9th Annual College of Science Graduate Student Awards

Spring 2016 Graduate Student News

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The Department of Planetary Sciences/Lunar and Planetary Laboratory was pleased to honor the following students as recipients of the 2016 College of Science Graduate Student Awards. Each student received $100 and recognition at a reception held on April 14.

Outstanding Scholarship: Michelle Thompson
Michelle Thompson will defend her dissertation, focused on deciphering the microstructural signatures of space weathering in lunar soils and samples returned from asteroid Itokawa by the Hayabusa mission, in May. She will leave graduate school having accumulated an unusually rich collection of honors and awards, including a Canadian NSERC, a NESSF, a Berkner Internship, the LPI Career Development Award, a Dwornik Award (2014 LPSC), a Galileo Circle Scholarship, a Shandel Travel Award, the Wiley Award for Outstanding Student Presentation (2015 GSA), the Microbeam Analysis Society Scholar Award (2014 Microscopy and Microanalysis conference). Michelle recently served as co-lead for the Workshop on Space Weathering of Airless Bodies and she is active in various workshops and graduate-student initiatives within our department (e.g., LPLC, Academic Careers Seminars). She has given invited talks at both the 2013 Symposium on Hayabusa Samples and the 2015 Microscopy and Microanalysis Society meetings.

Michelle's dissertation research required her to master advanced transmission electron microscopy techniques to analyze the crystal structure and chemistry of the lunar and asteroidal materials to gain new insights into the modification of the surfaces of airless bodies to develop a comprehensive model for space weathering in the solar system. This is an important problem for understanding remotely sensed spectra of asteroids and correlating meteorites with their parent bodies. Michelle's work has resulted in two journal articles, and she is working on a third for her dissertation; a fourth publication is likely, post-dissertation. All of this is even more impressive when coupled with the fact that her work had to be done using transmission electron microscopes at other research institutes because the UA did not have one capable of the kind of analyses she required.
Michelle’s advisor is Assistant Professor Tom Zega, who describes his student as “a rising star in the field.”

**Outstanding Service and Outreach: Donna Viola**

Donna Viola is this year’s recipient of the LPL award for service and outreach, which includes attention to broader impacts and involvement in activities outside of academic responsibilities that benefit the department, university and the larger community. Her outreach development and leadership efforts have exceeded what may be expected of a full-time graduate student, and these efforts are in addition to volunteering her time for hands-on activities at various STEM-related festivals and summer camps over the past few years as well as her service representing LPL graduate students on the Associate Graduate Council for the College of
For three semesters, Donna has led workshops for middle and high school students in the Expanding Your Horizons conferences held at local schools. Donna’s high school workshop on choosing landing sites for the future ExoMars rover mission was particularly ingenious. To give the students a glimpse into what it was like to be a planetary scientist, she guided the students using the same datasets that the European Space Agency was using to choose landing sites. She also developed and led an activity regarding Mars in an astrobiological context for the Sci-Fi versus Sci-Fact book club we held over the summer at the Dusenberry-River Library (Tucson) for children ages 9-12 in collaboration with the library’s Children’s Librarian.

Donna has been described by peers as a dependable volunteer and versatile outreach activity developer and leader for all audiences. She has shown an ease at adapting her hands-on activities to different types of audiences, such as modifying her Mars rover landing site activity successfully for both lifelong learners and middle/high school students. She is skilled at marketing her research regarding craters on Mars, as demonstrated by her presentation to a standing-room only crowd in February 2015, the most well attended Space Drafts [5] talks for the entire spring 2015 semester.

Donna has distinguished herself through her initiative in developing and leading engaging outreach activities, leveraging her expertise on both Mars and astrobiology along with her previous outreach experiences.

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**Outstanding Teaching and Mentoring: Ethan Schaefer**
Ethan Schaefer earned the LPL Outstanding Graduate Teaching Assistant (GTA) Award for Spring 2015 and is the 2016 department recipient of the College of Science Teaching and Mentoring award. Ethan earned the LPL GTA award for his work as a GTA with Professor Joe Giacalone in the PTYS/ASTR 206 class, which is a General Education Natural Sciences Tier II course. He is a sixth-year graduate student working with Professor Alfred McEwen.

The nominating comments from Ethan’s students cited his mentoring and thoughtful grading, which included taking the time to explain how to improve the answers to homework problems and why a particular answer was incorrect. The students noted that he was always available and open to suggestions—one student wrote, "I always come away with a much richer understanding after going over lecture topics with him. One of the best TAs I've had." Ethan gave three lectures during the semester, augmenting the instructor's material with numerous well chosen online videos; students were impressed with his lecturing, praising him as a "phenomenal lecturer." Ethan also independently managed an in-class project that required students to present a report describing how science news is depicted in the media depending on the outlet.
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