

**Aubrey N. Adams**  
Assistant Professor

Colgate University, An Undergraduate Institution  
Department of Geology  
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PROFESSIONAL PREPARATION

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University of Florida, B.S., Geology	2004
Pennsylvania State University, Ph.D., Geosciences	2010
Washington University in St. Louis, Seismology, Postdoctoral Researcher Associate	2012 - 2014

APPOINTMENTS

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Assistant Professor	<b>Colgate University</b>	2015 – present
Lecturer	<b>Washington University in St. Louis</b>	2015
Research Scientist	<b>Washington University in St. Louis</b>	2015
Postdoctoral Research Associate	<b>Washington University in St. Louis</b>	2012 – 2014
Development Geophysicist	<b>Chevron, Covington, Louisiana</b>	2010 – 2012
Graduate Research Assistant	<b>Pennsylvania State University</b>	2004 – 2010
Graduate Teaching Assistant	<b>Pennsylvania State University</b>	2004 – 2007

PEER REVIEWED PUBLICATIONS

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\* indicates Colgate student collaborators

\*\* indicates graduate or undergraduate collaborators at other institutions

Abers, G., **Adams, A.**, Haeussler, P., Roland, E., Shore, P., Wiens, D., Schwartz, S., Sheehan, A., Shillington, D., Webb, S., and Worthington, L. (2019), Examining Alaska's earthquakes on land and sea, *EOS*, 100, 10.1029/2019EO117621.

**Adams, A.**, J. Miller\*, and N. Accardo\*\* (2018), Relationships between lithospheric structures and rifting in the East African Rift System: A Rayleigh wave tomography study, *Geochemistry, Geophysics, Geosystems*, 10.1029/2018GC007750.

Graw, J.\*\*, **A. Adams**, S. Hansen, D. Wiens, L. Hackworth, and Y. Park (2016), Upper mantle shear wave velocity structure beneath northern Victoria Land, Antarctica: Volcanism and uplift in the northern Transantarctic Mountains, *Earth and Planetary Science Letters*, **449**, 48-60.

**Adams, A.**, Wiens, D., Nyblade, A., and G. Euler (2015), Evidence for the origin of the Cameroon Volcanic Line from Rayleigh wave tomography, *Journal of Geophysical Research*, **189**, pg. 1708-1727.

O'Donnell, J. P., **A. Adams**, A. A. Nyblade, G. D. Mulibo\*\*, and F. Tugume\*\* (2013), The uppermost mantle shear wave velocity structure of eastern Africa from Rayleigh wave tomography: constraints of rift evolution, *Geophysical Journal International*, **194**, iss. 2, 961-978.

**Adams, A.**, Nyblade, A., and D. Weeraratne (2012), Upper mantle shear wave velocity structure beneath the East African Plateau: evidence for a deep, plateau-wide low velocity anomaly, *Geophysical Journal International*, **189**, 123-142.

**Adams, A.** and A. Nyblade (2011), Shear wave velocity structure of the southern African upper mantle with implications for the uplift of southern Africa, *Geophysical Journal International*, **186**, iss. 2, 808-824.

**Adams, A.**, R. Brazier, A. Nyblade, A. Rodgers, and A. Al-Amri (2009), Source Parameters for

Moderate Earthquakes in the Zagros Mountains with Implications for the Depth Extent of Seismicity, *Bulletin of the Seismological Society of America*, **99**, 2044-2049.

## SUBMITTED PROPOSALS

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† Indicates funded or awarded proposals.

†Abers, G., D. Wiens, S. Schwartz, E. Roland, A. Sheehan, **A. Adams**, D. Shillington, S. Webb, P. Haeussler, and L. Worthington. Alaska Amphibious Community Experiment Seismic Data Collection, *NSF – GeoPRISMS, NSF-Marine Geology and Geophysics, and others*, August 2016, Funded August 2017. [Total Award Including Instrument Support and Ship Time: \$4.5 million; Total to Universities: \$1.47million; Total to Colgate: \$100,479]

**Adams, A.** RUI: Anisotropy in the East African Rift System: Oriented Melt Pockets or Lattice Preferred Orientation. *Submitted to NSF – EAR – GeoPRISMs*, July 2016.

Nyblade, A., D.S. Stamps, **A. Adams**, R. Durrheim, S. Hansen, A request to the UNAVCO and IRIS Boards of Directors for inclusion of the AfricaArray Network in the NGE0 Proposals, August 2016.

**Adams, A.**, D. Wiens and A. Nyblade. RUI Collaborative Research: Origin of a Hot Line in the Mantle: The Offshore Cameroon Volcanic Line. *Submitted to NSF – OCE – Marine Geology and Geophysics*, August 2015.

## FIELD CAMPAIGNS

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### **Alaska Amphibious Community Seismic Experiment (2018-2019)**

- I am part of team of PIs who has installed 30 broadband land seismometers and 75 OBSs in spring/summer 2018, with planned removed in late summer 2019.
- In May-June 2018, I installed 17 land stations in remote regions of the western Alaskan Peninsula and neighboring islands, with a Colgate student and a collaborator at a partner institution.
- In August 2019, I will co-lead one of the OBS recovery cruises.

### **OI Doiyo Lengai & Natron Rift Joint GPS & Seismic Deployment (January 2018)**

- In January 2018, a Colgate student and I installed a Colgate-owned broadband seismometer near the OI Doiyo Lengai volcano in Tanzania, building upon an existing GPS network established by researchers at Virginia Tech and Ardhi University.

### **Colgate University Central New York Seismicity**

- Installed a broadband station on Colgate University's campus, collaborating with Columbia University researchers to incorporate the station into the real-time Lamont Doherty Earth Observatory's regional network. The station was taken offline in summer 2017 due to construction.
- Installed three broadband seismic stations in the central Adirondacks during summer 2016, with the assistance of student researchers. The stations are maintained and data is collected quarterly. I am currently negotiating with the Adirondack Club for permission to install a fourth station.

### **Cascadia Initiative, Apply to Sail**

- Trained and participated in the deployment and surveying of ocean bottom seismometers as part of the Cascadia Initiative, Pacific Ocean offshore Oregon, USA, August 2014

### **Washington University in St. Louis**

- Maintenance and preliminary data quality check for seismic stations from McMurdo Station, Antarctica, January-February 2014
- Installation, maintenance, demobilization, and preliminary data quality check for seismic stations from South Pole Station, Antarctica, November 2012-January 2013

## Pennsylvania State University

- Demobilization & reinstallation of a broadband seismic array, Uganda & Tanzania, November – December 2008
- Broadband seismic array servicing, Uganda, November 2007
- Broadband seismic array deployment, Uganda, August – September 2007
- Broadband seismic station installations, Zambia, January 2006

## RECENT RESEARCH PRESENTATIONS

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- A. Adams, “African Tectonics: Seeing the Earth Inside-Out”, Colgate University NASC Colloquium, February 15, 2019.
- Invited*, A. Adams and E. Roland, “Summary of the AACSE Project and Mini-Workshop”, GeoPRISMS AGU Townhall, New Orleans, LA, December 11, 2017.
- A. Adams and J. Miller, “Rayleigh Wave Phase Velocities Beneath the Central and Southern East African Rift System”, December 14, 2017.
- Invited*, “Earthquakes and the Construction of the Adirondack Mountains”, Hamilton College Adirondacks School, Keene, NY, November 3, 2017.
- “Comparison of Surface Wave Studies of the Central East African Rift System” AfricaArray Workshop, University of Witwatersrand, South Africa, June 29, 2017.
- Invited*, “Seismic Imaging: Remotely Probing the Deep Earth”, Physics and Astronomy Seminar, Colgate University, February 14, 2017.
- Invited*, “Illuminating Sub-Saharan Lithosphere with Surface Wave Tomography”, University of Alabama, November 11, 2016.
- Invited*, “Variable melt sources in the Lau Back-arc spreading center”, Rochester University, April 22, 2016.
- Invited* K.D. Nelson Lecture, “Variable melt sources in the Lau Back-arc spreading center”, Syracuse University, February 11, 2016.
- Invited*, “The Cameroon Volcanic Line”, University of Aberdeen, June 20, 2014.
- Invited*, “The Role of Pre-Existing Structures in Rift Formation”, GeoPRISMS East African Rift System Planning Workshop, 2012.

## SELECTED MEETING ABSTRACTS

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\* indicates Colgate student collaborators

- Adams, A and J. Tockstein\* (2018), Shaking up the Seismometer Line-up: Industry Standard vs. Hobby Seismometers, *Eos Trans. AGU*, 99(52), Fall Meet. Suppl., Abstract
- Adams, A., M. Dimas\*, Y. Jin\*, and I. Dove\* (2018), Earthquake Locations in the Adirondack Mountains, *Eos Trans. AGU*, 99(52), Fall Meet. Suppl., Abstract
- Adams, A. and J. Miller\* (2017) Rayleigh Wave Phase Velocities Beneath the Central and Southern East African Rift System, AGU Fall Meeting
- Miller\*, J. and A. Adams (2016), Sources of Rifting in the East African Rift System from Rayleigh Wave Tomography, *Eos Trans. AGU*, 97(52), Fall Meet. Suppl., Abstract T51C-2944
- Adams, A., Wiens, D., Conder, J., Barklage, M., Wei, S., and C. Cai. (2016), Insights into Along Strike Variability in the Lau Back Arc Spreading Center and Tonga Arc from Bodywave Tomography, *Eos Trans. AGU*, 97(52), Fall Meet. Suppl., Abstract DI23B-2520
- Adams, A., Wiens, D., Conder, J., Barklage, M., Wei, S., and C. Cai. (2015), Sources of melt beneath the Lau Back Arc Spreading Center and Tonga Arc as indicated by local and teleseismic bodywave tomography, *Eos Trans. AGU*, 96(52), Fall Meet. Suppl., Abstract DI13A-2636
- Adams, A., Wiens, D., Blackman, D., Webb, S., Dunn, D., Conder, J., and D. Zhao. (2014), Seismic structure of the Tonga Arc and Lau Backarc Spreading Center from joint

- inversion of local and teleseismic body wave arrivals, *Eos Trans. AGU*, 95(52), Fall Meet. Suppl., Abstract D113B-4277
- Adams, A.**, Wiens, D., Blackman, D., Webb, S., Dunn, D., Conder, J., and D. Zhao. (2014), Seismic structure of the Tonga Arc and Lau Backarc Spreading Center local and teleseismic body wave tomography, *Bulletin of the Seismological Society of America*, 85 (2), Annual Meeting, #106.
- Adams, A.**, Wiens, D., Euler, G., Nyblade, A., and P. Shore. (2013), Upper mantle velocity structure beneath the Cameroon Volcanic Line region and implications for the formation of mantle hot lines, *Eos Trans. AGU*, 94(52), Fall Meet. Suppl., Abstract T31C-2183
- Adams, A.**, Euler, G., Wiens, D., Nyblade, A., Shore, P., Tibi, R., Tokam, A., Tabod, C., and A. Bekoa. (2012), Upper mantle phase velocity and shear wave velocity structure beneath the Cameroon Volcanic Line, *Eos Trans. AGU*, 93(52), Fall Meet. Suppl., Abstract T31C-2183
- Adams, A.**, Nyblade, A., and Weeraratne, D. (2010), Upper mantle structure in East Africa from rayleigh wave tomography using AfricaArray data, *Eos Trans. AGU*, 91(52), Fall Meet. Suppl., Abstract T31C-2183
- Adams, A.** and Nyblade, A. (2009), Rayleigh wave phase velocity and shear wave velocities in the western branch of the East African Rift System, *Eos Trans. AGU*, 90(52), Fall Meet. Suppl., Abstract T31B-1803
- Kgaswane, E., **Adams, A.** (presenter), and Nyblade, A. (2009), Shear wave velocity structure beneath southern Africa from Rayleigh wave tomography, *Eos Trans. AGU*, 90(52), Fall Meet. Suppl., Abstract S43D-02
- Adams, A.**, Nyblade, A., and Weeraratne, D. (2007), Rayleigh wave tomography of southern Africa: Preliminary results from AfricaArray, *Eos Trans. AGU*, 88(52), Fall Meet. Suppl., Abstract SS33A-1051
- Adams, A.**, Nyblade, A., Brazier, R., Rodgers, A., and Al-Amri, A. (2006), Earthquake source depths in the Zagros Mountains: A "Jelly Sandwich" or "Crème Brulee" Lithosphere?, *Eos Trans. AGU*, 87(52), Fall Meet. Suppl., Abstract S53A-1316
- Adams, A.**, Nyblade, A., Brazier, R., Rodgers, A., and Al-Amri, A. (2006), Lithospheric strength beneath the Zagros Mountains of southwestern Iran, *Eos Trans. AGU*, 87(36), Jt. Assem. Suppl., Abstract S21A-10

## WORKSHOPS

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- OBSIP Ocean Bottom Seismometer Workshop (2017)  
AfricaArray Workshop (2017) Johannesburg, South Africa  
SERC Early Career Geoscience Faculty Workshop (2016)  
The Future of the Amphibious Array Workshop (2014)  
STEM Pedagogies: Incorporating Active-Learning Approaches in the Classroom (2014)  
OBSIP OBS Workshop (2013)  
GeoPRISMS East African Rift System Planning Workshop (2012)

## COLGATE SERVICE AND ACTIVITIES

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- NASC Division Retreat, research pop-up presentation, May 2017  
Core White Eagle Retreat, presentation on the use of media in CORE176/FSEM143, May 2017  
Division of Natural Sciences, Colloquium Committee, May 2016-May 2018  
Hiring Committee for High Performance Computing Support Spring-Summer 2016  
Contributed feedback on candidates for the CIO search April-May 2016  
Hiring committee for tenure-track Assistant Professor position in the Geology Department  
Participated in curricular revision in the Department of Geology  
Attended the CORE conference at White Eagle May 2015, 2016, 2017, 2018, 2019

## EXTERNAL SERVICE AND OUTREACH

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**NSF-EARS**, (2019) Proposal reviewer

**Alaska Amphibious Community Seismic Experiment** Lead an introductory workshop on Alaskan Tectonics and Seismology for students across the US, Kodiak, AK (June 2019)

**American Geophysical Union Fall 2018 Meeting**, *Invited* Session Chair, Seismology  
Contributions: Earthquakes

**Alaska Amphibious Community Seismic Experiment** Apply to Sail Committee Leader (2017-2019)

**GeoPRISMS AGU Fall Meeting Mini-Workshop on the Alaska Amphibious Community Seismic Experiment** Co-Convener (Fall 2017)

**NSF-Polar Programs** (August 2017, September 2017) Proposal Reviewer

**NSF-Earthscope**, (2013, 2015, 2018) Proposal reviewer

**Geochemistry, Geophysics, Geosystems (G3), Seismological Research Letters, Tectonophysics, Bulletin of the Seismological Society of America, and Geophysical Journal International** Journal Article Reviewer

**American Geophysical Union Fall 2015 Meeting**, Primary Convener and Chair, DI9788  
Geochemical and Geophysical Links Between Subduction Zone Dynamics and Arc Systems

**IRIS – Incorporated Research Institutions in Seismology**, Colgate University Voting Representative (2015-present)

**Overnight America, KMOX NewsRadio 1120** (June 5, 2015) Radio interview on earthquake hazards versus the representation of earthquakes in popular media

**Hold That Thought** (March 20, 2015) A podcast interview about the origins of the Cameroon Volcanic Line

**Washington University in St. Louis** (2014) *As the heat of summer settles on St. Louis, here is a gust of cold air from Antarctica*; (2013) *Tales from the field: maintaining seismic stations at the South Pole*; photo-journals in Washington University Newsroom

**Harris Elementary School** (April 2013, April 2014) Guest presentation to 2<sup>nd</sup> graders about the science and the history of Antarctica

**Science**, Book Reviewer, Vol. 324, Iss. 5932, (2009), *Summer Reading* “Apocalypse: Earthquakes, Archaeology, and the Wrath of God” by Amos Nur and Dawn Burgess.

**Pennsylvania State University Council for Women**, (2006 –2007) Representative

## PROFESSIONAL AFFILIATIONS

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**American Geophysical Union**

**Geological Society of America**

**Seismological Society of America**

**Society of Exploration Geophysicists**