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# JESSICA SUTTON

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## EDUCATION

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### University of South Carolina, Columbia, SC

*Ph.D. in Geological Sciences*

May 2016

*Certificate of Graduate Study in Applied Statistics*

### Yale School of Forestry and Environmental Studies, New Haven, CT

*Masters of Environmental Science*

May 2011

### Berea College, Berea, KY

*Bachelor of Arts in Biology with concentration in field biology*

May 2009

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## RECENT TEACHING & RESEARCH EXPERIENCE

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### Berry College, Mount Berry, GA

❖ *Assistant Professor of Environmental Science*

Aug. 2017 - present

- Teach Introduction to Environmental Science
- Teach Environmental Chemistry

### University of South Carolina, Columbia, SC

❖ *Instructor & Coordinator for Biology 301: Ecology and Evolution*

Sep. 2016 – Jul. 2017

- Advise undergraduate biology majors
- Supervise four biology graduate teaching assistants
- Plan, organize, and setup for eight lab sections each week
- Teach Ecology and Evolution to ~70 biology majors each semester

❖ *Research Technician*

Worked under the supervision of Dr. Venkat Lakshmi to:

- Analysis of satellite data on precipitation, vegetation, evaporation for the Mekong River Basin
- Conduct a comparative study of in-situ and satellite remote sensing precipitation estimates

### NASA DEVELOP National Program, NOAA National Centers for Environmental Information, Asheville, NC

❖ *Center Lead/Research Contractor*

Aug. 2015 – Apr. 2016

- Met with project partners to plan applied research projects
- Interview and hiring new participants for projects
- Provided orientation, training, and assistance to participants
- Reviewed and edited research project deliverables every week
- Authored project proposals with project partners
- Wrote R code for data download, sub-setting, visualization, and analysis
- Taught teams about GIS, satellite remote sensing, data analysis, and scientific writing

❖ *Team Lead/ Research Contractor* Summer 2015

- Worked with research team to develop a 30-year climatology for the U.S. Affiliated Pacific Islands (USAPI) using remotely sensed precipitation from the PERSIANN Climate Data Record (CDR) using R and ArcGIS
- Completed data verification of remotely sensed precipitation using *in situ* precipitation from NOAA stations
- Served as primary contact between DEVELOP and the USAPI
- Helped prepare and write a technical report, poster and oral presentation

### **University of South Carolina, Columbia, SC**

❖ *Instructor for Geology 101: Introduction to the Earth* May 2014/15

- Developed lectures, exams, and lab projects
- Planned and organized geology field trips around South Carolina
- Lectured and graded assignments and exams

❖ *Lab Coordinator for Geology 103 Lab: Environment of the Earth* Spring 2015

- Planned and organized nine laboratory sections for 215 undergraduate students
- Supervised three graduate student instructional assistants
- Helped prepare, proctor and grade exams
- Acted as primary contact person for undergraduate students
- Calculated grades for undergraduate students
- Gave lectures to students when professor was out of town

❖ *Lab Coordinator & Instructional Assistant for Geology 101 Lab: Introduction to the Earth* Fall 2013/14

- Taught undergraduate students about general geology including minerals, rock types, earthquakes, geologic time, plate tectonics, topographic maps, and coastal processes
- Planned and organized lab sections, graded papers, proctored exams, and held office hours for undergraduate students
- Supervised other graduate instructional assistants

### **NASA DEVELOP National Program, Ames Research Center, Moffett Field, CA**

❖ *Team Member/ Research Contractor* Summer 2014

- Worked with research team to measure, monitor, and analyze water quality parameters in near-shore marine environments using NASA satellite data
- Utilized Landsat 7 and 8 imagery to classify land cover in 2000 and 2014
- Helped prepare and write a technical report, poster and oral presentations

### **University of South Carolina, Columbia, SC**

❖ *Instructional Assistant for Marine Science 215 Lab: Coastal Environments of the S.E. U.S.* Spring 2013/14

- Taught undergraduate students about coastal processes and coastal areas including tides, waves, winds, sediments, settling velocity, coastal wetlands, coastal navigation, and anthropogenic influences
- Taught lab sections, graded papers, and held office hours for undergraduate students

- Taught undergraduate students about ocean processes and properties including plate tectonics, thermohaline circulation, waves, tides, climate, and marine species
- Taught lab sections, graded papers, and held office hours for undergraduate students

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## PUBLICATIONS

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- Sutton, J.R.P.** and Lakshmi, V. (2017). From space to the rocky intertidal: using NASA MODIS sea surface temperature and NOAA water temperature to predict intertidal logger temperature. *Remote Sens.* 9, 162, DOI:10.3390/rs9020162. Published on 16 February 2017.
- Wright, E.E., **Sutton, J.R.P.**, Luchetti, N.T., Kruk, M.C., and Marra, J.J. (2016). Closing the Pacific Rainfall Data Void, *EOS*, 97, DOI:10.1029/2016EO055053. Published on 07 July 2016.
- Luchetti, N., **Sutton, J.R.P.**, Wright, E.E., Kruk, M.C. and Marra, J.J. (2016). When El Niño Rages: How Satellite Data Can Help Water-Stressed Islands. *Bull. Amer. Meteor. Soc.* DOI: <http://dx.doi.org/10.1175/BAMS-D-15-00219.1>, Published on 22 February 2016.
- Sutton, J.R.P.**, Luchetti, N.T., Wright, E.E., Kruk, M.C. and Marra, J.J. (2015) An El Nino Southern Oscillation (ENSO) based Precipitation Climatology for the United States Affiliated Pacific Islands (USAPI) Using the PERSIANN Climate Data Record. National Aeronautics and Space Administration DEVELOP National Program, 478 pp.
- Price, J.R.** and Lakshmi, V. (2014). Growth studies of *Mytilus californianus* using satellite surface temperatures and chlorophyll data for coastal Oregon. In: *Remote Sensing of the Terrestrial Water Cycle*. V. Lakshmi (ed). Geophysical Monograph 206. AGU. ISBN 9781118872031.
- Schmitz, O.J. and **Price, J.R.** (2011). Convergence of trophic interaction strengths in grassland food webs through metabolic scaling of herbivore biomass. *J. Anim. Ecol.* 80:1330-1336.
- Thompson, R. L., Thompson, K.R. Fleming, E.A. Cooks, R.D., **Price, J.R.**, Naseman, M.N., and Ole, A.J. (2007). Eastern mistletoe (*Phoradendron leucarpum*, Viscaceae) in the city of Berea: a high incidence of infestation and eight new host species for Kentucky. *J. KY Acad. of Sci.* 69:3-10.

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## RESEARCH PRESENTATIONS

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| <b>2016 AGU Fall Meeting, San Francisco, CA – Poster presentation</b>   | Dec. 2016 |
| “Comparisons of Satellite Precipitation Estimates over the United States Affiliated Pacific Islands (USAPI).” |           |
| <b>2015 AGU Fall Meeting, San Francisco, CA – Poster presentations</b>  | Dec. 2015 |
| “Developing a Greater Understanding of Rocky Intertidal Ecosystems using NASA Earth Observations.”            |           |
| “Mapping ENSO: Precipitation for the U.S. Affiliated Pacific Islands.”  |           |
| <b>2015 Pattullo Conference, Warrenton, VA</b>  | Oct. 2015 |
| Overview of Ph.D. Research  |           |
| <b>2015 Annual Presentations at NASA Headquarters, Washington D.C – Poster presentation</b>                   | Aug. 2015 |
| “Pacific Water Resources.”  |           |
| <b>2014 AGU Fall Meeting, San Francisco, CA – Poster presentations</b>  | Dec. 2014 |

- “Monitoring Watershed Water Quality Impacts on Near-Shore Coral Reef Ecosystems in American Samoa using NASA Earth Observations.”
- “From Space to the Rocky Intertidal: Measuring the Body Temperature of the Intertidal Mussel Species, *Mytilus californianus* using NASA MODIS Surface Temperatures.”
- 2014 AGU Fall Meeting, San Francisco, CA – Oral presentation** Dec. 2014
- “Dazed and Confused: Learning to Engage Non-Science Undergraduates in the Geosciences.”
- 2014 Graduate Student Day, Columbia, SC – Oral presentation** Apr. 2014
- “Using remotely sensed surface temperatures to predict the body temperature of the rocky intertidal mussel species, *Mytilus californianus*, along the Oregon coastline.”
- 2014 Oceans Sciences Meeting, Honolulu, HI – Poster presentation** Feb. 2014
- “Understanding how the temporal and spatial variation in remotely sensed data influences the rocky intertidal mussel species, *Mytilus californianus*.”
- 2013 AGU Fall Meeting, San Francisco, CA – Poster presentation** Dec. 2013
- “Growth studies of *Mytilus californianus* using satellite surface temperatures and chlorophyll data for coastal Oregon.”
- 6<sup>th</sup> International Symposium on B.E.E.R., Arlington, VA– Oral presentation** Oct. 2013
- “Growth studies of *Mytilus californianus* using satellite surface temperatures and chlorophyll data for coastal Oregon.”
- 2013 Graduate Student Day, Columbia, SC – Oral presentation** Apr. 2013
- “An examination of body temperature for the rocky intertidal mussel species, *Mytilus californianus*, using remotely sensed satellite observations.”
- 2012 AGU Fall Meeting, San Francisco, CA – Oral presentation** Dec. 2012
- “An examination of body temperature for the rocky intertidal mussel species, *Mytilus californianus*, using remotely sensed satellite observations.”
- Yale F&ES Student Research Colloquium, New Haven, CT – Poster presentation** Apr. 2011
- “The Effect of Fiddler Crab Behaviors on Salt Marsh Ecosystem Function in the Presence or Absence of Avian Predation.”
- KY Academy of Sciences 94<sup>th</sup> Annual Meeting, Lexington, KY – Oral presentations** Nov. 2008
- “Influence of elevation, host species and host size on the density of mistletoe, *Phoradendron robustissimum* (Viscaceae) in Costa Rica. Kentucky Academy of Sciences 94<sup>th</sup> Annual Meeting, University of Kentucky, Lexington, Kentucky (oral presentation).”
- “Behavioral ecology and translocation of the endangered Stephens’ Kangaroo Rat (*Dipodomys stephensi*).”

**KY Academy of Sciences 93<sup>rd</sup> Annual Meeting, Louisville, KY – Oral presentation**

Nov. 2007

“Design and development of palladium-iron bimetallic electrocatalysts for polymer electrolyte fuel cells.”

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### **GRANTS & AWARDS**

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University of South Carolina School of Earth, Ocean, and Environment Taber Award for Outstanding Doctoral Research – 2016

NOAA National Centers for Environmental Information 2015 Employee’s Choice Award *For Innovative Product of the Year* – 2016

University of South Carolina School of Earth, Ocean, and Environment Taber Award for Outstanding Teaching –2015

University of South Carolina Graduate School Travel Grant (\$500) – 2013

6th International Symposium on Biomathematics and Ecology: Education and Research Travel Grant (\$500) – 2013

American Geophysical Union Graduate Student Travel Grant for the 2012 and 2013 Fall Meeting in San Francisco (\$500 each) – 2012 & 2013

Earth and Ocean Sciences Departmental Travel Grant (\$500 each) – 2012 & 2013

The Sounds Conservancy Program of the Quebec-Labrador Foundation/Atlantic Center for the Environment (\$500) - 2010

The Schiff Fund (\$4,000) – 2010

Crawford Prize for Excellence in Conservation Award - 2010

Berea College Labor Award – 2010

Gilman International Scholarship – 2008

Berea Term Abroad Scholarship - 2008

1<sup>st</sup> Place Oral Research Presentation in Zoology- Kentucky Academy of Science – 2008

3<sup>rd</sup> Place Oral Research Presentation in Botany- Kentucky Academy of Science – 2008

2<sup>nd</sup> Place Oral Research Presentation in Chemistry- Kentucky Academy of Science - 2008

Underwood-Alger Biology Award – 2008

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### **COURSES TAUGHT**

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Biology 301: Ecology and Evolution

Geology 101: Introduction to the Earth

Geology 101: Introduction to the Earth Laboratory

Marine Science 215: Coastal Environments of the Southeastern United States Laboratory

Marine Science 210: Oceans and Society Laboratory

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### **GUEST LECTURER**

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Geology 103: Environment of the Earth

“The Hydrosphere”

Fall 2016

“Hydrologic Cycle & Surface Water”

Geology 335: Processes of Global Environmental Change  
“The Effects of Climate Change on Ecosystem Dynamics”  
“The Ocean in Motion”  
“El Nino, La Nina and the Southern Oscillation”  
Fall 2014

Geology 335: Processes of Global Environmental Change  
“The Effects of Climate Change on Ecosystem Dynamics”  
“Why Summer is Warmer than Winter”  
Fall 2013

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