D. Sarah Stamps

Associate Professor
Virginia Tech
Department of Geosciences
926 W. Campus Drive
Blacksburg, VA 24061

@dsarahstamps (Twitter)
Phone: (+1) 540-231-3651
Fax: (+1) 540-231-3386
Email: dstamps@vt.edu
http://www.geodesy.geos.vt.edu

1.0 EDUCATION

Purdue University, West Lafayette, IN — 2013
PhD in Geodesy and Geophysics
Dissertation: Kinematics and Dynamics of Nubia-Somalia Divergence Along the East African Rift

The University of Memphis, Memphis, TN — 2007
BS in Earth Sciences with honors

Additional Training

Active Bystander Training: How to Stand Up and Step In To End Harassment	2021
The Carpentries Instructor Training	2021
Principles of Effective Teaching Certificate Program	2020-2021
Becoming a Good Mentor	2020
Include Is a Verb: How Allies Make Inclusion a Reality	2020
Creating Effective Group Activities and Assignments	2020
Fostering an Inclusive Classroom Environment	2019
Fostering a Growth Mindset	2019

2.0 POSITIONS HELD

Associate Professor, Virginia Tech — **2021 – present**
Department of Geosciences

Assistant Professor, Virginia Tech — 2015 – 2021
Department of Geosciences

Assistant Adjunct Professor of Geology, UCLA — 2014-2016

NSF Earth Sciences Postdoctoral Fellow, MIT/UCLA — 2013-2015
Main advisor: Brad Hager, MIT
Proposal title: An Investigation of Continental Rift-Parallel Deformation

NSF Graduate Research Fellow, GRA, and GTA, Purdue University — 2008-2013
Main advisor: Eric Calais
Thesis: Kinematics and Dynamics of Nubia-Somalia Divergence Along the East African Rift

NSF Research Experiences for Undergraduates Participant, The University of Arkansas — 2005 (summer)
Advisors: Glenn Mattioli and Pamela Jansma
Project: Caribbean Plate Block Kinematics and GPS Measurements

NSF Undergraduate Research Assistant, The University of Memphis — 2004-2007
Advisor: Robert Smalley
Project 1: Kinematics of the Scotia Arc
Project 2: Developing an analog earthquake locator

3.0 TEACHING EXPERIENCE

Virginia Tech (* indicates course was team taught)	
Tectonics/Advanced Tectonics (Undergraduate/Graduate, new course)	S16, S18, S19, S20, S21
Earth's Natural Hazards (Undergraduate, new section)	F17, F18, S19, F19, S20, S21
Geodesy in the Earth Sciences (Undergraduate/Graduate, new course)	F18, F20
Active Tectonics Seminar (Undergraduate/Graduate, new seminar)	S17*
Tectonic Geodesy (Graduate, new course)	F16
Geodynamics and ASPECT (Graduate, new course)	F15*, F17, F20
Undergraduate Research (9 student projects)	every semester
Government of Uganda, Entebbe Workshop on Tectonic Geodesy Applications for the Seismology Department	2018
AfricaArray Annual Meetings, University of Witwatersrand, S. Africa	
International Scientific Collaboration and AfricaArray, Instructor	June 2018
Experiment Design and Implementation with GNSS, Instructor	June 2017
University of California, Los Angeles	
Geologic Maps	Winter quarter 2015
University of Antananarivo, Madagascar	
Introduction to GPS Geodesy and High Precision Observations	July 2015
GPS Training Program	June 2013
University of Bukavu, Democratic Republic of Congo	
GPS Geodesy and Applications in Geodynamics Short-Course	March 2013
Boston University	
Guest Lecturer, Introductory Geophysics	November 2013
Purdue University	
Teaching Assistant, Geosciences in the Cinema	Fall 2011
Laboratory Instructor, Physical Geology	Summer 2010, Spring 2012
Guest Lecturer, A Dynamic Earth	October 2010, 2012
Center for Earthquake Research and Information	
Student Teacher, Outreach Activities	Spring 2007, Fall 2007
The University of Memphis	
Instructor, Environmental Geology Laboratory	Spring 2005

4.0 CURRENT GEODESY AND TECTONOPHYSICS LABORATORY MEMBERS

Undergraduate Students

Gabrielle Troia (Geosciences, Virginia Tech, 2019-present)
Myles Mason (Computational Modeling and Data Analytics, Virginia Tech, 2019 – present)
Kelsey Popolizio (Geosciences, Virginia Tech, 2021 – present)
Esha Islam (Computational Modeling and Data Analytics, Virginia Tech, 2021 – present)
Abdullah Rizwan (Computational Modeling and Data Analytics, Virginia Tech, 2021 – present)
Rami Gorle (Computational Modeling and Data Analytics, Virginia Tech, 2021 – present)
Deja Celestine (USGS Student Contractor, 2021 – present)

Graduate Students

Karen Williams (PhD Student, NSF DRRM Fellow, Virginia Tech, 2020 – present)
Asenath Kwagalakwe (PhD Student, Virginia Tech, 2021 – present)
Ntambila "Daud" (PhD Student, Virginia Tech, 2021 – present)

Postdoctoral Associates

Dr. Emmanuel Njinju (2020 – present)

Software Engineer Collaborators

Mike Dye (2021 – present)

5.0 FORMER GEODESY AND TECTONOPHYSICS LABORATORY MEMBERS

Undergraduate Students

Rebecca Plosay (Geosciences, Virginia Tech, Oct 2019 – May 2020)
Ryan Roane (Physics, Virginia Tech, January 2018 – July 2020)
Roberto Gorjon-Andujar, (BS Geosciences, Virginia Tech, August 2018 – May 2020)
Israel Mamo (Computational Modeling and Data Analytics, Virginia Tech, May 2019 – June 2019)
ThaoVy Nguyen (Mathematics, Virginia Tech, April 2017 – June 2019)
Sarah Morgan, (Mathematics, Virginia Tech, January 2018 – December 2018)
Sean Malloy (Physics, Virginia Tech, January 2017 – May 2018, now Field Engineer at UNAVCO)
Codi Wiersma, (Geosciences, Virginia Tech, August 2016 – May 2017)
Jared Guzman (Physics, Virginia Tech, October 2017 – December 2017)
Greg Jesmok (Geology, UCLA, 2016)
Raul Carrillo (Geology, UCLA, 2016)

Graduate Students

Joshua Robert Jones (PhD, 2021, MAOP Fellow, Virginia Tech, now a geodesist at the US National Geodetic Survey)
Emmanuel Njinju (PhD, 2020, Virginia Tech, now a postdoctoral associate at Virginia Tech)
Tahiry Rajaonarison (PhD, 2020, Virginia Tech, now an instructor at University of Antananarivo, Madagascar)
Jessica Schobelock (MSc, 2018, Virginia Tech, now a Software Engineer at Capitol One)
Herimitsinjo Nia (MSc co-advisor, 2015, University of Antananarivo, Madagascar)
Tahiry Rajaonarison (MSc, co-advisor, 2013, University of Antananarivo, Madagascar)

Research Associates

Rui Xu, Associate Researcher Visiting Scholar, 2017-2018, Sichuan Earthquake Bureau, China

6.0 GRANTS, FELLOWSHIPS, AND PROPOSALS

PI, NSF Frontiers in Earth Sciences Program, "Dry Rifting in the Albertine-Rhino Graben" ($3M total, $491,754, 4 years) 2020 - present
(Students: Asenath Kwagalakwe, Esha Islam)

PI, NSF CAREER Program "Volcano-tectonic interactions during early phases of continental rifting" ($625,000, 5 years) 2020 - present
(Students: Joshua Robert Jones, Ntambila Daud, Kelsey Popolizio, Myles Mason. Rami Gorle, Abdullah Rizwan)

Co-I, USGS, "Subsidence monitoring network to improve elevation datum quality for a comprehensive analysis of land motion effects on marsh migration in the Chesapeake Bay" ($170,000, 4 years)
(Students: Karen Williams, Gabrielle Troia)

PI, Virginia Tech Coastal Hazards Seed Grant "Measuring vertical land motions in the Hampton Roads Area, Virginia: Towards investigating land subsidence processes in the Chesapeake Bay" ($5000, 1 year) 2018-2019

PI, Virginia Tech ICTAS Program "Collecting Observations for Data Analysis and Encoding in the Geosciences (CODE-GEO)" ($10,000, 1 year) 2017-2018

PI, NSF EarthCube Program "Brokered Alignment of Long-Tail Observations (BALTO)" ($1.4M total, $572,342, 3 years) 2017 - present
(Students: Emmanuel Njinju, Ryan Roane)

Co-I, NSF EarthCube Program "An Expanded Implementation of Cloud-Hosted Real-time Data Services for the Geosciences (CHORDS)" ($1.3M total, $87,815 + $24,269 supplement, 3 years) 2016 - 2021
(Students: Joshua Robert Jones, ThaoVy Nguyen)

PI, NSF GeoPRISMS Program "Quantifying plume-lithosphere interactions 2016 - 2020

with GNSS geodesy, seismology, and geodynamic modeling" ($393,047 + $6000 REU)
(Students: Tahiry Rajaonarison, Sean Malloy, Myles Mason, Rebecca Plosay)

PI, National Geographic Society "Impending volcano eruption response in northern Tanzania" ($18,500, 1 year) 2017 - 2018

Co-I, National Geographic Society "Geodetic and Geochemical Constraints on the Hypothesized Lwandle-Somalia Plate Boundary in Northern Madagascar" ($14,185, 1 year, student Tahiry Rajaonarison lead PI) 2016-2017

PI, National Geographic Society "An investigation of plate boundary formation in Madagascar" ($25,056, 1 year) 2014-2015

PI, NSF Earth Sciences Postdoctoral Fellowship "An investigation of continental rift-parallel deformation" ($170,000, 2 years) 2013-2015

PI, National Geographic Society "Kinematic constraints on the Lwandle-Somalia plate boundary across Madagascar from GPS geodesy – Is Madagascar breaking apart?" ($15,000, 2 years) 2011-2012

PI, NSF Graduate Research Fellowship Program "Testing rifting models in the East African Rift" ($100,000, 3 years) 2009-2013

7.0 HONORS AND AWARDS

NSF CAREER Award 2020-present
NSF Computational Infrastructure for Geodynamics Distinguished Lecturer 2017-2020
NSF EarthCube Community Service and Leadership Award 2017
NSF Postdoctoral Research Fellowship 2013
NSF Graduate Research Fellowship 2009
Outstanding Scientific Publication Award 2008
University of Memphis Outstanding Senior Award in Earth Sciences 2007
First and Second Place Awards, University of Memphis Research Forum 2007
Excellence in Earth Sciences Phi Beta Delta Honors Award 2006
NSF Research Experiences for Undergraduates, University of Arkansas 2005
University of Memphis Regents Tuition Award 2004-2007
Leadership Award, Mainthia Technologies, NASA 2003

8.0 OUTREACH

Public presentations

Virginia Tech Department of Geosciences Public Lecture 2018
Ardhi University, Tanzania 2016
Presentation to Engaresero Village, Tanzania on Volcanic Hazards and the new TZVOLCANO GNSS Network 2016

K-12 presentations and activities

Virginia Tech Black College Institute Geosciences representative 2020, 2021
Virginia Tech Summer Uncamp "Ask an Expert" 2020
Editor, contributor, and featured explorer for National Geographic Kids Book "Absolute Expert: Rocks and Minerals" by Ruth Strother 2018 - 2019
National Geographic "Earth and Space Science" by Mark Hendrix High School Textbook featurette 2019
Contributor to National Geographic Kids "Solve This!" Children's Book 2016
Sishi High School, China (200+ students) 2015
Chengdu No. 7 High School, China (300+students) 2015
Sumbawanga Secondary School, Tanzania (200+ students) 2014
2 High Schools in Madagascar (100+ students) 2014
Soroto Secondary School, Tanzania (200+ students) 2010

Olito Secondary School, Uganda (200+ students)	2010
Trinity High School, Haiti (60+ students)	2010
S&H Secondary School, Haiti (50+ students)	2010
Ikizu Secondary School, Tanzania (150+ students)	2008

Media

Measuring volcanic interactions using real-time data on Jetstream NSF XSEDE Jetstream Science Focus Article	2021
Seismological Society of America At-Work: D. Sarah Stamps	2020
D. Sarah Stamps receives $625,000 NSF CAREER grant to study role of volcanism in continental rifting, Virginia Tech College of Science News	2020
New study: East African Rift System is slowly breaking away, with Madagascar splitting into pieces, Virginia Tech College of Science News	2020
Geosciences' D. Sarah Stamps rocks science in National Geographic Kids book, Virginia Tech College of Science News	2019
UNAVCO Highlight: CHORDS Provides Next Generation Infrastructure for Real-time Geoscience Data Services,	2019
Spring Virginia Tech Science Magazine for CODE-GEO	2018
National Geographic Society media interview on "Mountain of God" Volcano Preparing to Erupt	2018
Invited AGU Policy Twitter featured Tweet	2018
Geoscience's D. Sarah Stamps to spearhead $1.4 million NSF grant to build key cyberinfrastructure project, Virginia Tech College of Science News	2017
Geosciences team to place GPS sensors around Tanzanian volcano in effort to predict eruptions, Virginia Tech College of Science News	2016
National Geographic Society, Interview for Women in Science project	2016
Interview for Discovery Magazine on the East African Rift System	2016
UNAVCO Highlight: Rifting in Eastern Africa: Geodetic data deciphers spreading forces	2014
Interview for Haitian television on 2010 earthquake, Haiti	2010
Interview for Haitian radio network on 2010 earthquake, Haiti	2010
Plate tectonics in the East African Rift (2008) UNAVCO Highlight	2008

9.0 LEADERSHIP AND SERVICE

National/International

Guest Associate Editor in Solid Earth Geophysics, Frontiers	2021 - present
Special Topics Editor, Advances in African Earth Sciences, Frontiers	2021 - present
AGU Committee Chair, Africa Award for Research Excellence in Earth/Ocean Sciences	2020 - present
AGU Committee member, Africa Award for Research Excellence Research Excellence in Earth and Ocean Sciences	2018 - 2020
NSF EarthCube Science and Engagement Team Co-Chair (elected)	2020 - present
NSF EarthCube Leadership Council (elected)	2017 - 2018
NSF UNAVCO Virginia Tech Institutional member representative	2015 - present
NSF EarthCube Science Committee (now Science and Engagement Team)	2014 - present
NSF EarthCube P418-GUI Advisory Team	2018
NSF EarthCube Registry Priority Action Team	2017
NSF EarthCube 2017 All-Hands Meeting Organizing Committee	2017
NSF EarthCube 2017 All-Hands Meeting Emcee	2017
NSF EarthCube Architecture and Implementation Plan Tiger Team Member	2016
NSF UNAVCO Education & Community Engagement Committee Member	2009 - 2012

NSF UNAVCO Education & Community Engagement Committee Member	2015-2017
AGU Geodesy Executive Committee Member	2008 - 2010
AGU Fall Meeting Session, Co-Chair or Chair	2014, 2016 (2), 2017 (2), 2018, 2019, 2020(2)
Review Panel Member for NASA's Earth & Surface Interiors	2016, 2021
Review Panel Member for NSF EAR Postdoctoral Fellowship	2021

External Grant Reviewer (Multiple years for the programs NSF Tectonics, GeoPRISMS, Geophysics, EarthCube, UK Early Career, NASA postdoctoral program)

Reviewer for journals (Numerous reviews for the journals Tectonics, Science Advances, Geophysical Journal International, Journal of Geophysical Research, Tectonophysics, Earth and Planetary Science Letters, Geophysical Research Letters, Physics of the Earth and Planetary Interiors, Reviews of Geophysics, International Journal of Earth Sciences, Journal of African Earth Sciences, Geosciences, Surveys of Geophysics)

Virginia Tech

Virginia Tech Department of Geosciences Alumni Event	2019
Virginia Tech Science Week/Virginia Tech GeoFair	2019
Virginia Tech Hokie Village education outreach	2019
Virginia Tech ICAT Day	2018
Spring Break Camp: Collecting Observations and Data Analysis for Encoding in the Geosciences	2018
Virginia Tech ICAT Day	2017
Virginia Tech Science Week/Virginia Tech GeoFair	2016

10.0 DIVERSITY, EQUITY, AND INCLUSION ACTIVITIES

Virginia Tech Geosciences URGE Pod Leader	2020 - present
NSF EarthCube Diversity, Equity, and Inclusion Working Group Member	2020 - present
Virginia Tech HHMI Inclusive Excellence Faculty Scholar	2019 - present
International Association for Geoscience Diversity Member	2019 - present
Virginia Tech Geosciences Inclusion, Diversity, Equity, Inclusion, and Accessibility (IDEA) Committee Member	2018 - present
Virginia Tech Black College Institute Department Representative	2019, 2020, 2021
Supported Fall GPS measurements with HBCU Hampton University	2020
Spring Break GPS measurements with HBCU Hampton University	2019
Virginia Tech Black Students in STEM booth organization	2019
Black Students in STEM hike organizer and participant	2019
Virginia Tech Advancing Diversity Workshop	2018, 2019, 2020
Virginia Tech HBCU/HSI Institute Outreach	2018, 2019, 2020
Developed CODE-GEO program for underrepresented students (funded by NSF CAREER grant for 2021-2025)	2018, 2021

11.0 INVITED PANEL PARTICIPANT

EarthCube Program Panelist	2020
International Data Week Panelist	2016

12.0 ORAL PRESENTATIONS

German Research Center for Geosciences, virtual, YouTube *Using GNSS Observations to Constrain Extension Rates and Intra-Rift Strain Rates Along the East African Rift System*	Feb 2021
Virginia Tech, Department of Geosciences, virtual	Feb 2021

Clues about the break-up of the African Continent

American Geophysical Union, invited, virtual — Dec 2020
Redefinition of Somalian plate motion, East African Rift System Kinematics, and the tectonics significance of Madagascar

University of California, Los Angeles, virtual — Apr 2020
Clues about the break-up of the African continent

Vertical Land Motions in the Chesapeake Bay Workshop, Hampton, VA — Feb 2020
What geologic processes could impact vertical land motions?

University of New Mexico, Albuquerque, NM — Feb 2020
Clues about the break-up of the African continent

Michigan State University as CIG Distinguished Lecturer, East Lansing, MI — Nov 2019
Clues about the break-up of the African continent

Grand Valley State University as CIG Distinguished Lecturer, Allendale, MI — Nov 2019
Clues about the break-up of the African continent

The University of Memphis, Memphis, TN — April 2019
Re-Evaluating the Somalian Plate: an update on East African kinematics

Penn State University, State College, PA — March 2019
Re-Evaluating the Somalian Plate: an update on East African kinematics

University of Delaware, Newark, DE — Nov 2018
Advances in the kinematics of the East African Rift System

International Conference on the East African Rift System, Tanzania — Oct 2018
- *A geodetic strain rate model for the East African Rift System*
- *The Tanzania Volcano Observatory*

Appalachian State University, Boone, NC — Sept 2018
Advances in the kinematics of the East African Rift System

University of Witwatersrand, AfricaArray Annual Meeting, South Africa — June 2018
Is active tectonics on Madagascar consistent with Somalia Plate kinematics?

EarthCube All-Hands Meeting, Denver, CO — June 2018
Tanzania Volcano Observatory: Implementing Real-Time GNSS Monitoring with the EarthCube Cyberinfrastructure CHORDS

Hampton University as NSF CIG Distinguished Lecturer, Hampton, VA — Apr 2018
Advances in the Kinematics and Dynamics of Africa

American Geophysical Union Fall Meeting, San Francisco, CA — Dec 2017
Invited Speaker: *Is active tectonics on Madagascar consistent with Somalia Plate kinematics?*

University of Witwatersrand, AfricaArray Annual Meeting, South Africa — July 2017
Keynote: *Advances in the Kinematics and Dynamics of Africa*

University of Kentucky, Holbrook Lecture, Lexington, KY — April 2017
Present-day kinematics of the eastern Tibetan Plateau and Sichuan Basin: Implications for lower crustal rheology

University of Michigan, The Smith Lecture, Ann Arbor, MI — January 2017
Continental Rift Initiation: Top Down and Bottom Up Perspectives

Ardhi University, Tanzania, Departmental Special Seminar — June 2016
Crustal Deformation and Volcano-Tectonic Interactions in East Africa

Princeton University, Princeton, NJ — Apr 2016
Dynamics of Lithosphere-Asthenosphere Interactions Along the East African Rift

UNAVCO Science Workshop, Boulder, CO — Mar 2016
Invited Speaker: *Implications of Lithosphere-Asthenosphere Interactions on Rift-Parallel Deformation*

Office of Foreign Disaster Assistance, USAID, Washington DC Mar 2016
TZVOLCANO project introduction
Volcano Disaster Assistance Program, USGS, Reston, VA Mar 2016
TZVOLCANO project introduction
Global Volcanism Program, Smithsonian Institute, Washington DC Mar 2016
TZVOLCANO project introduction
National Geographic Headquarters, Washington, D.C. Feb 2016
Is Madagascar Breaking Apart?
American Geophysical Union Fall Meeting, San Francisco, CA Dec 2015
Continental Deformation in Madagascar from GNSS Observations
Virginia Tech, Blacksburg, VA, Departmental Colloquium Mar 2015
Continental Rift-Parallel Surface Motions in Africa
Harvard University, Cambridge, MA Jan 2014
Evidence of Rift-Parallel Deformation Along the Western Branch & Main Ethiopian Rift?
University of California, Los Angeles, CA Dec 2013
Evidence of Rift-Parallel Deformation Along the Western Branch & Main Ethiopian Rift?
Massachusetts Institute of Technology, Cambridge, MA Nov 2013
Rift-Parallel Deformation Along the East African Rift
Active Volcanism and Continental Rifting Conference, Rwanda Nov 2013
Keynote: *Kinematics and Dynamics of the East African Rift*
NSF GeoPRISMS East African Rift Planning Workshop, New Jersey Oct 2012
Role of Mantle Flow on Rifting in East Africa
Queen Elizabeth National Park 2012 Research Symposium, Uganda June 2012
GPS Experiments in the East African Rift
University of Memphis – Memphis, TN Nov 2011
The East African Rift: kinematics and dynamics
University of Antananarivo, Madagascar Aug 2010
Kinematics of the Lwandle-Somalia Plate Boundary from GPS Geodesy: Is Madagascar Breaking Apart?
IGCP 565 Workshop on separating hydrologic and tectonic signals in geodetic data. Reno, NV
GPS Experiments in the East African Rift Oct 2010

13.0 SKILLS

Language: English, Swahili (professional)
Computer: GAMIT-GLOBK GNSS/GPS processing software maintained at MIT, Generic Mapping Tools, Matlab, TDEFNODE, LaTeX, SHELLS, AWK, vi, Coulomb 3, sparse codes in Fortran (Holt and Haines, 1993; Flesch et al., 2001; Stamps et al., 2010, 2014, 2018, Rui and Stamps, 2019), SELEN 4.0, Visit, Git, CHORDS, Grafana, Jupyter Notebook, GitHub community code development and contributions ASPECT (Computational Infrastructure for Geodynamics Community Code) in C++
Teaching: Certificate in Effective Teaching, Software Carpentries Instructor, HHMI Inclusive Excellence Faculty Scholar

14.0 PROFESSIONAL AFFILIATIONS/MEMBERSHIPS

American Geophysical Union
Geological Society of America
Seismological Society of America
American Association for the Advancement of Science
International Association for Geoscience Diversity
Association for Women Geoscientists

15.0 COLLABORATORS AND OTHER AFFILIATIONS

International Collaborators: Max Moorkamp (University of Leicester, UK), Kang-Hyeun Ji (Korea Institute for Geosciences and Mineral Resources), Xu Rui (Sichuan Earthquake Bureau, now Sichuan University), Elifuraha Saria (Ardhi University, Tanzania), Fred Tugume (Geological Survey and Mines, Department Ministry of Natural Resources of Uganda), Gladys Kianji (University of Nairobi), Stewart Fishwick (University of Leicester), Juliet Biggs (University of Bristol), Sascha Brune (GFZ), Anne Glerum (GFZ), Kevin Aanyu (Makerere University)

U.S. Collaborators: Maurizio Battaglia (USGS, VDAP), Mong-Han Huang (University of Maryland), Corné Kreemer (University of Nevada, Reno), James Gallagher and Dave Fulker (OPeNDAP), Mike Daniels (Ronin Institute), Dave Mencin (UNAVCO), Andy Nyblade (Penn State), Christelle Wauthier (Penn State), Estella and Elliot Atekwana (University of Delaware), Scott Peckham and Anne Sheehan (University of Colorado, Boulder), Zach Easton and Dan Fuka (Virginia Tech), Deidre Gibson and Bill Moore (Hampton University), J. Hu (Caltech), John Naliboff (New Mexico Tech), Brad Aagaard (USGS), Suzan Van der Lee (Northwestern University), Mike Taylor (University of Kansas), Andrew Katumwehe (Mid-Western State University), Rob Evans (WHOI), Sæmundur Halldórsson (University of Iceland), Tyrone Rooney (University of Michigan)

Graduate Advisor: Eric Calais, Ecole Normale Supérieure (formerly Purdue University)
Major Postdoctoral Advisor: Brad Hager, Massachusetts Institute of Technology

16.0 REPORTS AND TECHNICAL NON-REFERRED PUBLICATIONS

[10] Evans, Eileen L.; Nikulin, Alex; Ford, Heather A.; Stamps, D. Sarah; Creasy, Neala; Swiatlowski, Jeryln; et al. (2020): An Early Career Investigator Community Vision for the Future NSF Geophysical Facility: Education, Workforce, and Outreach Needs. figshare. Online resource. https://doi.org/10.6084/m9.figshare.12398372.v1

[9] Ford, Heather A.; Floyd, Michael; Stamps, D. Sarah; Mendoza, Manuel; Bozdag, Ebru; Bowden, Daniel; et al. (2020): An Early Career Investigator Community Vision for the Future NSF Geophysical Facility: Data Services Needs. figshare. Online resource. https://doi.org/10.6084/m9.figshare.12398321.v1

[8] Stamps, D. Sarah; Eilon, Zach; Fan, Wenyuan; Lynner, Colton; Kehoe, Haiyang; Ford, Heather A.; et al. (2020): An Early Career Investigator Community Vision for the Future NSF Geophysical Facility: Instrumentation Services Needs. figshare. Online resource. https://doi.org/10.6084/m9.figshare.12398288.v1

[7] NSF EARTHCUBE: A Position Paper on EarthCube adoption/promotion of principles embodied in the FAIR acronym for current and future activities, 2019, Rubin, K.H., Kelbert, A., Stamps, D.S., Meier, O., Koskela, R. and the EarthCube Leadership Council

[6] NSF EARTHCUBE REPORT: Ouida Meyer, D. Sarah Stamps, Lynne Schreiber, and the EarthCube Science Committee, 2018, EarthCube Resources for GEO-CI Workshops, https://doi.org/10.5281/zenodo.3371777

[5] NSF EARTHCUBE REPORT: David Arctur, Scott Peckham, D. Sarah Stamps, Bob Arko, Janet Fredericks, 2016, AIP Tiger Team Response to the Xenity Architecture Implementation Plan

[4] NSF EARTHCUBE SCIENCE COMMITTEE REPORT: Aronson E, Bristol S, Burgess AB, Chandrasekar V, Close H, van Eyken T, Ferrini V, Gomez B, Kinkade D, Kelbert A, Martin RL, Ritterbush K, Rubin K, Schmittner A, Slota S, Stamps DS, Stocks K, Tzeng MW, Wiebe P, Wood-Charlson E, 2015, Geoscience 2020: Cyberinfrastructure to reveal the past, comprehend the present, and envision the future, EarthCube Working Paper ECWP-2015-1, dx.doi.org/10.7269/P3MG7MDZ

[3] WHITE PAPER: Douglas B., R, Bennett, D.S. Stamps, N. Niemi, B. Wang, E. Nissan, M, Oskin, A. Duvall, M.Hamburger, 2015, Current directions of field science education with respect to geodetic technologies, White Paper for Workshop on Future Seismic and Geodetic Facility Needs in the Geosciences, May 4-6, 2015.

[2] WHITE PAPER: Stamps D.S. et al., 2013, An investigation of rift-parallel surface deformation along the East African Rift System, GeoPRISMS Planning Workshop for East African Rift, Morristown, NJ, 10/25/13-10/27/13.
[1] WHITE PAPER: Stamps D.S. et al., 2013, An investigation of plate boundary formation in Madagascar, GeoPRISMS Planning Workshop for East African Rift, Morristown, NJ, 10/25/13-10/27/13.

17.0 REFEREED PUBLICATIONS

ORCID 0000-0002-3531-1752
Statistics from Google Scholar (7/25/2021): Total citations: 1189, H-Index: 13, i10 index: 16
Total Publications: 25 (7 first author, 8 second author, 6 student first author)
*GTL graduate student author, **GTL researcher authored, ***GTL undergraduate student author

[25] *Njinju, E.A., D.S. Stamps**,** K Neumuller, J. Gallagher (2021), Lithospheric control of melt generation beneath the Rungwe Volcanic Province, East Africa, Journal of Geophysical Research, doi:10.1029/2020JB020728

[24] *Rajaonarison, T.A., D.S. Stamps, J. Naliboff, 2021, Role of Lithospheric Buoyancy Forces in Driving Deformation in East African from 3D Geodynamic Modeling, Geophysical Research Letters, https://doi.org/10.1029/2020GL090483.

[23] D.S. Stamps, C. Kreemer, R. Fernandes, *T. Rajaonarison, G. Rambolamanana, 2020, Redefining East African Rift System Kinematics, *Geology,* https://doi.org/10.1130/G47985.1.

[22] Glerum, A., S. Brune, D.S. Stamps, M. Strecker, Why does Victoria rotate? Continental microplate dynamics in numerical models of the East African Rift, 2020, Nature Communications, doi:10.1038/s41467-020-16176-x.

[21] *Rajaonarison, T.A., D.S. Stamps, S. Fishwick, S. Brune, A. Glerun, J. Hu, 2020, Numerical Modeling of Mantle Flow Beneath Madagascar to Constrain Upper Mantle Rheology Beneath Continental Regions, Journal of Geophysical Research, doi: 10.1029/2019JB018560.

[20] *Njinju A. E., E. Atekwana, D.S. Stamps, M.G. Abdelsalam, E.A. Atekwana, K.L. Mickus, V.N. Nyalugwe, 2019, Lithospheric Structure of the Malawi Rift: Implications for Rifting Processes in Magma Poor Rift Systems, Tectonics, doi:10.1029/2019TC005549.

[19] **Rui, X. and D.S. Stamps, 2019, Strain Accommodation in the Liangshan Mountain area, Southeastern Margin of the Tibetan Plateau, Journal of Geophysical Research, doi: 10.1029/2019JB017614.

[18] *Njinju A. E., F. Kolawole, E.A. Atekwana, D.S. Stamps, E.A. Atekwana, M.G. Abdelsalam, K.L. Mickus, A.B. Katumwehe, and V.N. Nyalugwe, 2019, Terrestrial heat flow in the Malawi Rifted Zone, East Africa: Implications for tectono-thermal inheritance in continental rift basins, Journal of Volcanology and Geothermal Research, doi:10.1016/j.jvolgeores.2019.07.023.

[17] *Jones, J.R., D.S. Stamps, C. Wauthier, J. Biggs, E. Saria, 2019, Evidence for slip on a border fault triggered by magmatic processes in an immature continental rift, G-Cubed. doi:10.1029/2018GC008165.

[16] **Rui, X., D.S. Stamps, A Geodetic Strain Rate and Tectonic Velocity Model for mainland China Based on GNSS Data Spanning 1996-2017, 2019, G-Cubed, doi:10.1029/2018GC007806.

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18.0 OPEN-ACCESS DATA PRODUCTS, JUPYTER NOTEBOOKS, AND SOFTWARE

*GTL graduate student author, **GTL undergraduate student author

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19.0 SELECTED CONFERENCE PROCEEDINGS

Stamps, DS, J Gallagher, S Peckham, A Sheehan, N Potter, K Neumiller, E Njinju, M Stoica, EA Easton, D Fuka, D Fulker (2021), Seamless Long-Tail and Big Data Access via the EarthCube Brokering Cyberinfrastructure BALTO, EarthCube Annual Meeting

Peckham, S, M Stoica, DS Stamps, J Gallagher, N Potter, D Fulker (2020), The BALTO Jupyter Notebook GUI, Jupyter Meets Earth Meeting

Peckham, S, M Stoica, DS Stamps, J Gallagher, N Potter, D Fulker (2020), The BALTO Jupyter Notebook GUI, EarthCube Annual Meeting

Stamps, DS, J Gallagher, S Peckham, A Sheehan, N Potter, K Neumiller, E Njinju, M Stoica, A Easton, D Fuka, D Fulker (2020), Seamless Long-Tail and Big Data Access via the EarthCube Brokering Cyberinfrastructure BALTO, EarthCube Annual Meeting

*Njinju E, DS Stamps, K Neumuller, J Gallagher (2020), Lithospheric control of melt generation beneath the Rungwe Volcanic Province and the Malawi Rift, East Africa, EarthCube Annual Meeting

K Neumiller, J. Gallagher, DS Stamps, E. Njinu, Maria, (2020), Remote data processing inside the ASPECT analysis tool, EarthCube Annual Meeting

DS Stamps, JHR Gallagher, SD Peckham, AF Sheehan, N Potter, M Stoica, *EA Njinju, ZM Easton, DW Fulker, DR Fuka (2019) The Open-Source EarthCube Cyberinfrastructure BALTO: Applications in Earth Science, AGU Fall Meeting

*Jones, JR, DS Stamps, B Aagaard, C Wauthier (2019) Investigation of Volcano-tectonic Interactions in the Natron Rift of the East African Rift System using Numerical Modeling, AGU Fall Meeting

Daniels, MD, SJ Graves, V Chandrasekar, DS Stamps, B Kerkez, C Martin, SR Gooch, *JR Jones, MD Bartos (2019) CHORDS: Helping to build the Internet of Things for the Geosciences (IoT-G), AGU Fall Meeting

*Rajaonarison, TA, J Naliboff, DS Stamps (2019) The relationship between lithospheric structure and observed deformation centered on the Eastern Branch of the East Africa Rift System, AGU Fall Meeting

Fuka, DR, ME Apple, JHR Gallagher, DW Fulker, N Potter, R Duerr, MB Wagena, E Lingerfelt, MD Daniels, A Ameko, SD Peckham, K Neumiller, A Collick, EM Bock, RR White, DS Stamps, ZM Easton (2019) IoT Sensors and Their Pathway to HPC, AGU Fall Meeting

*Njinju, EA, DS Stamps, JHR Gallagher, K Neumiller (2019) Sources of Melt Generation in the Malawi Rift Implemented with ASPECT and the EarthCube Cyberinfrastructure BALTO, AGU Fall Meeting

Stamps, DS, E Saria, M Daniels, D Mencin, *JR Jones, D Ntambila, KH Ji (2018) Tanzania Volcano Observatory (TZVOLCANO): Implementing Real-Time GNSS Monitoring with the EarthCube Cyberinfrastructure CHORDS, poster, UNAVCO Science Workshop

Malloy S, M Stoica, DS Stamps, S Peckham, C Meertens (2018) Towards Open Access GNSS/GPS Velocity Solutions at UNAVCO, UNAVCO Science Workshop

Gallagher, J, N Potter, DS Stamps (2018) Using JSON-LD to power dataset search and discovery in the Hyrax data server, AGU Fall Meeting

Daniels M, B Kerkez, V Chandrasekar, S Graves, DS Stamps, A Botnick, C Martin, K Keiser, R Gooch, *JR Jones, M Bartos, C Collins (2018) CHORDS: Building the Internet of Things for the Geosciences (IoT-G), Poster, AGU Fall Meeting

Stamps, DS, J Gallagher, S Peckham, A Sheehan, N Potter, M Stoica, *S Malloy*, *E Njinju, ZM Easton, DR Fuka (2018) Towards Brokered Alignment of Long¬Tail Observations (BALTO), iPoster, AGU Fall Meeting

Malloy S, CM Puskas, M Stoica, DS Stamps, D Phillips, S Peckham (2018) Towards Open Access GNSS/GPS Velocity Solutions at UNAVCO, AGU Fall Meeting

Daniels M, B Kerkez, V Chandrasekar, S Graves, DS Stamps, A Botnick, C Martin, K Keiser, R Gooch, *JR Jones, M Bartos, C Collins (2018) Cloud-Hosted Real-time Data Services for the Geosciences (CHORDS): Developing interfaces to systems that visualize, process, analyze and archive real-time geoscience data, poster, EarthCube All-Hands Meeting

*Njinju, EA, DS Stamps, S Fishwick (2018) Investigating Seismic Anisotropy Beneath the Malawi Rift, East Africa with Geodynamic Modeling, poster, AGU Fall Meeting

*Rajaonarison T, DS Stamps, S Fishwick S, Brune, A Glerum (2018) Small-Scale Flow Induced Azimuthal Seismic Anisotropy beneath Madagascar: Implications for Rheology, poster, AGU Fall Meeting

Stamps, DS, J Gallagher, S Peckham, A Sheehan, N Potter, M Stoica, *S Malloy*, *E Njinju, ZM Easton, DR Fuka (2018) Towards Brokered Alignment of Long-Tailed Observations (BALTO), a, poster, EarthCube All-Hands Meeting

*Jones, JR, DS Stamps (2017) A case study in graduate student development, EarthCube All-Hands Meeting, 2017, invited talk

Stamps, DS, E. Saria, *J.R. Jones, K.H. Ji, M. Daniels, D. Mencin, D. Ntambila (2017) Potential volcanic deformation signals at Ol Doinyo Lengai in 2017: detection and Response, EarthCube All-Hands Meeting

*Schobelock, J, DS Stamps, M Pagani, J Garcia, RH Styron, (2017) The Role of Long-Term Tectonic Deformation on the Distribution of Present-Day Seismic Activity in the Caribbean and Central America, AGU Fall Meeting

Stamps, D.S., E Saria, *T. Rajaonarison (2017) Advances in the kinematics and dynamics of Africa, AfricaArray Meeting

T Nguyen, D.S. Stamps (2017) Visualizing TZVOLCANO GNSS Data with Grafana via the EarthCube Cyberinfrastructure CHORDS: an Example of Dashboard Creation for the Geosciences, AGU Fall Meeting

Stamps, DS, C. Kreemer, *T Rajaonarison (2017) Is Active Tectonics on Madagascar Consistent with Somalian Plate Kinematics?, AGU Fall Meeting

*Njinju, E, E Atekwana, DS Stamps, M Abdelsalam, VA Nyalugwe (2017) Evidence for crustal and sub-continental lithospheric mantle decoupling beneath the Malawi Rift, AGU Fall Meeting

Kolawole, F, EA Atekwana, *S Malloy,* DS Stamps, R Grandin, MG Abdelsalam, K Leseane, EM Shemang (2017) April 3, 2017 Mw 6.5 Moiyabana, Botswana Earthquake resulted from extensional reactivation of Precambrian Limpopo Belt thrust splay: Evidence from potential field data and Differential Interferometric Synthetic Aperture Radar (DInSAR) analyses, AGU Fall Meeting

*Jones, JR, DS Stamps, C. Wauthier, MD Daniels, E Saria, Elifuraha, K-H Ji, D Mencin, D Ntambila (2017) Implementing real-time GNSS monitoring to investigate continental rift initiation processes, AGU Fall Meeting

Jones, JR, J Schobelock, *TT Nguyen*, *TA Rajaonarison, *S Malloy*, *EA Njinju, *L Guerra*, DS Stamps, GB Glesener (2017) A Hands-on Physical Analog Demonstration of Real-Time Volcano Deformation Monitoring with GNSS/GPS, AGU Fall Meeting

Malloy, *S.* DS Stamps (2017) Implications of Seismically Active Fault Structures in Ankay and Alaotra Regions of Central Madagascar, AGU Fall Meeting Abstracts

*Rajaonarison, TA, Stamps, DS, Fishwick, Stewart (2017) Geodynamic Constraints on the Sources of Seismic Anisotropy Beneath Madagascar, AGU Fall Meeting

Muirhead, J, H Lee, SA Kattenhorn, TP Fischer, CJ Ebinger, S Mana, BD Turrin, G Kianji, E Dindi, SW Roecker, SJ Oliva, A Weinstein, DS Stamps (2016) Early-stage continental rifting in East Africa assisted by magma and magmatic Volatiles, AGU Fall Meeting Abstracts

*A Rajaonarison, DS Stamps (2016) The Malagasy Lithosphere-Asthenosphere System Constrained by Independent Initial Temperature Conditions: Implications for Extensional Processes, AGU Fall Meeting Abstracts

*JR Jones, DS Stamps (2016) Investigating Stress Interactions Between the Active Ol Doinyo Lengai Volcano and Adjacent Natron Border Fault in a Young Segment of the East African Rift System, AGU Fall Meeting Abstracts

Stamps, DS, E Saria, *JR Jones, MD Daniels, D Mencin (2016) Tectono-Magmatic Investigations with Societal Implications: Progress on the Tanzania Volcano Observatory (TZVOLCANO, AGU Fall Meeting Abstracts

*Schobelock, J., DS Stamps (2016) Toward a Regional Tectonic Strain Rate Model: A Geodetic Model of the Caribbean and Central America, AGU Fall Meeting Abstracts

Daniels, MD, B Kerkez, V Chandrasekar, SJ Graves, DS Stamps, MJ Dye, K. Keiser, CL Martin, SR Gooch (2016) Using Cloud-Hosted Real-time Data Services for the Geosciences (CHORDS) in a range of geoscience applications, AGU Fall Meeting Abstracts

Kreemer, G. Blewitt, DS Stamps, E. Saria (2015), Plate Tectonics 2.0: Using GPS to Refine Global Crustal Kinematics and Rewrite Textbooks, American Geophysical Union Fall Meeting.

Stamps, DS, *T. Rajaonarison, and G. Rambolamanana (2015), Continental Deformation in Madagascar from GNSS Observations (Invited), American Geophysical Union Fall Meeting.

Stamps, DS, W. Bangerth, B. Hager, C. Kreemer, and E. Saria (2015), Kinematics and Dynamics of Observed Along-Rift Surface Motions in the East African Rift System, American Geophysical Union Fall Meeting.

Stamps, DS, W. Bangerth, and B. Hager (2015), Topside Driven 3D Convection Model of the East African Rift System with Comparison to Observed Rift-Parallel Surface Motions, LPI Contributions, 1839, 5019, Caltech.

Stamps, DS, W. Bangerth, and B. Hager (2015), Influence of Edge-Driven 3D Convection on Mantle-Lithosphere Interactions in East Africa, 14th International Workshop on Modelling of Mantle and Lithospheric Dynamics, France.

20.0 PRE-FACULTY CONFERENCES AND WORKSHOPS

Nov 2014	UNAVCO Field Education Workshop, USA
May 2014	ASPECT Hack-a-thon, USA
Dec 2005-14	American Geophysical Union Fall Meeting, USA
July 2012	CIG Mantle-Lithosphere Dynamics Workshop, USA
Jan 2011	ExxonMobil Student Scientist Conference, USA
Jun 2010	AfricaArray Workshop, USA
Aug 2009	Advanced Workshop on Monitoring, Evaluating, and Communicating Seismic and Volcanic Hazards in East Africa – Trieste, Italy
May 2009	NSF MARGINS Rupturing Continental Lithosphere Workshop, USA
Apr 2009	European Geosciences Union, Austria
Feb 2009	Purdue Univ. Sigma Xi Research Forum, USA
Dec 2008	Purdue Univ. Ecological Sciences and Engineering Symposium, USA
Feb 2008-13	Purdue Univ. Earth & Atmospheric Sci. Graduate Student Expo, USA
Aug 2007	MAERC Research Experiences for Undergraduates, USA
July 2007	International Conference on the East African Rift - Kampala, Uganda
Jun 2006-14	UNAVCO Science Workshop, USA (special session leader, 2012)
Jun 2006	UNAVCO GAMIT/GLOBK Workshop, USA
Feb 2006	Tennessee Honors Council, USA

21.0 FIELDWORK EXPERIENCE

Kenya	GNSS deployment, student training, PI	2017, 2019
Hampton Roads, VA	GPS campaigns, student training, PI	2018, 2019
Rainbow Basin, CA	Geologic Mapping course, instructor	2015
Madagascar	GPS campaigns, student training, PI	2010, 2012, 2014
Uganda	GPS campaign, training, PI	2007- 2010, 2012, 2014, 2018
La Jolla, California	Sedimentology	2011
Tanzania	GPS campaign, co-leader, PI	2006, 2008, 2012, 2014, 2016, 2017, 2019
Haiti	GPS campaign, geodesist	2010
Texas and New Mexico	Geologic mapping	2010
Black Hills, South Dakota	Geologic mapping	2007
Death Valley, California	Stratigraphy and mapping	2006
Northern Caribbean	GPS campaign	2005
New Madrid Seismic Zone	GPS network maintenance	2005-2007