Jiahao "Nick" LI

Ph.D. Candidate
UCLA HCI Research

ljhnick@ucla.edu
+1 424 355 6278
https://jiahaoli.net

EDUCATION

2018– University of California, Los Angeles
Ph.D. in Mechanical Engineering
Advisor: Xiang 'Anthony' Chen

2017–2018 University of California, Los Angeles
M.S. in Mechanical Engineering

2013–2017 Shanghai Jiao Tong University
B.E. in Naval Architecture and Ocean Engineering

RESEARCH AREAS

Understanding and enhancing interaction between humans, robots and physical environments.

Keywords: human-computer interaction, human-AI interaction, augmented reality, robotics.

PUBLICATIONS

Full Paper

2022 [C.5] Xiaoying Yang, Jacob Sayono, Jess Xu, **Jiahao "Nick" Li**, Josiah Hester, Yang Zhang. MiniKers: Interaction-Powered Smart Environment Automation. *In Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT), Volume 6 Issue 3, September. 2022.*

[C.4] **Jiahao "Nick" Li**, Alexis Samoylov, Jeeeun Kim, Xiang 'Anthony' Chen. Roman: Making Everyday Objects Robotically Manipulable with 3D-printable Add-on Mechanisms. *In Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems (CHI '22).*

[C.3] Abul Al Arabi, **Jiahao "Nick" Li**, Xiang 'Anthony' Chen, Jeeeun Kim. Mobiot: Augmenting everyday objects into moving IoT devices using 3D printed attachments generated by demonstration. *In Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems (CHI '22).*

2020 [C.2] **Jiahao "Nick" Li**, Meilin Cui, Jeeeun Kim, Xiang 'Anthony' Chen. Romeo: A Design Tool for Embedding Transformable Parts in 3D Models to Robotically Augment Default Functionality. *In Proceedings of the 33rd Annual ACM Symposium on User Interface Software and Technology (UIST '20).*

2019 [C.1] **Jiahao "Nick" Li**, Jeeeun Kim, Xiang 'Anthony' Chen. Robiot: A Design Tool for Actuating Everyday Objects with Automatically Generated 3D Printable Mechanisms. *In Proceedings of the 32nd Annual ACM Symposium on User Interface Software and Technology (UIST '19).*

Under Review

2023 **Jiahao "Nick" Li**, Yan Xu, Tovi Grossman, Stephanie Santosa, Michelle Li. OmniActions: Understanding and Predicting Follow-up Actions on Multimodal Information Using Large Language Models. *Submitted to UIST 2023*

Xingyu "Bruce" Liu, **Jiahao "Nick" Li**, Siyou Pei, Xiuxiu Yuan, David Kim, Xiang 'Anthony' Chen, Ruofei Du. Human I/O: Towards Comprehensive Detection of Situational Impairments in Everyday Activities. *Submitted to UIST 2023*.

Jiahao "Nick" Li*, Toby Chong*, Zhongyi Zhou, Hironori Yoshida, Koji Yatani, Xiang 'Anthony' Chen, Takeo Igarashi. RoCap: A Robotic Pipeline for Collecting Dataset of Appearance-changing Objects Pose Estimation. *Submitted to UIST 2023*.

Jiahao "Nick" Li, Ruolin Wang, Li-Yi Wei, Rubaiat Habib Kazi, Stephen DiVerdi, Xiang 'Anthony' Chen. RealityPlay: Authoring Interactive and Embedded Graphics Driven by Everyday Objects with User-defined Mappings. *Submitted to SIGGRAPH 2023 Conference Track*.

Preprints

2020 Zhaoliang Zheng, **Jiahao "Nick" Li**, Parth Agrawal, Ethan Uetrecht, Zhao Lei, Joseph Prince Mathew, Dinesh Kumar Karri, Ankur Mehta. User Design Parameters Based Design and Evaluation System for Indoor Airships. *Arxiv*.

2019 Erva Ulu, Nurcan Gecer Ulu, **Jiahao "Nick" Li** and Walter Hsiao. Curvy: An Interactive Design Tool for Varying Density Support Structures. *Arxiv*.

Posters & Extended Abstract & Workshop

2020/2022 **Jiahao "Nick" Li**, Meilin, Cui, Jeeeun Kim, Xiang 'Anthony' Chen. Romeo: A Design Tool for Embedding Transformable Parts in 3D Models to Robotically Augment Default Functionality. *Demo at ACM UIST 2020 and Poster at ACM UIST 2022*.

2019 **Jiahao "Nick" Li**, Jeeeun Kim, Xiang 'Anthony' Chen. Robiot: A Design Tool for Actuating Everyday Objects with Automatically Generated 3D Printable Mechanisms. *Demo in ACM UIST 2019*.

Ruolin Wang, Yuqi Tang, Hsuan Wei Fan, **Jiahao "Nick" Li**, Xiang 'Anthony' Chen. AuxiScope: Improving Awareness Surroundings for People with Tunnel Vision. *UIST Student Innovation Competition 2019.*

PROFESSIONAL EXPERIENCE

2018–	**UCLA HCI Research**, Research Assistant.	Los Angeles, CA
2022/2023	**Meta Reality Labs**, Research Intern. Mentor: Tovi Grossman, Yan Xu	Toronto, Canada
2022	**Igarashi Lab at University of Tokyo**, Visiting Ph.D. student Supervisor: Takeo Igarashi	Tokyo, Japan
2021	**Adobe Research**, Research Intern. Mentor: Li-Yi Wei, Rubaiat Habib Kazi, Stephen DiVerdi	Los Angeles, CA (Remote)
2019	**PARC, A Xerox Company**, Research Intern. Mentor: Erva Ulu, Nurcan Ulu	Palo Alto, CA
2018–2019	**DMAI Inc.**, Part-time Robotic Design Engineer.	Los Angeles, CA

SERVICE

Conference Organizing

2020-2021 **Program Committee, Associate Chair**. ACM CHI Late-Breaking Work

2022 **Student Volunteer.** ACM CHI 2022.

Reviewing

2019–2023 The ACM Symposium on User Interface Software and Technology (UIST).

2020–2023 The ACM Conference on Human Factors in Computing Systems (CHI).

2023 The ACM Special Interest Group on Computer Graphics and Interactive Techniques (SIGGRAPH) Poster

INVITED TALKS

2023 "Making Everyday Objects Physically Interactable with Robotic-augmented Sensing and Actuation."
Dynamic Graphics Project (DGP), University of Toronto (hosted by Bryan Wang).

2022 "Making Everyday Objects Physically Interactable with Robotic-augmented Sensing and Actuation."
Acuated Experience Lab (Ken Nakagaki) and Human Computer Integration Lab (Pedro Lopes), University of Chicago (hosted by Yudai Tanaka).
Purdue University (hosted by Liang He).

PRESS COVERAGE

Keynote and Plenary Addresses

2019 **New Scientist.** Turn any object into a robot using this program and a 3D printer.

Hackster News. Robiot Is a Design Tool That Generates Mechanisms to Motorize Everyday Objects.

Fabbaloo. Robiot Can Automatically Design Handy Household Machines.

Updated April 2023