

# Yanbin Yang

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## RESEARCH INTEREST

Human-Computer Interaction, Human Factors and Ergonomics, Accessibility and Inclusive Design, etc.

## EDUCATION

- **The Hong Kong University of Science and Technology (Guangzhou)** Sep 2023 - Jan 2026  
*Master of Philosophy in Intelligent Transportation* Guangzhou, China
  - GPA: 3.98/4.30
  - Advisor: [Prof. Dengbo He](#), Cooperate with: [Prof. Mingming Fan](#)
  - Courses: *Engineering Psychology and Transportation Applications (A+)*, *Analytical Methods in Human Factors (A)*, *Assistive Technology Design based on Computational Media and Arts (A)*
- **Tongji University** Sep 2019 - Jul 2023  
*Bachelor of Arts in Product Design* Shanghai, China
  - GPA: 4.29/5.00 (87.92/100)
  - Graduation Thesis Advisor: [Prof. Weiwei Guo](#)

## PUBLICATIONS

- [M.1] **Yanbin Yang**#, Lei, Lei#, Qianjie Wei, Zhixiong Wang, and Mingming Fan\*. **Auralink: Enhancing Auditory-Verbal Therapy for Children with Cochlear Implants via a Game-based Auditory Training System.** (Under Review)
- [M.2] **Yanbin Yang**, Lei Lei, Haiyu Li, Dubo Huang, and Dengbo He\*. **Can the General Public Operate eVTOLs? Effects of Short-Term Pilot Training in eVTOLs with a Single-hand Joystick Controller.** (Under Review)
- [M.3] Haiyu Li, **Yanbin Yang**, and Dengbo He\*. **Public Acceptance of Autonomous Electric Vertical Take-off and Landing Aircraft: An Analysis Based on the Extended Technology Acceptance Model.** (Under Revision)
- [P.1] **Yanbin Yang**, Haiyu Li, Lei Lei, Dubo Huang, and Dengbo He\*. 2025. **The Influence of Personality Traits on Users' Preference of eVTOL Control Parameters.** In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*. SAGE Publications, Los Angeles, CA, USA.
- [P.2] Peizhong Gao, Tanhao Gao, **Yanbin Yang**, Zhenyuan Liu\*, Jianyu Shi, and Jin Li. 2023. **Bamboo Agents: Exploring the Potentiality of Digital Craft by Decoding and Recoding Process.** In *Proceedings of the Seventeenth International Conference on Tangible, Embedded, and Embodied Interaction (TEI '23)*. Association for Computing Machinery, New York, NY, USA, Article 15, 1–13.

## RESEARCH EXPERIENCE

- **Human-Integrated Systems (HIS) Lab, HKUST(GZ)** [🌐] Sep 2023 - Present  
*Post-graduate Researcher* Guangzhou, China
  - Advisor: [Prof. Dengbo He](#)
  - Research on behaviors and states detection of electronic Vertical Take-off and Landing (eVTOL) pilots in collaboration with XPeng AeroHT.
  - Conduct research on acceptance of autonomous eVTOL, and participated in drafting the social acceptance assessment section of the Urban Air Mobility White Paper developed by HKUST(GZ).
- **Center for Digital Innovation (CDI), Tongji University** [🌐] Dec 2022 - Jun 2023  
*Undergraduate Researcher* Shanghai, China
  - Advisor: [Prof. Weiwei Guo](#)
  - Independently conducted research on human-machine interaction in autonomous drone swarms.
- **Fablab O, Tongji University** [🌐] Sep 2022 - Dec 2022  
*Undergraduate Researcher* Shanghai, China
  - Advisor: [Prof. Francesca Valsecchi](#), [Prof. Saverio Silli](#)
  - Conducted research on computational design and sustainable manufacturing.

## SKILLS

- **Languages:** English (IELTS 6.5), Mandarin (Native)
- **Tools:** Python, SAS, MatLab, Figma, Adobe CC (Ps, Ai, Ae, Id, etc.), Arduino IDE, etc.
- **Research Skills:** Experimental Design, User Study, Data Collection and Statistical Analysis, Usability Testing


## PROJECT EXPERIENCE

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- **DroneSync: A Modular Management Platform for Swarm Intelligence of AgriTech Drones** Feb 2023 - Jun 2023  
*Undergraduate Thesis Project* 
  - Designed a task flow and interaction system to support multi-drone collaboration in agriculture, enhancing operational efficiency and team coordination.
  - Developed a high-fidelity interactive prototype using Figma, guided by Ecological Interface Design (EID) principles and the SRK framework.
  - Conducted usability evaluations through user interviews, the System Usability Scale (SUS) questionnaire, and task-based performance tests.
- **Craftsperson Journey: To Create A Career Development Platform for Construction Workers** May 2022 - Jul 2022  
*Cooperated with Bosch*
  - Designed a digital platform to support skill development and career progression of migrant construction workers.
  - Built high-fidelity interactive prototypes using Figma, with front-end developed in React + TypeScript.
  - Evaluated usability through think-aloud protocol, A/B testing, and heatmap analysis, identifying pain points and validating interaction logic for on-site workflows.
- **SmartHand: An Intelligent Hemiplegic Rehabilitation Assistant for Stroke Survivors** Feb 2022 - Apr 2022  
*Won the First Prize of Shanghai Universities Industrial Design Competition*
  - Developed a data-driven rehabilitation system for hemiplegic stroke survivors, integrating a wearable EMG module, electrical stimulation unit, and a smartphone app to enable precise grip training at home.
  - Built gesture recognition in Python using MediaPipe and OpenCV, enabling real-time feedback based on a custom gesture library.
  - Engineered two wearable modules, using Arduino to control EMG detection and electrical stimulation, while integrating serious games to enhance rehabilitation motivation.
- **Bamboo Agents: A digital bamboo plaiting toolkit and a digital platform for artisans** Nov 2021 - Dec 2021  
*Won the iF Design Talent Award (Top 1%) and Gold Medal of China Universities Industrial Design Competition* 
  - Developed a digital craft platform combining traditional bamboo weaving with computational design.
  - Utilized Rhino and Grasshopper to generate adaptive 3D models for digital fabrication.
  - Created a parametric pattern library and interactive tools to support customization and co-creation between users and craftsmen.

## INTERNSHIP EXPERIENCE

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- **Designaffairs, Part of Accenture**  Oct 2022 - Dec 2022  
*Intern, Department of UI/UX Design* Shanghai, China
  - Participated in Fulbright surgical robot project, mainly responsible for interaction design, information architecture design, user interface design, prototype design and testing.

## HONORS AND AWARDS

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- **Gold Medal of International Genetically Engineered Machine Competition (iGEM)** by MIT Oct 2022
- **iF Design Talent Award** Jun 2022
- **Undergraduate Scholarships for Social Activities** by Tongji University Dec 2022
- **Gold Medal of China Universities Industrial Design Competition 2022** Nov 2022
- **First Prize of Shanghai Universities Industrial Design Competition 2022** Oct 2022
- **The Best User Experience Design Project** by Bosch PT/BE Mar 2022