Curriculum Vitae

Emily Hand

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EDUCATION

Doctor of Philosophy in Computer Science *2013-present*
University of Maryland College Park

Bachelor of Science in Computer Science and Engineering, *magna cum laude* *2009-2013*
Bachelor of Science, Applied Mathematics, *magna cum laude* *2009-2013*
University of Nevada Reno

EXPERIENCE

Graduate Research Assistant
University of Maryland, College Park *August 2014-present*
- Use attribute classifiers to perform face verification on unconstrained face images.

Research Intern
NASA Jet Propulsion Laboratory *May 2014-August 2014*
- Incorporated stereo data into Random Forest classification of geologic types.
- Performed exhaustive testing on four new datasets collected from the Mojave Desert.
- Improved classification performance over the original algorithm by as much as 10% on some datasets.

Graduate Research and Teaching Assistant
University of Maryland, College Park *August 2013-May 2014*
- Created and graded homework, quizzes, programming projects, and exams for Artificial Intelligence class.
- Integrated internal and external meta-cognition into an artificial dialog agent (ALFRED).

Research Intern
NASA AMES Research Center *May 2012-August 2012, May 2013-August 2013*
- Developed a structure from motion framework compatible with other localization techniques for use on low-resolution rover and high-resolution planetary images with the Advanced Navigation subgroup of the Intelligent Robotics Group.

Undergraduate Research Assistant
University of Nevada, Reno *November 2010-December 2012*
- Improved performance of template tracking system using Random Projections in place of Principal Component Analysis for dimensionality reduction.
- Integrated Sparse Bundle Adjustment into the Structure from Motion system to improve accuracy.

NSF REU Participant
University of Central Florida *May 2011-August 2011*
- Developed a template-based tracking framework for use in a larger human tracking system with a Ph.D. candidate.

SERVICE

WICSE: Women into Computer Science and Engineering UNR Student Member *November 2010-May 2013*
ACM UNR Student Member *January 2011-May 2013*
SIAM Student Member *August 2013-present*
IEEE Student Member *February 2014-present*

ACM Student Member *June 2014-present*

AWARDS AND HONORS

Dean's List University of Nevada, Reno *August 2009-May 2013*
Computer Science and Engineering Senior Service Award *May 2013*
Computer Science Dean's Fellowship University of Maryland, College Park *2013-2014, 2014-2015*
NSF Graduate Research Fellowship Program, Honorable Mention *2014*

COMPETITIONS

1. "Higher-Order Contract Counterexamples" abstract accepted into the ACM Student Research Competition of the International Conference on Functional Programming, 2014.

CONFERENCE AND WORKSHOP PUBLICATIONS

1. Guang Shu, Afshin Dehghan, Omar Oreifej, **Emily Hand**, Mubarak Shah, "Part-based Multiple-Person Tracking with Partial Occlusion Handling," in CVPR, 2012.

2. Don Perlis, Mike Cox, Michael Maynord, Elizabeth McNany, Matthew Paisner, Vika Shivashankar, **Emily Hand**, Jared Shamwell, Tim Oates, Tongchun Du, Darsana Josyula and Manual Caro, "A Broad Vision for Intelligent Behavior: Perceptual Real-World Cognitive Agents," in Advances in Cognitive Systems, Workshop on Metacognition and Artificial Situated Agents 2013.

3. **Emily Hand**, Darsana Josyula, Matthew Paisner, Elizabeth McNany, Michael T. Cox and Don Perlis, "Two Approaches to Implementing Metacognition," in The Sixth International Conference on Advanced Cognitive Technologies and Applications, COGNITIVE 2014.

4. A.V. Nefian, X. Bouyssounouse, L. Edwards, T. Kim, **E. Hand**, J. Rhizor, M. Deans, G. Bebis, T. Fong, "Planetary Rover Localization within Orbital Maps," in the International Conference on Image Processing, 2014.