

# Ruhan YANG

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## EDUCATION

University of Colorado Boulder

- Doctor of Philosophy, Creative Technologies and Design August 2021 - May 2025
- Master of Science, Creative Technologies and Design August 2019 – May 2021
- Bachelor of Science, Mechanical Engineering (major) January 2015 – May 2019  
Applied Mathematics (minor)

## PUBLICATION

**Ruhan Yang**, Krithik Ranjan, and Ellen Yi-Luen Do. 2023. Fabricating Paper Circuits with Subtractive Processing, ACM CHI 2023 Workshop 02: Beyond Prototyping Boards: Future Paradigms for Electronics Toolkits

Peter Gyory, S. Sandra Bae, **Ruhan Yang**, Ellen Yi-Luen Do, and Clement Zheng. 2023. Marking Material Interactions with Computer Vision. In Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI '23), April 23–28, 2023, Hamburg, Germany. ACM, New York, NY, USA, 17 pages. <https://doi.org/10.1145/3544548.3580643>

S. Sandra Bae, Rishi Vanukuru, **Ruhan Yang**, Peter Gyory, Ran Zhou, Ellen Yi-Luen Do, and Danielle Albers Szafir. 2023. Cultivating Visualization Literacy for Children Through Curiosity and Play, in IEEE Transactions on Visualization and Computer Graphics, vol. 29, no. 1, pp. 257-267. [https://doi: 10.1109/TVCG.2022.3209442](https://doi.org/10.1109/TVCG.2022.3209442)

Sandra Bae, **Ruhan Yang**, Peter Gyory, Julia Uhr, Danielle Albers Szafir, and Ellen Yi-Luen Do. 2021. Touching Information with DIY Paper Charts & AR Markers. In Interaction Design and Children (IDC '21). Association for Computing Machinery, New York, NY, USA, 433–438. <https://doi-org.colorado.idm.oclc.org/10.1145/3459990.3465191>

**Ruhan Yang**, Cody Candler, and Ellen Yi-Luen Do. 2020. EdBoard: an educational breadboard. In Proceedings of the 2020 ACM Interaction Design and Children Conference: Extended Abstracts (IDC '20). Association for Computing Machinery, New York, NY, USA, 193–198. <https://doi-org.colorado.idm.oclc.org/10.1145/3397617.3397832>

## AWARDS

- Distinguished Graduate Student Award 2021
- ATLAS Institute Scholarship 2019-2021
- College of Engineering Summer Session Incentive Award 2016

## SKILLS

Computer: SOLIDWORKS, Autodesk Fusion 360, CorelDRAW  
Microsoft Excel, Word, PowerPoint  
R, Processing, P5.js, Python

Machine: Lathe, Mill, Saw, Drill, Laser Cutter, Vinyl cutter

## EXPERIENCE

### ATLAS Institute, University of Colorado Boulder

- Instructor (Graduate Part-Time Instructor), ATLS 3100 FORM 2022 Fall
- Teaching Assistant, ATLS 3100 FORM 2021 Fall
- Capstone Project Sponsor 2021 - 2022
- Graduate Student Mentor 2021 - 2022
- Organizer, T9 Hacks 2019- 2022

### CU Science Discovery, University of Colorado Boulder

- Lecturer, Sphero Mini Golf 2022 Summer

### Graduate School, University of Colorado Boulder

- Graduate Student Mentor 2022 - till now

### YOU'RE@CU Research Program, University of Colorado Boulder

- Graduate Mentor 2022 Spring

### EdBoard Technologies LLC

- Cofounder, CTO 2017 - till now

### Student Academic Success Center, University of Colorado Boulder

- Instructional Assistant, Tutor 2017 - 2019

### The Child Language Learning Lab, University of Colorado Boulder

- Research Assistant 2016 Summer

## PROJECTS

### *e-Trombone*

2020

An electronic trombone built during the 2020 Georgia Tech's (GT) annual Moog Hackathon. The e-Trombone was built with PVC pipes sprayed with glossy paint to simulate a metallic look and inserted wind sensors, allowing players to create brass-like sounds through different blowing techniques. The e-Trombone won the first place in the hackathon and became one of the finalists of GT's prestigious Guthman Musical Instrument Competition.

### *EdBoard*

2017 - 2020

An educational breadboard. It is a new design of breadboard that is affordable, accessible, and engaging to younger audiences, in order to increase diversity and remove the barriers of entry in K-12 STEM education. EdBoard won second place in the People's Choice Award at the 2017 Design Expo and fourth place in the 2020 CU New Venture Challenge.

### *Disabled Swimmer Lift System*

2018 - 2019

A special swimmer lift system designed for the QL+ challenger, Travis Mills Foundation. Five of us built this project as our mechanical engineering capstone project in senior year. We are challenged to develop a portable lift to get swimmers with disabilities out of the water and onto a floating dock.