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Department of Earth and Planetary Science  
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## EDUCATION

*Graduate Student*, Earth and Planetary Science September 2013-Present  
*Masters of Art*, Earth and Planetary Science May 2015  
Johns Hopkins University, Baltimore, MD  
Advisors: Dr. Olivier S. Barnouin and Dr. Darrell F. Strobel

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

## RESEARCH EXPERIENCE

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

## PUBLICATIONS

4. **Susorney, H.C.M.**, Barnouin, O.S., Ernst, C.M. The distribution of surface roughness around large complex craters and it's implications for relating surface roughness to surface Age (in prep.)
3. **Susorney, H.C.M.**, Barnouin, O.S., Ernst, C.M., and Byrne, P.K. Surface Roughness from the Mercury Laser Altimeter (submitted), JGR-Planets
2. Blewett, D.T., Stadermann, A.C., **Susorney, H.C.**, Ernst, C.M., Xiao, Z., Chabot, N.L., Denevi, B.W., Murchie, S.L., McCubbin, F.M., Kinczyk, M.J., Gillis-Davis, J.J., and Solomon, S.C. Analysis of MESSENGER high-resolution images of Mercury's hollows and implications for hollow formation (2016). JGR-Planets, accepted
1. **Susorney, H.C.M.**, Barnouin, O.S., Ernst, C.M., Johnson, C.L. Impact Crater Morphology on Mercury from MESSENGER Altimetry and Imaging (2016). *Icarus*, 271, 180-193.

## HONORS

Johns Hopkins University Earth and Planetary Science Department 2016  
Best 60 minute Journal Club Graduate Student Presentation  
Dwornik Award, Best Graduate Student Poster 2015  
Johns Hopkins Applied Physics Laboratory Graduate Student Fellowship 2014-2017  
Johns Hopkins University Earth and Planetary Science Department 2014  
Best 30 minute Journal Club Graduate Student Presentation  
National Science Foundation Graduate Research Fellowship, *Honorable Mention* 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

### PROFESSIONAL SERVICE

Reviewed Papers in: Journal of Geophysical Research-Planets, Advances in Space Research Geological Society of America Student Advisory Council, <i>Chair</i>	2015-2016
NASA Review Panel, <i>Executive Secretary</i>	2015
Local Organizing Committee for the Geological Society of America Annual Meeting, <i>Student Member</i>	2015
Geological Society of America Planetary Geology Division, <i>Student Representative</i>	2014-2016

### RESEARCH ACTIVITIES

Lunar Planetary Institute's Meteor Crater Field Camp, <i>Participant</i>	Meteor Crater, AZ, October 2014
Johns Hopkins University Applied Physics Laboratory NASA Summer Internship, <i>Intern</i>	Laurel, MD, Summer 2012,2013
NSF International Research Experience for Students (IRES), <i>Participant</i>	Hangzhou, China, October 2014

### 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 2015,2016
<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>	

### CONFERENCE ABSTRACTS

- \*Susorney, H.C.M. and Barnouin, O.S. (2016) The Global Surface Roughness of 433 Eros. AAS Division of Planetary Science Annual Meeting

- **\*Susorney, H.C.M.** Barnouin, O.S., and Ernst, C.M. (2016) The Distribution of Surface Roughness Around Complex Craters on Mercury. 47th Lunar and Planetary Science Conference. Abstract 1705.
- **\*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

Python, Unix, IDL, ISIS, Mathematica, Git, 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  
AAS Division of Planetary Science, 2015-present