

HALEY GREEN

email: hng9vf@virginia.edu · *website:* haleygreen.netlify.app · *lab:* www.collabrobotics.com

+1(540)312-3951

151 Engineer's Way, Charlottesville, Virginia 22903, USA

EDUCATION

University of Virginia

Ph.D. in Computer Engineering

Charlottesville, Virginia

August 2020 - Present

- Advisor: Prof. Tariq Iqbal
- Dissertation Topic: Real-time trust evaluation in human-robot interactions.

Brown University

B.S. in Mechanical Engineering

Providence, Rhode Island

September 2016 - May 2020

- Member of Brown University Women's Basketball Team

AWARDS AND SCHOLARSHIPS

- UVA Engineering Distinguished Fellowship *August 2020 - August 2021*
- National Science Foundation Research Traineeship (NRT) *August 2021 - August 2022*

RESEARCH AND WORK EXPERIENCE

Graduate Research Assistant

Collaborative Robotics Lab

Charlottesville, Virginia

August 2020 - Present

- Conducting research on trust calibration in human-robot teams
- Examining mitigation strategies for task failure in a human-robot interaction
- Showcasing projects and robots to the UVA and Charlottesville communities

Graduate Student Member

Link Lab

Charlottesville, Virginia

August 2020 - Present

- Receiving hands-on, testbed-driven cyber-physical systems experience
- Attending various recruitment and professional development events
- Engaging with student researchers in the multidisciplinary, cyber-physical systems research center

Undergraduate Teaching Assistant

Course: Advanced Fluid Mechanics

Providence, Rhode Island

January 2020 - May 2020

- Mentored a group on designing a self-propelled helical robot swimmer
- Organized weekly meetings to keep the project on track
- Served as a liaison between research group and faculty

Integer Holdings

Mechanical Engineering Intern

Salem, Virginia

June 2019 - August 2019

- Created SolidWorks CAD (computer-aided design) drawings and utilized 3D printer
- Collected and analyzed data for a variety of process improvement tests
- Collaborated with a small team on revitalizing safety standards for handling hydrofluoric acid

Klöckner Pentaplast

Mechanical Engineering Intern

Rural Retreat, Virginia

May 2018 - August 2018

- Generated AutoCAD designs for parts to improve manufacturing process
- Implemented a filtration system for the Optical Controls Systems (OCS) cameras
- Experimented with various sensors on measuring roller gap to improve film thickness consistency

PUBLICATIONS

- [1] **H. N. Green**, M. M. Islam, S. Ali, and T. Iqbal, “Who’s Laughing NAO? Examining Perceptions of Failure in a Humorous Robot Partner,” *ACM/IEEE International Conference on Human-Robot Interaction (HRI)*, 2022.
- [2] **H. N. Green**, M. M. Islam, S. Ali, and T. Iqbal, “iSpy a Humorous Robot: Evaluating the Perceptions of Humor Types in a Robot Partner,” *AAAI Spring Symposium on Putting AI in the Critical Loop: Assured Trust and Autonomy in Human-Machine Teams Symposium*, 2022.
- [3] **H. N. Green**, M. M. Islam, S. Ali, and T. Iqbal, “Perceiving a Humorous Robot as a Social Partner,” *Elsevier*, 2022. *Under Review*.
- [4] M. M. Islam, R. M. Mirzaiee, A. Gladstone, **H. N. Green**, and T. Iqbal, “CAESAR: An Embodied Simulator for Generating Multimodal Referring Expression Datasets,” *Conference on Neural Information Processing Systems (NeurIPS), Track on Datasets and Benchmarks*, 2022.

GRADUATE COURSES

- Advanced Digital Design Laboratory: ASIC/FPGA
- Computer Engineering Perspectives
- Computer Architecture
- Communication, Test-Beds, and Policy
- Formal Methods, Safety, and Security
- Human Error in Complex Systems
- Robotic Autonomy
- Robots and Humans
- Signal Processing, Machine Learning, and Control

SELECTED PROJECTS

Autonomous Ball Tracker

Course: Robotic Autonomy

Charlottesville, Virginia

January 2022 - May 2022

- Programmed a robot autonomously track a moving target.
- Used Recursive Bayesian Estimation (RBE) to predict the motion of the target under occlusion.

Gesture-Based Music Performance Controller

Course: Signal Processing, Machine Learning, and Control

Charlottesville, Virginia

August 2021-November 2021

- Developed a model to predict when certain instruments were being played.
- Collected acceleration data using an ASUS ZenWatch 2.
- Adjusted the classifiers, features, and sliding window to optimize the model’s performance.

Guess Who?

Course: Robots and Humans

Charlottesville, Virginia

January 2021 - May 2021

- Created a playable game of Guess Who? between Nao and a human player.
- Explored the relationship between player enjoyment and relative game proficiency.

An Optimal Real-Time Interaction Model of Robotic Pet

Course: Formal Methods, Safety, and Security

Charlottesville, Virginia

January 2021 - May 2021

- Designed a set of safety, security, improvement, and system requirements.
- Implemented a set of realistic and elevated behaviors.

Timeloop/Accelergy for Evaluating DNN Hardware Acceleration

Course: Computer Architecture

Charlottesville, Virginia

August 2020 - November 2020

- Used the tools Timeloop and Accelergy to analyze DNN accelerators for different deep learning tasks.
- Replicated the results of MIT's Timeloop/Accelergy workshop.

LEADERSHIP

- President of the Link Lab Student Committee *May 2022 - Present*
- Member of the Link Lab Professional Development Committee *November 2021 - Present*
- Member of the Link Lab Student Committee *August 2021 - Present*
- Captain of the Brown University Women's Basketball Team *March 2019 - May 2020*

SKILLS

Robotics:

- Choregraphe
- ROS

Computer Skills:

- Programming Languages: C, C++, Python, Java
- Statistical Analysis: IBM SPSS
- Other: Matlab, LaTeX, UNIX/Linux, Amazon Mechanical Turk

Computer-Aided Design:

- SolidWorks
- AutoCAD
- Quartus II
- ModelSim
- Photoshop
- Illustrator

PROFESSIONAL SERVICES

Organizer: RSS 2022 Workshop in Close Proximity Human-Robot Collaboration, Link Lab 2022 Fall Retreat

Presenter: AAAI 2022 Spring Symposium, HRI 2022, Link Lab 2022 Spring Flash Talk, Link Lab Year-Opening Poster Session, CURE Symposium

Reviewer: THRI, NeurIPS, AI-HRI, IEEE RA-L, EngineerGirl, VSSEF

Tutor: Calculus, Programming, Accelerated Master's Program Weekend Course

Mentor: University of Virginia, Brown University

Outreach: Hollymead Elementary School, UVA SEAS Open House, UVA SWE Open House