

## Viranga Perera

School of Earth and Space Exploration  
Arizona State University  
PO Box 876004, Tempe, AZ 85287-6004

(480) 727-2164  
viranga@asu.edu  
virangaperera.com

### EDUCATION

*Doctor of Philosophy*, Geological Sciences (Planetary Science & Science Education) (August 2017)  
Arizona State University, Tempe, AZ  
Thesis topics: Asteroid interiors, the Moon's thermal evolution & online science education

*Master of Science*, Earth Sciences (Planetary Science) March 2014  
University of California, Santa Cruz, CA  
Thesis: *Lunar geophysics–The Moon's fundamental shape and paleomagnetism studies*

*Bachelor of Science*, Physics & Aerospace Engineering (Summa Cum Laude) June 2010  
California State Polytechnic University, Pomona, CA

### PUBLICATIONS

- Che, G., **Perera, V.**, & Semken, S. *Informal Education with a Build Your Own Radio Activity*, (**in prep.**)
- **Perera, V.**, Mead, C., Buxner, S., Horodyskyj, L., Semken, S., Lopatto, D., & Anbar, A. *Students in fully online programs report more positive attitudes toward science than students in traditional, in-person programs*, CBE–Life Sciences Education (**submitted**)
- **Perera, V.**, Jackson, A.P., Asphaug, E. & Ballouz, R. *The Spherical Brazil Nut Effect and its Significance to Asteroids*, Icarus (2016)
- Garrick-Bethell, I., **Perera, V.**, Nimmo, F. & Zuber, M. *The Tidal-Rotational Shape of the Moon and Evidence for Polar Wander*, Nature (2014)

### CONFERENCES

- **Perera, V.**, Mead, C., Buxner, S.R., Horodyskyj, L., Semken, S., Lopatto, D. & Anbar, A. *Assessing Student Attitudes Towards Science in an Adaptive Online Astrobiology Course: Comparing Online and On-Campus Undergraduates*, American Geophysical Union Fall Meeting (December 2016)
- **Perera, V.**, Jackson, A.P., Asphaug, E. & Ballouz, R. *Driving Mechanism of the Brazil Nut Effect in Asteroids*, American Astronomical Society Division for Planetary Sciences (October 2016)
- **Perera, V.**, Mead, C., Buxner, S.R., Horodyskyj, L., Semken, S., Lopatto, D. & Anbar, A. *Assessing Attitudes Towards Science During an Adaptive Online Astrobiology Course: Comparing Online and On-Campus Undergraduates*, American Astronomical Society Division for Planetary Sciences (October 2016)
- Asphaug, E., Jackson, A.P., Gabriel, T.S.J., **Perera, V.**, Elkins-Tanton, L.T., Minton, D.A. & Hesselbrock, A. *Fate of debris from the Borealis basin impact on Mars and from the formation of the Earth-Moon system*, American Astronomical Society Division for Planetary Sciences (October 2016)

- **Perera, V.**, Jackson, A.P., Asphaug, E. & Ballouz, R. *The Spherical Brazil Nut Effect and its Significance to Asteroids*, American Astronomical Society Division for Planetary Sciences (November 2015)
- **Perera, V.**, Buxner, S.R., Horodyskyj, L., Anbar, A., Semken, S., Mead, C. & Lopatto, D. *Investigating Changes in Students' Attitudes Towards Science During an Adaptive Online Astrobiology Course*, American Astronomical Society Division for Planetary Sciences (November 2015)
- Buxner, S.R., Anbar, A., Semken, S., Mead, C., Horodyskyj, L., **Perera, V.**, Bruce, G. & Schönstein, D. *A Guide for Scientists Interested in Researching Student Outcomes*, American Astronomical Society Division for Planetary Sciences (November 2015)
- **Perera, V.**, Lightholder, J., Noviello, J., Cotto-Figueroa, D., Asphaug, E. & Thangavelautham, J. *The Study of Planet Formation and Asteroid Surfaces Using a CubeSat Laboratory*, Low Cost Planetary Missions Conference (June 2015)
- **Perera, V.**, Cotto-Figueroa, D., Noviello, J., Asphaug, E. & Morris, M. *Asteroid Origins Satellite (AOSAT): Science in a CubeSat Centrifuge*, Conference on Spacecraft Reconnaissance of Asteroid and Comet Interiors (January 2015)
- **Perera, V.**, Movshovitz, N., Asphaug, E. & Thangavelautham, J. *Material Studies of Asteroid Regolith and Accretion Using a Low-Cost CubeSat Laboratory*, International Astronautical Congress (October 2014)
- Garrick-Bethell, I., **Perera, V.**, Nimmo, F. & Zuber, M. *The Tidal-Rotational Shape of the Moon and Evidence for Polar Wander*, Lunar and Planetary Science Conference (March 2014)
- Garrick-Bethell, I., **Perera, V.**, Nimmo, F. & Zuber, M. *The Early Shape of the Moon*, American Geophysical Union Fall Meeting (December 2013)
- **Perera, V.** & Garrick-Bethell, I. *Lunar Symmetry: The True Shape of the Moon?*, Lunar and Planetary Science Conference (March 2012)
- **Perera, V.** & Garrick-Bethell, I. *Lunar Asymmetry: Coincidence of the Degree-1 and Degree-2 Features due to a Rayleigh-Taylor Instability and Reorientation*, Lunar and Planetary Science Conference (March 2011)

### WHITE PAPERS

- **Perera, V.** & Buxner, S. *Establishing a Presence on YouTube for Formal and Informal Astronomy Education*, American Astronomical Society Education Task Force (2016).

### TEACHING EXPERIENCE

ASU School of Earth and Space Exploration, Tempe, AZ Teaching Assistant (Introductory Geology)	Spring 2016
Georgiana Bruce Kirby Preparatory School, Santa Cruz, CA Part-time Teacher (Physics)	January 2013 – June 2013
UCSC Earth and Planetary Sciences Department, Santa Cruz, CA Teaching Assistant (Introductory Planetary Science)	Fall 2011 & Fall 2012
Cal Poly Physics Department, Pomona, CA Teaching Assistant (Astrophysics)	Fall 2009

## MENTORING

*ASU Sundial Program*

June 2016 – August 2016

Academic Facilitator

- Helped develop aspects of the academic program for the two-week Sundial program, which served as an introduction to science and to college for a group of incoming physical science undergraduates
- Gave an interactive lecture on the parameters that control the habitability of a planet
- Mentored a group of students on a project exploring exoplanets data

## SERVICE

*Associated Students of Arizona State University*  
Committee Member (Technology Advisory Board)

October 2016 – present

*ASU Graduate and Professional Student Association*  
Research Grant Reviewer

Fall 2016

## COMPUTER SKILLS

Proficient in Python & R. Familiar with MATLAB. Experienced in running granular flow simulations using PKDGRAV.

## MEMBERSHIPS

American Astronomical Society's Division for Planetary Sciences, Junior Member  
American Geophysical Union, Student Member  
Toastmasters International

## CERTIFICATIONS

Human Subjects Research (Collaborative Institutional Training Initiative)

## HONORS & AWARDS

- Department Valedictorian of the Physics Department and the Aerospace Engineering Department of Cal Poly Pomona (June 2010)
- Sigma Pi Sigma National Physics Honor Society
- Sigma Gamma Tau Honor Society of Aerospace Engineering
- Golden Key International Honour Society
- Alpha Lambda Delta Honor Society
- Cal Poly Pomona President's List (2006, 2007, 2008 & 2009)
- Cal Poly Pomona College of Engineering Dean's List (14 consecutive quarters)
- UC Santa Cruz Graduate Research Symposium Division of Physical & Biological Sciences Alumni Association Award (May 2011)
- Cal Poly Pomona Aerospace Engineering Department Outstanding Sophomore (2007), Outstanding Junior (2008) & Outstanding Senior (2009)
- Cal Poly Pomona Aerospace Engineering Department Scholarship (June 2008 & June 2009)
- Cal Poly Pomona President's Council Scholarship (May 2008)
- Cal Poly Pomona Physics Department's Vincent & Jessie Parker Scholarship (January 2008)