Assistant** | Middlebury College  
Mineralogy (GEO210) Fall 2009

### **MENTORING EXPERIENCE**

Gordon Research Seminar in Rock Deformation Early Career Mentor	Summer 2020
RESESS Science mentor   MIT   Cambridge MA	Summer 2019
Science mentor for Teodora Mitroi	
Research Mentor   University of Colorado   Boulder CO	Fall 2017
Senior honors thesis Co-advisor for undergraduate researcher Kelly Curtis	
RESESS Communications Mentor   UNAVCO   Boulder CO	Summers 2015 – 2016
Communications mentor for undergraduate researcher Enrique Chon	
RESESS Graduate Assistant   UNAVCO   Boulder CO	Summer 2014
Graduate assistant and mentor for RESESS internship program at UNAVCO. Mentored minority students with research while serving as a resource for future opportunities.	
RESESS Research Mentor   UNAVCO   Boulder CO	Summer 2014
Research mentor for undergraduate researcher Diana Rattanasith. Assisted Rattanasith with monazite textural characterization from the Big Thompson Metamorphic Suite, CO.	
Field Research Mentor   Northern Madison Range   SW MT	Summers 2012, 2013, 2015
Mentor to undergraduate field assistants Joshua Johnson (2012), Kevin Teonenboehn, Jason Rosenthal, Diana Rattanasith (Summer 2013), and Craig Peterson (2015). Continued mentoring with Johnson on his senior thesis at Middlebury College and resulting publication (Johnson et al., 2014).	

### **OUTREACH**

Interview subject, Art in America Magazine, Expert and Artist Discussion	2020
Science Speaker at Rare Earths   The Mineral and Jam Show   Houston TX	2018
“Rocks and Water in the Deep Earth”	
Women in Science and Engineering Group (WiSE)   CU	2015 – 2017
Grant Writing and Leadership Committees Member	
Contributor to the CU Women in Science and Engineering Field Blog	2016
RESESS Field trip co-leader   Boulder CO	2013, 2014, 2015, 2016
Graduate Seminar Organizer   CU	2013 – 2015
Advisory Board Graduate Research Poster Session Organizer   CU	2013 – 2015
RESESS poster evaluator   UNAVCO   Boulder CO	2013, 2014

### **SERVICE TO THE SCIENTIFIC COMMUNITY**

GeoPRISMS Synthesis Workshop Co-Organizer	2020
Collaborated on proposal for 2.5 day long workshop focused on synthesizing the feedbacks between deformation, metamorphism, and rheology	
Session Convener, GSA Annual Meeting (planned)	2020
Subduction Zone Slip Behavior: The Intersection of Deformation and Metamorphism	
Session Convener, AGU Annual Meeting	2019
Deformation in the Middle and Lower Crust: Integrating Geologic Observations, Experiments, and Theory to Constrain Crustal Rheology;	
Frontiers of Subduction Zone and Regional Metamorphism: Fluids, Reactions, and Dynamics	
Primary Session Convener, AGU Annual Meeting	2018
The Varied Roles of Aqueous Fluids near the Subduction Interface	
Reviewer: <i>Earth and Planetary Science Letters</i> , <i>Journal of Geophysical Research: Solid Earth</i> , <i>Canadian Journal of Earth Science</i> , <i>Science Advances</i> , <i>Precambrian Geology</i> , NSF-Tectonics, NSF- Petrology and Geochemistry	

### **PROFESSIONAL ORGANIZATIONS**

Geological Society of America  
American Geophysical Union