

Matthew B. Luebbers

PhD Student / Teaching Assistant
University of Colorado Boulder
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Education

University of Colorado Boulder; Boulder, CO Aug 2018 –
Doctor of Philosophy, Computer Science
Advisor: Prof. Bradley Hayes
Collaborative AI and Robotics Lab (CAIRO)

Cornell University; Ithaca, NY Aug 2014 – May 2018
Bachelor of Arts, Computer Science
Internal Concentration: Artificial Intelligence & Robotics

Professional Experience

NASA Jet Propulsion Laboratory; Pasadena, CA Jun 2019 – Aug 2019
Summer Intern, Robotics (347)
Designed and developed prototype virtual reality application for stereo image viewing and 3D plan overlay for the Rover Sequencing & Visualization Program (RSVP). Intended for use in daily rover driving activities for Mars Curiosity and Mars 2020 missions. Also participated in tactical rover planning sessions for the Curiosity rover, learning to sequence and operate the vehicle.

NASA Jet Propulsion Laboratory; Pasadena, CA Jun 2018 – Aug 2018
Summer Intern, Instrument Data Systems (398)
Continued development work on the Common Workflow Service (CWS), including the creation of a web-based BPMN process modeler to contain all functionality for CWS within a single webapp.

NASA Jet Propulsion Laboratory; Pasadena, CA Jun 2017 – Aug 2017
Summer Intern, Instrument Data Systems (398)
Continued development work on the Common Workflow Service (CWS), including adaptation work for the Instrument Data Systems pipelines of the Mars 2020 mission.

NASA Jet Propulsion Laboratory; Pasadena, CA Jun 2016 – Aug 2016
Summer Intern, Instrument Data Systems (398)
General-purpose development work on the Common Workflow Service (CWS), a highly distributable, adaptable workflow system for NASA's Advanced Multi-Mission Operations System (AMMOS) using industry standard BPMN modeling semantics.

Teaching & Research Assistantships

CSCI 1300 (Introduction to Computer Science) Aug 2019 –
University of Colorado Boulder; Boulder, CO
Teaching Assistant, Prof. Ioana Fleming

Dean's Graduate Fellowship Aug 2018 – May 2018
University of Colorado Boulder; Boulder, CO
Research Assistant, Prof. Bradley Hayes

CS 4700 (Foundations of Artificial Intelligence) Aug 2017 – Dec 2017
Cornell University; Ithaca, NY
Teaching Assistant, Prof. Bart Selman

CS 3410 (Computer System Org. & Programming) Aug 2016 – May 2017
Cornell University; Ithaca, NY
Teaching Assistant, Prof. Anne Bracy

CS 2110 (OO Programming & Data Structures) Aug 2015 – May 2016
Cornell University; Ithaca, NY
Course Consultant, Profs. David Gries, Nate Foster, & Ross Tate

Publications & Presentations

1. Matthew B. Luebbers, Connor Brooks, Minjae John Kim, Daniel Szafir, and Bradley Hayes. (2019). **Augmented Reality Interface for Constrained Learning from Demonstration**. In *Proceedings of the Workshop on Virtual, Augmented and Mixed Reality for Human-Robot Interaction (VAM-HRI 2019)*. Daegu, South Korea.
2. Matthew B. Luebbers, Ramchandran Muthukumar, Madeleine Udell, and Ross A. Knepper. (2017). **Planning Aerial Survey Missions using Low Rank Approximation**. Presented at *Northeast Robotics Colloquium (NERC 2017)*. Boston, Massachusetts, USA.