Jiawen Yao

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I am an interaction designer and HCI researcher working at the intersection of physical computing, material exploration, and embodied interaction. My research investigates how physical forces, material behaviors, and bodily movement can be harnessed to create new interactive experiences, ranging from passive mechanical interfaces to electrical muscle stimulation and interactive materials.

Education

University of Chicago — 09/2024 - 03/2027
M.S. in Computer Science, expected March 2027, Initially enrolled in the Ph.D. program. — *Chicago, USA*

Weißensee Art Academy of Berlin — *GPA: 1.1 (1.0 as highest)* — 10/2020- 04/2023
M.A. in Product Design, Interaction Design — *Berlin, Germany*

North China University of Technology — *GPA: 2.1 (1.0 as highest)* — 10/2015- 07/2019
B.Eng. in Industrial Design — *Beijing, China*

Publications & Manuscripts

Publications

[1] Jiawen Yao. Info-Motion: Using the Metaphor of Plant Motion for Information Communication in Shape-changing Interface. Eighteenth International Conference on Tangible, Embedded, and Embodied Interaction. DOI: https://dl.acm.org/doi/10.1145/3623509.3633397

[2] Wen Li, E. Magnus Adams, Zijie Xu, **Jiawen Yao**, Aybala Esmer, Xiaoyue Ni, Bozhi Tian,and Pedro Lopes. *A wearable input/output interface learns personalized models of haptic perception.* In preparation for Science Robotics. arXiv:2611.09708. (manuscript)

Paper in Preparation

[1] **Jiawen Yao,** Yun Ho, Justin Zhang, and Pedro Lopes. *Directly Glitching Body via Electrical Muscle Stimulation Sparks Creativity in Dance.* In preparation for ACM DIS 2027.

[2] **Jiawen Yao**, Yifan Zou, Jiayu Fu, Alan Pham, Yue Jin, Zhenglang Weng, Chi Wang, Liang He, and Ken Nakagaki. *Mass.mov: Passive Mechanical Interfaces Responsive to Inertia-Driven Motion.* In preparation for ACM IMWUT (UbiComp 2027).

Academic Experiences

Research Assistant | Human Computer Integration Lab, University of Chicago — 05/2026 - Present
PI: Prof. Pedro Lopes — *Chicago, USA*

Directly Glitching Body via Electrical Muscle Stimulation Sparks Creativity in Dance

- *Developed a wearable EMS prototype and Android application to support movement exploration in dance.*
- *Conducted a user study with dancers and performed thematic analysis of interviews and movement observations.*

Graduate Researcher | Axlab, University of Chicago — 09/2024 - 04/2026
PI: Prof. Ken Nakagaki — *Chicago, USA*

Mass.mov: Passive Mechanical Interfaces Responsive to Inertia-Driven Motion

- *Conceived the system and designed passive mechanisms that translate inertia-driven motion into multi - feedback.*
- *Developed experimental setups and empirical models to characterize how mechanism geometry affects activation thresholds.*
- *Built a Rhino/Grasshopper design tool for configuring and fabricating the mechanisms.*

Teaching Assistant|University of Chicago — 09/2025 - 12/2025 — *Chicago, USA*

- *Introduction to Human-Computer Interaction — CMSC / MAAD 20300: Graded assignments, organized a course exhibition of student work, and advised undergraduate students during office hours on projects and coursework.*

Working Experience

Interaction Designer/ Scenographer, Internship | *Dreiform*

04/2022- 10/2022
Cologne, Germany

- *Developed physical interaction prototypes and concepts for a science exhibition, using Arduino, interface design, sketching, and rapid prototyping.*
- *Created user-experience visualizations, touchpoint diagrams, and interior interaction concepts for the Siemens Global Leadership Center using storytelling and Enscape.*

Services

TEI 2026 Late-Breaking Work Reviewer, DIS 2026 Paper Reviewer
CHI 2025 Late-Breaking Work Reviewer, TEI 2026 Visual Chair
C&C 2026 Paper Reviewer CHI2027 paper

Exhibitions

German Design Graduate Awards, finalist 08/2023
Project: Info-motion, In Design experiment categories, Top 3 *Hamburg, Germany*

DAAD (German Academic Exchange Service) Graduation Fellowship 10/2022
Project: Info-motion *Berlin, Germany*

Interactive Exhibition in Weizenbaum Institute 02/2022
Project: Doc-U *Berlin, Germany*

Languages Skill

English (IELTS 7.0), German(B2), Chinese(native)

Technical Expertise

Prototyping & Physical Computing: Arduino, Processing, Raspberry Pi, sensors, actuators
Electronics & PCB Design: KiCad, schematic design, PCB layout
Fabrication & Simulation: FEA, CNC machining, laser cutting, 3D printing, 4D-printed textiles 3D Modeling & Rendering: Rhino, SolidWorks, Blender, Cinema 4D, KeyShot, Enscape
Visual & UX Design: Figma, Adobe Photoshop, Illustrator, InDesign, Premiere