

Ruei-Che Chang

Education

- 2022–Present **University of Michigan, Ann Arbor, Michigan**
Ph.D. Student in Computer Science & Engineering.
Human-AI Lab, advised by [Anhong Guo](#).
- 2020–2022 **National Taiwan University, Taipei, Taiwan**
Visiting Student and Research Assistant.
Interactive Graphics Lab, advised by [Bing-Yu Chen](#).
- 2019–2021 **Dartmouth College, Hanover, New Hampshire**
M.S. in Computer Science.
- 2014–2018 **National Cheng Kung University, Tainan, Taiwan**
B.S. in Electrical Engineering.

Awards and Honors

- 2023 Special Recognition for Outstanding Reviews for CHI'23.
- 2022 Rackham Travel Grant Award for UIST 2022.
- 2022 University of Michigan CSE Departmental First-Year Fellowship 2022.
- 2020 Best Paper Honorable Mention for Glissade [C.2] at ACM CHI 2020. [Top 5% of 3126 submissions]
- 2019 Dartmouth College 75% Tuition Scholarship.

Peer-Reviewed Conference Papers

- 2023 [C.9] **[Ruei-Che Chang*](#)**, Seraphina Yong*, Fang-Ying Liao, Chih-An Tsao, Bing-Yu Chen. “Understanding (Non-)Visual Needs of the Design of Laser Cut Architecture.” *In Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI'23)*. Hamberg, Germany. 2023. [Acceptance Rate: 28.39%]
- 2022 [C.8] **[Ruei-Che Chang](#)**, Chao-Hsien Ting, Chia-Sheng Hung, Wan-Chen Lee, Liang-Jin Chen, Yu-Tzu Chao, Bing-Yu Chen, Anhong Guo. “OmniScribe: Authoring Immersive Audio Descriptions for 360° Videos.” *In The 35th Annual ACM Symposium on User Interface Software and Technology (UIST'22)*. Bend, Oregon. 2022. [Acceptance Rate: 26.3%]
- [C.7] Ching-Wen Hung, **[Ruei-Che Chang](#)**, Hong-Sheng Chen, Chung-Han Liang, Liwei Chan, Bing-Yu Chen. “Puppeteer: Exploring Intuitive Hand Gestures and Upper-Body Postures for Manipulating Human Avatar Actions.” *In The 28th Annual ACM Symposium on Virtual Reality Software and Technology (VRST'22)*. Tsukuba, Japan. 2022. [Acceptance Rate: 26.7%]
- 2021 [C.6] **[Ruei-Che Chang](#)**, Chih-An Tsao, Fang-Ying Liao, Seraphina Yong, Tom Yeh, Bing-Yu Chen. “Daedalus in the Dark: Designing for Non-Visual Accessible Construction of Laser-Cut Architecture.” *In The 34th Annual ACM Symposium on User Interface Software and Technology (UIST'21)*. Virtual Event. 2021. [Acceptance Rate: 21%]
- [C.5] **[Ruei-Che Chang*](#)**, Wen-Ping Wang*, Chi-Huan Chiang, Te-Yen Wu, Zheer Xu, Justin Luo, Bing-Yu Chen, Xing-Dong Yang. “AccessibleCircuits: Adaptive Add-On Circuit Components for People with Blindness or Low Vision.” *In Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems (CHI'21)*. Virtual Event, Japan. 2021. [Acceptance Rate: 26.3%]
- 2020 [C.4] **[Ruei-Che Chang*](#)**, Chi-Huan Chiang*, Shuo-wen Hsu, Chih-Yun Yang, Da-Yuan Huang, Bing-Yu Chen. 2020. “TanGo: Exploring Expressive Tangible Interactions on Head-Mounted Displays.” *In Symposium on Spatial User Interaction (SUI'20)*. Virtual Event. 2020. [Acceptance Rate: 31%]

- [C.3] **Ruei-Che Chang***, Yi-Shyuan Chiang*, Yi-Lin Chuang, Shih-Ya Chou, Hao-Ping Lee, I-Ju Lin, Jian Hua Jiang Chen, Yung-Ju Chang. "Exploring the Design Space of User-System Communication for Smart home Routine Assistants." *In Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems (CHI'20)*. Virtual Event. 2020. [Acceptance Rate: 24.3%]
- [C.2] Kai-Chieh Huang, Chen-Kuo Sun, Da-Yuan Huang, Yu-Chun Chen, **Ruei-Che Chang**, Shuo-wen Hsu, Chih-Yun Yang, Bing-Yu Chen. "Glissade: Generating Balance Shifting Feedback to Facilitate Auxiliary Digital Pen Input." *In Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems. (CHI'20)*. Virtual Event. 2020. [Acceptance Rate: 24.3%] **[Best Paper Honorable Mention, Top 5% of 3126 submissions]**
- 2019 [C.1] Chi Wang, Da-Yuan Huang, Shuo-Wen Hsu, Chu-En Hou, Yeu-Luen Chiu, **Ruei-Che Chang**, Jo-Yu Lo, Bing-Yu Chen. "Masque: Exploring Lateral Skin Stretch Feedback on the Face with Head-Mounted Displays." *In Proceedings of the 32nd Annual ACM Symposium on User Interface Software and Technology (UIST'19)*. New Orleans, LA. 2019. [Acceptance Rate: 24.4%]

Posters, Demos, Workshops, Works in Progress

- 2022 [A.1] Ching-Wen Hung, **Ruei-Che Chang**, Hong-Sheng Chen, Chung-Han Liang, Liwei Chan, Bing-Yu Chen. "Puppeteer: Manipulating Human Avatar Actions with Intuitive Hand Gestures and Upper Body Postures." *In The 35th Annual ACM Symposium on User Interface Software and Technology (UIST Poster 2022)*. Bend, Oregon. 2022.

Research Experience

- Sep 2022 – **Human-AI Lab, University of Michigan**
 present *Graduate Research Assistant, advised by Anhong Guo*
 - Developed accessible XR experience using sound manipulations [work in progress].
- Sep 2021 – *Remote research intern, advised by Anhong Guo*
 Apr 2022 Developed OmniScribe for authoring immersive audio descriptions for 360° videos [C.8].
- Jun 2020 – **Interactive Graphics Lab, National Taiwan University**
 Jul 2022 *Research Assistant, advised by Bing-Yu Chen and Tom Yeh (Univ. of Colorado)*
 - Developed Daedalus for non-visual accessible construction of laser-cut architecture [C.6].
 - Conducted study to understand (non-)visual needs for laser-cut model design [C.9].
- Feb 2019 – *Research Assistant, advised by Bing-Yu Chen and Da-Yuan Huang (Huawei)*
 Aug 2019 Developed Unity applications for Glissade[C.2] and Masque [C.1].
 - Developed TanGo for expressive haptic interaction on VR headset [C.4].
- Sep 2019 – **XDiscovery Lab, Dartmouth College**
 Sep 2020 *Graduate student, advised by Xing-Dong Yang*
 - Developed AccessibleCircuits, a set of 3D-printed add-ons to existing circuit components [C.5].
- Sep 2018 – **Mobile and Ubiquitous Interaction Lab, National Yang Ming Chiao Tung University**
 Apr 2019 *Research Assistant, advised by Yung-Ju (Stanley) Chang*
 - Designed and conducted an experiment to understand the communication between human and smart home agent [C.3].

Work Experience

- 2018 **Mandatory Military Service**, Taiwan.
 2018 **Undergraduate research intern** at *Industrial Technology Research Institute (ITRI)*, Hsinchu, Taiwan.

Academic Services

Programm Committee Associate Chair CHI '23 LBW

Student Volunteer UIST'22

Reviewer CHI('22 '23), UIST('21 '22), CSCW('23), TOHCI('23), TEI('23), SUI('23), DIS('22), ISS('22), MobileHCI('22), IEEE VR('23), CHI LBW('20 '21 '22)

Student Mentoring

- 2023–present **Samantha Au**, *Undergrad student* at University of Michigan. (OmniScribe deployment)
- 2023–present **Linfeng Song**, *Undergrad student* at University of Michigan. (OmniScribe deployment)
- 2023–present **Zaizhe Liu**, *Undergrad student* at University of Michigan. (OmniScribe deployment)
- 2022–present **Minyu Cai**, *Undergrad student* at University of Michigan. (ImageExplorer deployment)
- 2022–present **Dier Hou**, *Undergrad student* at University of Michigan. (ImageExplorer deployment)
- 2022–2023 **Chia-Sheng Hung**, *Master student* at National Taiwan University.
- 2021–2022 **Fang-Ying Liao**, *Master student* at National Taiwan University.
- 2021–2022 **Chao-Hsien Ting**, *Master student* at National Taiwan University. (OmniScribe [C.7], UIST'22)
- Jan–Apr 2021 **Chih-An Tsao**, *Master student* at National Taiwan University. (Daedalus [C.6], UIST'21)

Skills

- Programming Java, C#, Python, JavaScript, ROS, OpenCV, MongoDB, Swift, \LaTeX
- Prototyping Arduino, 3D-printing, Fusion 360, Laser-cutting
- Platforms/IDE Unity3D, Android Studio, Fusion 360, Xcode

References

Anhong Guo

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Computer Science*
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Robin Bing-Yu Chen

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