# HALEY GREEN

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## EDUCATION

**University of Virginia** — Charlottesville, Virginia
*Ph.D. in Computer Engineering* — *August 2020 - Present*

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

**Brown University** — Providence, Rhode Island
*B.S. in Mechanical Engineering* — *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** — Charlottesville, Virginia
*Collaborative Robotics Lab* — *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 community

**Graduate Student Member** — Charlottesville, Virginia
*Link Lab* — *August 2020 - Present*

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

**Undergraduate Teaching Assistant** — Providence, Rhode Island
*Course: Advanced Fluid Mechanics* — *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** — Salem, Virginia
*Mechanical Engineering Intern* — *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** — Rural Retreat, Virginia
*Mechanical Engineering Intern* — *May 2018 - August 2018*

· Generated AutoCAD designs for parts to improve manufacturing process
· Implemented a filtration system for the O.C.S. (Optical Controls Systems) 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," *Proceedings of AAAI Spring Symposium on Putting AI in the Critical Loop: Assured Trust and Autonomy in Human-Machine Teams Symposium*, 2022.

[3] 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. *Under Review.*

## 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** Charlottesville, Virginia
*Course: Robotic Autonomy* *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.

**Guess Who?** Charlottesville, Virginia
*Course: Robots and Humans* *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** Charlottesville, Virginia
*Course: Formal Methods, Safety, and Security* *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** Charlottesville, Virginia
*Course: Computer Architecture* *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

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

**Reviewer:** 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