

Elizabeth Bondi

1401 N Los Robles Ave, Apt. 3
Pasadena, CA 91104
☎ 585-610-9961
✉ bondi@usc.edu
📄 bit.ly/ElizabethBondiHome
[linkedin.com/in/elizabethbondi](https://www.linkedin.com/in/elizabethbondi)

Education

- 2016-2021 **P.h.D. Computer Science**, *University of Southern California*, Los Angeles, CA.
2012-2016 **B.S. Imaging Science**, *Rochester Institute of Technology*, Rochester, NY.
Cumulative GPA - 3.99, Summa Cum Laude, Dean's List, Honors Program

Experience

- August 2016 - **Graduate Student Research Assistant**, *Dr. Milind Tambe*.
Present Developing algorithm to aid anti-poaching efforts that will first automatically detect poachers and animals in thermal infrared (8-10 μm), UAV-based imagery, and second, use historical detections to predict future poaching locations and plan flight paths for the UAV. Supervising undergraduate and masters students in research tasks related to the project.
- May 2016 - **Remote Sensing Technician**, *Dr. Carl Salvaggio*.
August 2016 Developed calibration workflow for UAS imagery in various illumination conditions for improved vegetation index computation. Assisted in UAS data collection.
- June 2016 - **Image Science Intern, Harris Space and Intelligence Systems**, *Dr. Derek Walvoord*.
July 2016 Developed stabilization algorithm for aerial imagery.
- August 2015 - **Image Processing and Computer Vision Teaching Assistant**, *Dr. Carl Salvaggio*.
May 2016 Held office hours to help students in the course with programming assignments and graded projects. Projects include bilateral filtering, spatial filtering, Fourier domain filtering, Harris corner detection, histogram enhancements, and remapping.
- June 2015 - **Image Science Intern, Harris Space and Intelligence Systems**, *Dr. Derek Walvoord*.
August 2015 Created a feature matching algorithm that used both spatial and spectral information to improve multi-view geometric reconstruction. The algorithm was meant for hyperspectral datasets. A method to evaluate the performance of feature matching algorithms was also implemented.
- August 2014 - **Mars Data Analysis Intern at NASA's Jet Propulsion Laboratory through Columbus Technologies and Services, Inc.**, *Dr. Matt Golombek*.
December 2014 Used images from Mars spacecraft to characterize potential landing sites for Mars missions using ArcGIS Desktop. Assisted in testing of the Mars Helicopter Scout, which is a proposed instrument that would fly ahead of the rover to image and map the terrain so that the rover could find a safe path to travel.
- October 2012 - **Imaging Science Research Assistant**, *Dr. Roger Easton*.
May 2015 Processed historical manuscript images using ENVI 5.0 Classic, Adobe Photoshop, and IDL, involving image cubes, flat field calibration, PCA, ICA, and pseudocolor rendering. Automated this process in IDL as part of the Summer Undergraduate Research Fellowship and travelled to Italy in July 2014 to assist in data collection and processing. Made metadata for files and created a new website for the Archimedes Palimpsest.

Honors

- 2017 Honorable Mention National Science Foundation Graduate Research Fellowship Program
2016 Autonomous Air and Ground Sensing Systems for Agricultural Optimization and Phenotyping Conference Best Paper Award
2016 Viterbi School of Engineering Ph.D. Merit Top-off Fellowship
2016 Women in Science Student Travel Award
2015 Barry Goldwater Scholar

- 2015 Universities Space Research Association (USRA) Thomas R. McGetchin Memorial Scholarship Award
- 2015 Outstanding Undergraduate Scholar Award
- 2015 Central New York, ASPRS Student of the Year Award

Computer Skills

Languages Python, C++, IDL, MATLAB, L^AT_EX
Tools Photoshop, ENVI, Office Suite, Git, ArcGIS, Raspberry Pi

Publications

Refereed Conference Proceedings

- Pow, J.; Helguera, M.; Pieri, E.; Wolters, S.; Augspurger, M.; Neuberger, B.; Scholl, V.; Bondi, E., The Use of Peer Evaluations In A Non-Traditional First Year System Design Class, ASEE, 121st National Conference, T242 FPD4: Peers and Perceptions, Indianapolis, Indiana, United States (2014)

Conference Proceedings

- Bondi, Elizabeth; Salvaggio, Carl; Montanaro, Matthew; Gerace, Aaron D., Calibration of UAS imagery inside and outside of shadows for improved vegetation index computation, Proceedings of the SPIE, Defense + Commercial Sensing, Autonomous Air and Ground Sensing Systems for Agricultural Optimization and Phenotyping, Unmanned Aerial Vehicles in Precision Agriculture, 9866, 17, pp. 98660J-1-98660J-7, Baltimore, Maryland, United States (2016)
- Bondi, E.; Neuberger, B.; Iafrazi, M.; Pow, J., Multidimensional Comparison of Project-Based Learning Programs, IEEE, 4th IEEE Integrated STEM Education Conference, K-12 Integrated STEM Education Track, Princeton, New Jersey, United States (2014)

Conference Presentations (No Proceedings)

- Pow, J.; Iafrazi, M.; Kratzer, S.; Scholl, V.; Bondi, E., Putting the Capstone First: Turning the STEM Curriculum Upside Down, The League for Innovation in the Community College, 2013 STEMtech Conference, Atlanta, Georgia, United States (2013)

Internal Rochester Institute of Technology Presentations

- CIS Senior Research Symposium, Honors Research and Creativity Symposium: Calibration of UAS imagery inside and outside of shadows for improved vegetation index computation, 2016
- RIT Undergraduate Research Symposium: Spectral Image Processing Applied to Manuscripts of Cultural Importance from the Museo del Tesoro del Duomo in Vercelli, Italy, 2014
- RIT Undergraduate Research Symposium: Comparison of Independent and Principal Component Analysis for Historical Manuscript Image Processing, 2013
- ImagineRIT: 2013, 2014

Leadership

- 2015 - 2016 Undergraduate Curriculum Committee Student Representative, Imaging Science Club
- 2015 - 2016 Imaging Science Peer Mentor
- 2013 - 2014 Secretary, Imaging Science Club
- 2012 - 2014 President, Yoga Club