

Corbin Kling  
Ph.D. Candidate  
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Planetary Research Group  
Marine, Earth, and Atmospheric Sciences  
North Carolina State University

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## Education

*North Carolina State University*

**Doctorate of Philosophy**, Geology, GPA: 3.84, Expected Graduation May 2020

Dissertation Title: Investigating Pit Crater Formation Mechanisms across the Solar System

*University of Georgia*

**Master's of Science**, Geology, May 2016, GPA: 3.82

Thesis Title: Topographic Expressions of Large Thrust Faults on Mars

**Bachelor's of Science**, Geology, May 2014, GPA: 3.35

Thesis Title: Macro- and Microfossils from Terrace Deposits, Taylor Valley, Antarctica

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## Employment

### 2016-Current

*Research/Teaching Assistant*

North Carolina State University, Raleigh NC

Funded By NASA Earth and Space Science

Fellowship

### Summer 2017

*Exploration Geologist Intern*

West Africa Production Group

ExxonMobil Corporation, Houston TX

### 2014-2016

*Research Assistant*

University of Georgia, Athens GA

Funded by Center for Applied Isotope

Studies

### Summer 2015

*Exploration Geologist Intern*

Deepwater Gulf of Mexico Group

Chevron Corporation, Houston, TX

### Summer 2014

*Drone Pilot and Imagery Analysis Intern*

Agrisource Data, formerly VSG-Unmanned,

Norcross GA

### Spring 2014

*Geospatial Intern*

NASA Develop National Internship

Program

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## Skills

### Software:

Microsoft Suite, Adobe Design Suite

ArcGIS, GrassGIS, QGIS

ENVI, Erdas Imagine, Surfer

Pix4D, Agisoft Metashape

LAS Tools

CloudCompare

### Programming Languages:

R

Matlab

Python

### Data Familiarity:

Landsat suite, QuickBird, Planet

GRACE, ICESat, SMAP, Sentinel-1

LiDAR (manned and drone)

Multispectral, Hyperspectral, and

Photogrammetric (manned, drone, and satellite)

Seismic (onshore and offshore)

CTX, HRSC, HiRISE, CRISM, MOLA,

MLA, LOLA, and other planetary mission

data

### UAS Equipment:

DJI: Phantom Series, Mavic Series, Matrice

100, 210, and 600 Pro

C-Astral Bramor Geo

3DRobotics Suite

Trimble UX5

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### **Grants, Awards, and Honors**

**2019** Geological Society of America Graduate Student Grant (\$2150)  
**2018** Geological Society of America Graduate Student Grant (\$1850)  
**2018** NASA Hyperwall Data Visualization Contest Runner-up (\$2500)  
**2017** NASA Earth and Space Science Fellowship (3 year award, \$135,000)  
**2017** National Association of Geoscience Teachers Outstanding Teaching Assistant Award  
**2017** Land 'O Lakes Prize: Drone Challenge Competitor (\$5,000)  
**2016** Second Place, AAPG Eastern Section Imperial Barrel Award Competition  
**2014** Undergraduate Geology Student of the Year, University of Georgia

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### **Service**

**NASA Review Panel Member:** Lunar Data Analysis Program, Discovery Data Analysis Program, Rosetta Data Analysis Program, 1x Participating Scientist Program  
**Journal Reviewer:** Progress in Physical Geography, Geosphere, Icarus

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### **Invited Talks**

**2015** Chevron Internship Experience and Advice to Students Interested in the Petroleum Industry; UGA AAPG Chapter Meeting, October 2015  
**2015** Drones Eye View of the Laki Lava Flow, Iceland; UGA Geology Department weekly Colloquium Series, November 13, 2015

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### **Teaching Experience**

**2016-2019** MEA451 Structural Geology and Tectonics lab instructor (NCSU)  
**2018-2019** MEA465 Geology Field Camp (NCSU)  
**2017** MEA110 Intro Geology lab instructor (NCSU)  
**2015** GEOL4060 Structural Geology lab instructor (UGA)  
**2013-2017** Assistant Field Trip Leader, Paleontology Class, Sapelo Island, Georgia (UGA)

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### **Leadership**

**2017-2018** President, Graduate Student Association, Marine, Earth, and Atmospheric Sciences Department, North Carolina State University  
**2013-2014** Co-President, Geology Club, University of Georgia  
**2013** Co-coordinator for public science outreach, Geology Club, University of Georgia  
**2012-2013** Vice President, Longboarding club, University of Georgia

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### **Community Science Outreach**

**2013-2014** Participated in 3 outreach events to middle and elementary schools  
**2012-2013** Organized eight events for elementary schools and libraries, including half day programs in Earth Science Education

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### **Research/Field Experience**

**2019**

- Cayonlands National Park GSA Graduate Student Grant field work to investigate collapse structures located within the Needles District.

- Field Camp Teaching Assistant for mapping and Geomorphology portion (2 weeks) based out of Ghost Ranch, NM. Responsible also for updating mapping materials for the camp to new, higher resolution drone and satellite imagery and DEMs

## **2018**

- Craters of the Moon National Monument and Preserve fieldwork campaign. Unmanned aerial system permit granted for investigation of Pit craters and volcanic features within the Preserve to support Ph.D. work on Mars analogue pit crater field sites.
- Rio Chama Canyon fieldwork assistant for fellow Ph.D. student taking OSL and carbon samples for landslide dating of the Rio Chama river incision rate.
- Field camp Teaching Assistant for mapping and geomorphology portion (2 weeks) based out of Ghost Ranch, NM.

## **2017**

- Continuation of Simpson Desert AU field data collection, incorporating structure-from-motion drone photogrammetry to collect topography info, as well as collecting samples from at depth within the dune cores for optically stimulated luminescence dates and geochemical analysis

## **2016**

- ExxonMobil Bighorn Basin Field Trip, Sequence Stratigraphy and Sedimentology field course taught in the Bighorn Basin

## **2015**

- University of Arizona Volcanology Workshop, two weeks obtaining UAS imagery of the Laki lava flow, Iceland, and learning about volcanic processes

## **2014**

- Invited by Dr. Bob Craddock of the Air and Space Museum, Smithsonian Institution to participate in field work in the Simpson Desert, AU studying linear dune geomorphology by utilizing dGPS to collect topography data
- NASA Develop Internship, Ecological Forecasting via satellite data research projects. Hemlock tree degradation studies in the Great Smoky Mountains National Park by using Landsat 5 and Landsat 8 data to map Hemlock tree decline from 2000-2013. University of Georgia, Athens, Ga

## **2013**

- Invited by Dr. Bob Craddock of the Air and Space Museum, Smithsonian Institution, to do field work in on the big island of Hawai'i. Field work was based out of Volcano, Hi, and focused on astrobiology and what types of organisms can use basalt to make energy.
- Learned how to use Scanning Electron Microscopy( SEM) from Dr. Sam Bowser of the Wadsworth Center, Albany, NY and had about 15 hours of SEM time.

## **2012**

- Research leader, class project, barrier island facies of Sapelo Island, GEOL 4010 class, University of Georgia, Athens, GA. Outreach video and paper completed.
- Research assistant, Dr. Swanson and Chris Fleisher assisted Mineralogy class project working on a microprobe to get mineralogies for a Mafic, Ultramafic complex, for GEOL 3010 class, About 12 hours spent microprobing, University of Georgia, Athens, GA

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## Professional References

Dr. Paul Byrne  
Ph.D. Advisor  
Assistant Professor North Carolina State University  
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Dr. Karl Wegmann  
Ph.D. Committee Member  
Assistant Professor, North Carolina State University  
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Dr. Robert Craddock  
Mentor  
Research Scientist, Center for Earth and Planetary Studies, Smithsonian Institution  
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