https://elchilds.su.domains/

ELIZABETH H. CHILDS

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EDUCATION

STANFORD UNIVERSITY — Stanford, CA
Doctor of Philosophy in Mechanical Engineering — Expected May 2027
Knight Hennessy Scholar (*Three Year Stanford Leadership Fellowship*)
Impact Labs PhD Fellowship (*Fellowship for solutions-oriented research*)

STANFORD UNIVERSITY — Stanford, CA
Masters of Arts in Education — Expected May 2026

UNIVERSITY OF MARYLAND, COLLEGE PARK — College Park, MD
BS Mechanical Engineering | Entrepreneurship and Innovation Honors Program — Aug 2016 – Dec 2020
GPA (*Cumulative*): 3.98/4.00
Banneker Key Scholar (*Full Scholarship to the University of Maryland*)

HUMAN COMPUTER INTERACTION / EXTENDED REALITY EXPERIENCE

STANFORD UNIVERSITY — Stanford, CA
Interaction and Design Lab and *CHARM Lab* — June 2021 – Present
Advisor: Prof. James Landay and Prof. Allison Okamura
- Augmented Reality for Democratizing Education

DOLBY LABORATORIES — Sunnyvale, CA
Researcher, Advanced Technology Group — May 2024 – Aug 2024
- Investigated immersive technology for learning

LAM RESEARCH CORPORATION — Fremont, CA
Mechanical Engineer, Global Products Engineering — May 2021 – Aug 2021
- Designed HoloLens applications for visualizing industrial robots
- Created UX applications to visualize and diagnose robot errors.

UNIVERSITY OF MARYLAND, COLLEGE PARK — College Park, MD
Geometric Algorithms for Modeling, Motion, and Animation Laboratory — Aug 2020 – Aug 2021
Advisor: Prof. Dinesh Manocha
- Telepresence in Virtual Reality

JOURNAL PUBLICATIONS

1. **E. Childs,** K. Her, A. Okamura, J. Landay, *"Effects of Augmented Reality Enhancements on Students' Scientific Reasoning in an Introductory Physics Laboratory,"* (in preparation)
2. **E.H. Childs**, A.V. Latchman, and R.D. Sochol *et. al.*, "*Additive Assembly for PolyJet-Based Multi-Material 3D Printed Microfluidics*," **Journal of Microelectromechanical Systems**.
3. **E. Childs**,* F. Mohammad,* L. Stevens* and D. Manocha *et al.,* "*An Overview of Enhancing Distance Learning Through Augmented and Virtual Reality Technologies*," **IEEE Transactions of Visualization and Computer Graphics.** *These authors contributed equally; listed alphabetically

CONFERENCE PUBLICATIONS

1. A. Cheng, J. Ritchie, N. Agrawal, **E. Childs**, C. DeVeaux, Y. Jee, T. Leon, B. Maples, A. Cuadra, and J. Landay *"Designing Immersive, Narrative-Based Interfaces to Guide Outdoor Learning"* **Human Computer Interaction Conference (ACM CHI)** 2023
2. U. Bhattacharya, **E. Childs**, and D. Manocha *et al.,"Speech2AffectiveGestures: Synthesizing Co-Speech Gestures with Generative Adversarial Affective Expression Learning,"* **ACM International Conference on Multimedia (ACMMM)**, 2021

PRESENTATIONS / PANELS

Human Computer Interaction Conference (ACM CHI) — Yokohama, Japan
Hosted workshop on Purposeful XR: Affordances, Challenges, and Speculations for an Ethical Future — April 2025

AUGMENTED WORLD EXPO — Longbeach, CA
Panelist, The Educational Rift in Spatial Reasoning — June 2024

STANFORD XR CONFERENCE — Stanford, CA
Panel Moderator, XR in Education — May 2023
Demonstration, Mobile AR Learning — May 2022

HONORS AND AWARDS

- NSF LSAMP Bridge Scholar
- Academic Achievement Award for highest GPA in Mechanical Engineering
- MIT Reality Hack: 1st Place: Best Use of Looking Glass

ROBOTICS/MECHANICAL ENGINEERING EXPERIENCE

UNIVERSITY OF MARYLAND, COLLEGE PARK — College Park, MD
Bioinspired Advanced Manufacturing (BAM) Laboratory — Sept 2018 – July 2020
Advisor: Prof. Ryan D. Sochol
- Additive Folding of PolyJet 3D Printed Components for Microfluidic Applications

Robotics Realization Lab — Jan 2017 – May 2018
Advisor: Prof. Sarah Bergbreiter
- Soft Robotics to Model the Human Hand

Bioinspired Robotics — Feb 2019 – May 2019
- Designed robot inspired by summersaulting Moroccan Spider

INSTITUTE OF TECHNOLOGY OF CAMBODIA & VILLANOVA UNIVERSITY — Phnom Phenh, Cambodia
International Research Experience for Students, Cambodia — June 2019 – Aug 2019
Sponsor: National Science Foundation | Advisor: Prof. Garrett Clayton
- Modular Robotics for Explosive Ordnance Disposal in Cambodia

OREGON STATE UNIVERSITY, CORVALLIS — Corvallis, OR
Dynamic Robotics Laboratory — June 2018 – Aug 2018
Sponsor: National Science Foundation | Advisor: Prof. Jonathan Hurst
- Impact Absorption in Dynamic Walking Robots

KEY TECHNOLOGIES, INC — Baltimore, MD
Mechanical Engineer, *Medical Technology Engineering Consulting* — Sept 2019 – Dec 2019
- Designed, manufactured, and tested for consumer products and medical devices

Consultant, *Quality Enhancement Systems and Teams (Quest)* — Oct 2018 – Dec 2018
Sponsor: Unites States African Development Foundation (USADF)
- Consulted for farming cooperative startup in the DRC medical devices

TECHNICAL SKILLS

SolidWorks | Arduino | C++ | C# | | Maya | Microsoft Office | Unity | D3 | FDM 3D Printing | PDMS (Silicone) Molding | CNC Machining