

**Hannah C.M. Susorney**  
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Department of Earth and Planetary Science  
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## EDUCATION

*Graduate Student*, Earth and Planetary Science September 2013-Present  
Johns Hopkins University, Baltimore, MD  
Advisors: Dr. Olivier S. Barnouin and Dr. Darrell F. Strobel

*Masters of Art*, Earth and Planetary Science May 2015  
Johns Hopkins University, Baltimore, MD

*Bachelor of Science*, Earth Science-Geology May 2013  
Montana State University, Bozeman, MT  
Minor: Mathematics

## RESEARCH EXPERIENCE

*Johns Hopkins University Baltimore, MD and JHU Applied Physics Lab* September 2013-Present  
Laurel, MD  
Graduate Research Assistant  
Advisor: Dr. Olivier Barnouin and Dr. Darrell Strobell

- The Global Surface Roughness of Mercury
- The Surface Roughness In and Around Complex Craters on Mercury

*The Johns Hopkins University Applied Physics Lab/NASA Internship* June-August, 2012, 2013  
Laurel, MD  
Advisor: Dr. Carolyn Ernst and Dr. Nancy Chabot

- Exploring the Morphology of Simple Craters that Host Polar Deposits on Mercury: Implications for the Source and Stability of Water Ice
- Investigating Mercury's Geology with the Mercury Dual Imaging System (MDIS)

*Field Assistant* July-August 2011  
Robertson Glacier, Alberta  
Advisor: Dr. Mark Skidmore (Montana State University)

- Microbiology of Robertson Glacier Basal Runoff

*NSF International Research Experience for Students (IRES)* May-June 2011  
Hangzhou, China  
Advisor: Dr. Frankie Jackson (Montana State University)

- Morphology and Associated Sedimentology of Cretaceous Egg Clutches

## PROFESSIONAL ACTIVITIES

Geological Society of America Student Advisory Council, <i>Chair</i>	2015-2016
NASA Review Panel, <i>Student Member</i> Executive Secretary	2015
Local Organizing Committee for the Geological Society of America Annual Meeting, <i>Student Member</i>	2015
Lunar Planetary Institute's Meteor Crater Field Camp, <i>Participant</i>	2014
Geological Society of America Planetary Geology Division, <i>Student Representative</i>	2014-2016

## TEACHING EXPERIENCE

<i>Johns Hopkins University</i>	
Guest Lecture Planetary Surface Processes (1 lecture)	Fall 2015
Guest Lecture Tour of the Solar System (1 lecture)	Spring 2015

<i>Montana State University</i>	
Undergraduate Teaching Assistant for Honors Earth System Science	Fall 2011, 2012

## OUTREACH ACTIVITIES

Roots and Branches Elementary School West Baltimore, MD	May 2015
<ul style="list-style-type: none"> <li>Presented on asteroids and impact craters to 200 elementary age children.</li> </ul>	
The Johns Hopkins University Applied Physics Lab Laurel, MD	Summer 2012, 2013
<ul style="list-style-type: none"> <li>Produced Images of the Day for the MESSENGER Public Website</li> <li>Assisted in responding to the public's question about Mercury and the MESSENGER mission</li> </ul>	
Father Marquette Middle School Marquette, MI	May 2012
<ul style="list-style-type: none"> <li>Presented an hour long talk to two 6th grade classes (approximately 30 students each) about my experience study science in college and recent research activities I was involved in</li> </ul>	

## HONORS

Dwornik Award Best Graduate Student Poster	2015
Johns Hopkins Applied Physics Laboratory Graduate Student Fellowship	2014-present
Johns Hopkins University Earth and Planetary Science Department Best 30 minute Journal Club Graduate Student Presentation	2014
National Science Foundation Graduate Research Fellowship <i>Honorable Mention</i>	2014
Montana State University Top Geology Undergraduate	2013
Montana Space Grant Consortium Best Undergraduate Poster	2013
Montana State University Undergraduate Scholars Program Research Grant	2011, 2012
Montana State University Earth Science Colloquium Best Undergraduate Poster	2012

## PUBLICATIONS

1. **Susorney, H.C.M.**, Barnouin, O.S., Ernst, C.M., Johnson, C.L. Impact Crater Morphology on Mercury from MESSENGER (2016). *Icarus*, in press

### TALKS

- **Susorney, H.C.M.**, and Barnouin, O.S. (2014) Surface Roughness using a Range of MLA Baselines. 32nd MESSENGER Science Team Meeting
- **Susorney, H.C.M.**, Chabot, N.L., Ernst, C.M., and Barnouin, O.S. (2013) Exploring the Morphology of Simple Craters that Host Polar Deposits on Mercury: Implications for the Source and Stability of Water Ice. 31st MESSENGER Science Team Meeting

### CONFERENCE ABSTRACTS

- **Susorney, H.C.M.** Barnouin, O.S., Ernst, C.M., and Neumann, G.A. (2015) The Distribution of Surface Roughness Around Complex Craters on Mercury. Geological Society of America Annual Meeting. Abstract 100-4.
- **Susorney, H.C.M.**, Barnouin, O.S., and Ernst, C.M. (2015) The Surface Roughness of Mercury: Investigating the Effects of Impact Cratering, Volcanism and Tectonics. 46th Annual Lunar and Planetary Science Conference. Abstract 2088.
- Barnouin, O.S., Ernst, C.M., **Susorney, H.C.** (2015). The Remarkable Hokusai Crater, Mercury. 46th Lunar and Planetary Science Conference. Abstract 2672.
- Kring, D. A. ...**Susorney, H.C.M.** (2015) Distribution of Kaibab Ejecta North of Meteor Crater, Arizona. 46th Lunar and Planetary Science Conference. Abstract 1186.
- **Susorney, H.C.M.**, Barnouin, O.S., and Ernst, C.M. (2014) Investigating the Surface Roughness of Mercury. American Geophysical Union Fall Meeting. Abstract P34C-08\*
- **Susorney, H.C.M.**, Barnouin, O.S., and Ernst, C.M. (2014) The Role of Target Properties and Projectile Velocity on Final Crater Morphology of Craters on Mercury. 45th Lunar and Planetary Science Conference. Abstract 1276.
- Ernst, C. M., Chabot, N. L., **Susorney, H.C.M.**, Barnouin, O. S., Harmon, J. K., and Paige, D. A. (2014) Exploring the Morphology of Simple Craters that Host Polar Deposits on Mercury: Implications for the Source and Stability of Water Ice. 45th Lunar and Planetary Science Conference. Abstract 1238.
- Ernst, C.M., Chabot, N.L., **Susorney, H.C.**, and Barnouin, O.S. (2013) Exploring the Morphology of Simple Craters that Host Polar Deposits on Mercury: Implications for the Source and Stability of Water Ice. Geological Society of America Annual Meeting. Abstract 383-10.
- **Susorney, H.C.**, Barnouin, O.S., Ernst, C.M., and Head, J.W. (2013) Impact Crater Morphometry on Mercury from MESSENGER Observations. 44th Annual Lunar and Planetary Science Conference. Abstract 1650.
- Barnouin, O.S., Ernst, C.M., **Susorney, H.C.**, Neumann, G.A., Johnson, C.L., Balckerski, J and Hauck, S.A. (2012). Impact Velocity as a Source of Variations in Crater Depth on Mercury, American Geophysical Union Fall Meeting. Abstract P33B-1941.
- Barnouin, O.S. Runyon, K.D., **Susorney, H.**, Ernst, C.M., and Wada, K. (2012). Experimental Investigation of Ejecta Emplacement. Geological Society of America Annual Meeting. Abstract 202-9.

\* denotes oral presentation

### COMPUTING SKILLS

IDL, ISIS, Mathematica, R, GMT, MATLAB, L<sup>A</sup>T<sub>E</sub>X

## **MEMBERSHIPS**

American Geophysical Union, Planetary Sciences Section, 2011-present  
Geological Society of America, Planetary Geology Division, 2010-present