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# **KANTWON ROGERS**

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#### **RESEARCH INTERESTS**

Human-Computer Interaction Human-Robot Interaction

Trust and Deception

Artificial Intelligence

Education Technology

## EDUCATION

GEORGIA INSTITUTE OF TECHNOLOGY

Ph.D. in Computer Science

Human Computer Interaction & Learning Sciences and Technology

ADVISOR

Dr. Ayanna MacCalla Howard, Dean of Engineering at The Ohio State University

## M.S. in Human Computer Interaction

ADVISOR Dr. Mark Guzdial, Interactive Computing

THESIS

Nudges Aren't Enough! Measuring and Influencing Self-efficacy and Belongingness of Students in Introductory Computer Science Courses

## **M.S. in Electrical and Computer Engineering**

VLSI, Packaging, and Digital Design

## B.S. in Computer Engineering

VLSI and Digital Design

2011-2015

2015-2016

Present

2016-2018

## PROFESSIONAL EXPERIENCE

## AMAZON

Applied Scientist Intern Designed computer vision algorithm for synthetic data generation. Conducted bias testing of current Amazon camera systems to encourage equitable human and face recognition.	Summer 2022
GOOGLE	
<b>Research Intern</b> Designed, developed, and executed user study and data analysis for eye-tracking research project within the education realm.	Summer 2019
LEVELED UP	
Chief Technology Officer & Co-founder Start-up designed to create a one-stop-shop of STEM opportunities for minority students. Recipient of \$20,000 seed funding from Georgia Tech	Summer 2018
INTEL CORPORATION	
<b>Software Engineering Intern</b> Designed Python-based network visualizations used by over 50 engineers in the Xeon supercomputer architecture team	Summer 2018
Proposed future system-design recommendations to increase the usability and efficiency of graph visualizations	
<b>Curriculum Design Engineering Intern</b> Created educational lesson plans for Intel's Future Skills program to expose underrepresented minority students to STEM. Topics include internet of things, drones, and introductory programming.	Summer 2017
Curricula have been shipped nation-wide and are used by hundreds of learners.	
<b>Software Engineering Intern</b> Designed and implemented JavaScript and AngularJS based features in task organization web application used by over 30,000 Intel employees.	Summer 2016
Design Automation Intern Produced data-mining TCL script to analyze design change lists to increase efficiency of chip-design timing convergence	Summer 2015

#### **TEACHING EXPERIENCE**

INSTRUCTOR	
Computing for Engineers in MATLAB (CS 1371)	Fall 2016-Present
1,000+ student undergraduate course focused on introducing programming concepts including data manipulation, data visualization, algorithm design, and graph theory.	
Responsible for leading three weekly lectures for 300+ students and managing team of 40+ teaching assistants	
Education Technology (CS 4660)	Summer 2021,2020
Upper-level undergraduate course focused on teaching and learning theories and the practical application of these in the design of learning technologies using a user-centered design process.	
TEACHING ASSISTANT	
Computing for Engineers in MATLAB (CS 1371)	Fall 2012-2015
Responsible for leading weekly recitation for 70+ students	
Created and graded homework assignments and exams for over 1000 students a semester.	

Revamped and led supplemental tutoring sessions for at-risk students

## PUBLICATIONS

**Rogers, K.**, Howard, A, "Tempering Transparency in Human-Robot Interaction" 2023 IEEE International Symposium on Ethics in Engineering, Science and Technology (ETHICS) (Accepted awaiting publication)

Arkin, R., Melo Cruz, A., **Rogers, K**., Borenstein, J., Wagner, A., "AI-Assisted Ethical Decision-Making: Robots, Case-based Reasoning, and ChatGPT." 2023 Governance of Emerging Technologies and Science Conference (GETS) (Accepted awaiting publication)

**Rogers,K.,** Webber, R., Howard, A. 2023. Lying About Lying: Examining Trust Repair Strategies After Robot Deception in a High-Stakes HRI Scenario.. In Companion of the 2023 ACM/IEEE International Conference on Human-Robot Interaction (HRI '23 Companion)

**Rogers, K**, Howard, A. "Exploring First Impressions of the Perceived Social Intelligence and Construal Level of Robots that Disclose their Ability to Deceive' 2022 IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN)

**Rogers, K**, Anhalt, P., Howard, A. "Playing Dumb to Get Smart: Investigating the Influence of a Learner's Age on the Permissibility of Robot Deception in an Educational Scenario" *Rebellion and Disobedience* 

in AI Workshop (RaD-AI) within International Conference on Autonomous Agents and Multiagent Systems (AAMAS) 2022

**Rogers, K**, Howard, A. "When a Robot Tells You It Can Lie" *IEEE International Conference on Advanced Robotics and Its Social Impacts (ARSO).* 2022.

Bryant, D., Xu, J., **Rogers, K**., & Howard, A. (2021, July). The Effect of Conceptual Embodiment on Human-Robot Trust During a Youth Emotion Classification Task. In *2021 IEEE International Conference on Advanced Robotics and Its Social Impacts (ARSO)* (pp. 211-218). IEEE. **\*\*BEST PAPER AWARD\*\*** 

**Rogers, K**, Howard, A. "Intelligent Agent Deception and the Influence on Human Trust and Interaction." *2021 IEEE International Conference on Advanced Robotics and Its Social Impacts (ARSO).* IEEE, 2021.

**Rogers, K.,** Howard, A., Looks Can Permit Deceiving: How Reward or Punishment Decisions are Influenced by Robot Embodiment. In Proceedings of ACM Human-Robot Interaction (HRI '21). ACM, New York, NY, USA, 5 pages. 2021.

**Rogers, K.,** Howard, A., *Robot Gendering: Influences on Trust, Occupational Competency, and Preference of Robot Over Human.* Extended Abstracts of the 2020 CHI Conference on Human Factors in Computing Systems. ACM, 2020.

Valliappan, N., Dai, N., Steinberg, E., He, J., **Rogers, K.**, Ramachandran, V., Xu, P., Sho, M., Guo, L., Kohlhoff, K., Navalpakkam, V. (2020, September) *Breaking Down Barriers in Eye Movement Research Via Accurate and Affordable Smartphone Eye Tracking*. Nature Communications

Parker, M., Rogers, K., Ericson, B. J., & Guzdial, M. (2017, August). *Students and Teachers Use An Online AP CS Principles EBook Differently: Teacher Behavior Consistent with Expert Learners.* In Proceedings of the 2017 ACM Conference on International Computing Education Research (pp. 101-109). ACM.

Pati A., **Rogers, K**., Zhu H. (2017, May) *A Rule-Based Computational Model of Cognitive Arithmetic*. arXiv preprint arXiv:1705.01208.

Ericson, B., **Rogers, K.**, Parker, M., Morrison, B., Guzdial M. (2016, June) *Identifying Design Principles for CS Teacher*. Paper accepted in International Computing Education Research (ICER) 2016 conference in Melbourne, Australia

Guzdial, M., Ericson, B., Morrison, B., Parker, M., Pathak, N., Moldavan, M., **Rogers, K.** (2016, January) *Supporting STEM Learning by Redesigning the Textbook.* Paper presented at the annual American Association for the Advancement of Science (AAAS) conference in Washington, DC

#### PRESENTATIONS AND POSTERS

**Rogers, K**. (2018, May) *Nudges Aren't Enough! Measuring and Influencing Self-efficacy and Belongingness of Students in Introductory Computer Science Courses.* GVU Demo Day.

Parker, M., **Rogers, K**. (2017, August). *Students and Teachers Use An Online AP CS Principles EBook Differently: Teacher Behavior Consistent with Expert Learners.* International Computing Education Research (ICER)

## INVITED TALKS

Amazon Consumer Robotics What Happens When a Robot Lies to You?	2022
Everyone lies. Whether it be for malicious reasons or to try to be helpful, humans rationalize a variety of reasons of why deception is acceptable. As technology continues to progress and artificially intelligent systems and robots are created to mimic humanistic behaviors, this poses a taboo question: Should robots be given the ability to deceive humans? This talk presents a variety of empirical studies that explore different factors that influence the acceptability and effectiveness of robot deception.	
<b>Georgia Tech Student Alumni Association Last Lecture</b> A highly regarded faculty member comes to give an inspiring speech to graduating students where they share a piece of wisdom and may speak about their life experiences, something important they have come to learn, or advice they wish to share.	2018
<b>TEDxGeorgiaTech</b> The Misadventures of a (Tired) Gay Black Man	2018
The acceptance of racial "preferences" while dating has become common place. However, most of these cases are actually forms of sexual racism. This talk explores the topic within queer and non-queer communities and presents explanations of the development of these beliefs and how they can be ameliorated.	
6 speakers were chosen out of 70 applicants to give an official TED talk.	
Link: https://youtu.be/cP-6ov3ghy4	
HONORS AND AWARDS	
Ford Foundation Predoctoral Fellowship Highly competitive fellowship program (Acceptance rate 4%) for racial minority students intending on joining academia. Funding of \$81,000	2021
<b>ARCS Foundation Fellowship</b> The ARCS Scholar Awards recognize outstanding doctoral students who have a record of past achievement and who show exceptional promise of making a significant contribution to the worldwide advancement of science and technology. Funding of <b>\$24,000</b> .	2020
	2020
<b>Sloan Foundation Fellowship</b> Fellowship sponsored by the Alfred P. Sloan Foundation and seeks to increase the number of outstanding engineering Ph.D. graduates from under-represented populations. Funding of <b>\$40,000</b> .	2020

reward students that have positively impacted the Institute community through their leadership, scholarship, and service. **\$6,000** award.

Graduate Engineering Minority (GEM) PhD Fellowship Fellowship sponsored by Intel Corporation including a summer internship in the Xeon Architecture group. Funding of <b>\$21,000</b> stipend and full tuition.	2018
Freshman Activities Board Educator of the Year Award presented and voted on by the entire 2018 freshman class to the educator who best exemplifies a dedication to teaching and enhancement of learning	2018
Center for Teaching and Learning Graduate Student Instructor of the Year Award presented to the graduate student instructor from the entire university who displays a excellence in innovation and commitment to teaching and learning.	2018
Center for Teaching and Learning Graduate Computer Science Student Instructor of the Year Award presented to the graduate student instructor within computer science who displays excellence, innovation, and commitment to teaching and learning.	2018
<b>GVU Distinguished Master's Student Finalist</b> Recognizes the achievements of top graduate students whose personal vision and innovations in their research fields have the potential to shape how people interact with technology	2017
Freshman Activities Board Freshman Professor of the Year Award presented and voted on by the entire 2017 freshman class to the educator who best exemplifies a dedication to teaching and enhancement of learning	2017
Graduate Engineering Minority (GEM) MS Fellowship Fellowship sponsored by Intel Corporation including summer internships in the Corporate Affairs Group and Software Development Group. Funding of \$16,000 for stipend and full-tuition.	2016
Center of Teaching and Learning Undergraduate Teaching Assistant of the Year Award presented to the undergraduate teaching assistant who displays excellence, innovation, and commitment to teaching and learning.	2015
<b>Georgia Institute of Technology Provost Scholarship</b> Provost Scholars are those who demonstrate extraordinary academic achievement, outstanding leadership skills, and have high potential to contribute inside and outside the classroom at Georgia Tech. 1 of 40 recipients out of thousands of applicants	2011