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ELIZABETH H. CHILDS

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EDUCATION

STANFORD UNIVERSITY — Stanford, CA
Doctor of Philosophy in Mechanical Engineering — Expected May 2026
Knight Hennessy Scholar (*Three Year Stanford Leadership Fellowship*)

STANFORD UNIVERSITY — Stanford, CA
Masters of Arts in Education — Expected May 2024

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*)

RESEARCH 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

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

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

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

UNIVERSITY OF MARYLAND, COLLEGE PARK — College Park, MD
Robotics Realization Lab — Jan 2017 – May 2018
Advisor: Prof. Sarah Bergbreiter
- Soft Robotics to Model the Human Hand

JOURNAL PUBLICATIONS

1. **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**.
2. **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

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
- Amadas Industries Award Recognizing Aptitude for Success in Science, Engineering, and Technology
- National Academy of Engineering Grand Challenge | *Advanced Health Informatics*
  - Awarded 1st Place for Grand Challenge Presentation & 1st Place for Overall Grand Challenge Novelty

ADDITIONAL ENGINEERING EXPERIENCE

LAM RESEARCH CORPORATION — Fremont, CA
Mechanical Engineer, Global Products Engineering — May 2021 – Aug 2019
- Designed HoloLens applications for visualizing industrial robots
- Created UX applications to visualize and diagnose robot errors.

UNIVERSITY OF MARYLAND, COLLEGE PARK — College Park, MD
Bioinspired Robotics — Feb 2019 – May 2019
- Designed robot inspired by summersaulting Moroccan Spider

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

UNIVERSITY OF MARYLAND, COLLEGE PARK — College Park, MD
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

GENERAL ELECTRIC AVIATION — Madisonville, KY
Process Engineer, *MAD Coating* | Vapor Phase Aluminide (VPA) Coating — June 2017 – Aug 2017
- Designed rework programs for turbine blade coating to improve efficiency by over 100%

TECHNICAL SKILLS

- **Engineering Software:** SolidWorks | Arduino Programming | MATLAB | Engineering Equation Solver | C++ | Processing | Creo | NX | Maya | Microsoft Office | Unity | D3
- **Manufacturing:** FDM 3D Printing | Dremel | Belt Sander | Band Saw | Jigsaw | Laser Cutter | Stratasys Objet500 Connex3 (Polyjet 3D Printing) | PDMS (Silicone) Molding