

# Junnan Yu

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## Appointments

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- 2022.08–Now **The Hong Kong Polytechnic University**  
Assistant Professor, School of Design
- Summer 2022 **University of Colorado Boulder**  
Temporary Research Faculty, Department of Information Science
- Summer 2020 **Harvard University**  
Research Intern, The Berkman Klein Center for Internet & Society

## Education

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- 2017.08–2022.05 **University of Colorado Boulder** | Boulder, CO, USA
- **Doctor of Philosophy in Information Science**
    - Thesis: *A Design Exploration of Leveraging Physical Play to Support Computational Learning for Young People*
    - Committee Members: Ricarose Roque (Chair), Casey Fiesler, Ben Shapiro, Joseph Polman, Victor R. Lee (Stanford University)
- 2014.09–2017.03 **Shanghai Jiao Tong University** | Shanghai, China
- **Master of Arts in Design (Graduated with Honor)**
  - School of Media & Design
- 2010.09–2014.06 **Zhejiang University** | Hangzhou, China
- **Bachelor of Engineering in Industrial Design**
  - College of Computer Science and Technology

## Research Interests

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- Interactive Learning Technologies and Equity
- Computing Education for Young People
- Child-Computer Interaction
- Design Research

## Grants

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- 2023–2025 **PI**, School Collaborative Research Fund with Non-local Institutions, The Hong Kong Polytechnic University & University Grants Committee of Hong Kong

- Project: *Investigating the Design of Culturally Responsive Computational Learning Tools for Children*
  - Co-Investigator: Dr. Natalie Rusk (MIT Media Lab, Lifelong Kindergarten Research Group)
  - Amount: HKD 400,000
- 2023–2025 **PI**, Departmental Supporting Fund (UGC), The Hong Kong Polytechnic University
- Project: *Combining Computational Learning with Physical Play for Young Children: Investigating the Design of Learning Tool and Experience*
  - Amount: HKD 100,000
- 2023–2024 **PI**, Departmental General Research Fund, The Hong Kong Polytechnic University & University Grants Committee of Hong Kong
- Project: *Parent-Child Joint Media Engagement with Learning Technologies in Hong Kong*
  - Amount: HKD 100,000
- 2023–2024 **CO-PI**, Departmental General Research Fund, The Hong Kong Polytechnic University & University Grants Committee of Hong Kong
- Project: *Towards a subjective well-being society from a positive design perspective: A case study of Hong Kong*
  - Amount: HKD 89,200
- 2023–2024 **PI**, Internal Research Fund, The Hong Kong Polytechnic University & University Grants Committee of Hong Kong
- Project: *AI Literacy for Children: An Overview of Learning Content and Tools*
  - Amount: HKD 250,000
- 2022–2024 **PI**, Internal Research Fund, The Hong Kong Polytechnic University & University Grants Committee of Hong Kong
- Project: *Investigating Gender-related Design Features in Computational Toys and Kits for Young Children*
  - Amount: HKD 150,000
- 2020–2021 **PI**, Outreach Micro Grants, University of Colorado Boulder
- Project: *Computational Physical Play Workshops in Community-based Organizations*
  - Amount: USD 1,870
- 2020 **CMCI Graduate Student Travel Grant** (USD1,000), University of Colorado Boulder
- 2018 **CMCI Graduate Student Travel Grant** (USD 750), University of Colorado Boulder

## Honors & Awards

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- 2021 The Graduate School Summer Fellowship (USD 6,000)  
University of Colorado Boulder
- 2021 Graduate Research Award  
Department of Information Science, University of Colorado Boulder
- 2020 The Gerald C. Bean Scholarship  
College of Media, Communication and Information, University of Colorado Boulder
- 2018 Student Best Paper Award

ACM Conference on Interaction Design and Children (IDC)

- 2017 Outstanding Graduate  
Shanghai Jiao Tong University
- 2015&2016 National Scholarship for Graduate Students (Awarded Twice)  
The Ministry of Education of China
- 2012 Winner of the Innovative Electric Heater Design Competition  
Chinese Industrial Design Association (Top 10 out of 1500)

## Peer Reviewed Publications [[Google Scholar Page](#)]

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Authors underlined are students I mentored for the work.

### Journals:

- [J5] **Yu, J.**, Xu, T., Kelley, C., Ruppert, J. & Roque, R. (2024, In Press). Leveraging Physical Activities to Support Learning for Young People via Technologies: An Examination of Educational Practices Across the Field. *Review of Educational Research* (Acceptance Rate: 5.3%; Five-Year Impact Factor: 16.6)
- [J4] Xu, T.\*, **Yu, J.\***, Doyle, D., & Volda, S. (2023). Technology-Mediated Strategies for Coping with Mental Health Challenges: Insights from People with Bipolar Disorder. *Proc. ACM Hum.-Comput. Interact.* 7, CSCW2, Article 240 (October 2023), 31 pages. (CSCW '23) (\*Equal contribution)
- [J3] **Yu, J.**, Granados, J., Hayden, R., & Roque, R. (2021). Parental Facilitation of Young Children's Technology-based Learning Experiences from Nondominant Groups During the COVID-19 Pandemic. *Proc. ACM Hum.-Comput. Interact.*, 5 (CSCW2, October). (CSCW '21)
- [J2] **Yu, J.**, Ruppert, J., Roque, R., & Kirshner, B. (2020). Youth Civic Engagement Through Computing: Cases and Implications. *ACM Inroads*, 11(4), 42-51.
- [J1] **Yu, J.**, & Roque, R. (2019). A Review of Computational Toys and Kits for Young Children. *International Journal of Child-Computer Interaction*, 21, 17-36.


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### Proceedings:

- [C14] **Yu, J.**, Qi, X. & Yang, S. (2024). Parent-Child Joint Media Engagement Within HCI: A Scoping Analysis of the Research Landscape. In *Proceedings of the ACM CHI Conference on Human Factors in Computing Systems (CHI '24)*, May 11-16, 2024, Honolulu, HI, USA. 21 pages. (Acceptance Rate: 26%)
- [C13] Luo, Y., **Yu, J.**, Liang, M., Wan, Y., Zhu, K. & Santosa, S. (2024). Emotion Embodied: Unveiling the Expressive Potential of Single-Hand Gestures. In *Proceedings of the ACM*

- CHI Conference on Human Factors in Computing Systems (CHI '24)*, May 11-16, 2024, Honolulu, HI, USA. 17 pages. (Acceptance Rate: 26%)
- [C12] Cho, J., Choi, D., **Yu, J.** & Volda, S. (2024). Reinforcing and Reclaiming the Home: Co-speculating Future Technologies to Support Remote and Hybrid Work. In *Proceedings of the ACM CHI Conference on Human Factors in Computing Systems (CHI '24)*, May 11-16, 2024, Honolulu, HI, USA. 28 pages. (Acceptance Rate: 26%)
- [C11] Cowit, N. & **Yu, J.** (2024). Supporting Physically Active CS-Ed for Children: Exploring the Design of Physical Play Friendly Coding Blocks. In *Extended Abstracts of the CHI Conference on Human Factors in Computing Systems (CHI EA '24)*, May 11-16, 2024, Honolulu, HI, USA. (Acceptance Rate: 33.88%)
- [C10] **Yu, J.**, Hayden, R. & Roque, R. (2023). Exploring Computational Thinking with Physical Play through Design. In *Proceedings of the 22nd Annual ACM Interaction Design and Children Conference (IDC '23)*, June 19-23, 2023, Chicago, IL, USA. 124-136. (Acceptance Rate: 29%)
- [C9] Cen, J. & **Yu, J.** (2023). Examining Gendered Communications of Coding Kits for Young Children. In *Proceedings of the 22nd Annual ACM Interaction Design and Children Conference (IDC '23)*, June 19-23, 2023, Chicago, IL, USA. 624-629.
- [C8] Cen, J., Xu, T., & **Yu, J.** (2023). Examining Gender-oriented Design Features in Computational Toys and Kits for Young Children. In *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI '23)*, April 23-28, 2023, Hamburg, Germany. 19 pages. (Acceptance Rate: 28%)
- [C7] **Yu, J.**, Widman, S., & Roque, R. (2023). Family Negotiation in Joint Media Engagement with Creative Computing. In *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI '23)*, April 23-28, 2023, Hamburg, Germany. 15 pages. (Acceptance Rate: 28%)
- [C6] **Yu, J.**, & Roque, R. (2022). Young Children's Perceptions of Coding and Implications. In *Proceedings of the 21st Annual ACM Interaction Design and Children Conference (IDC '22)*, Braga, Portugal. 448-451.
- [C5] **Yu, J.**, DeVore, A., & Roque, R. (2021). Parental Mediation for Young Children's Use of Educational Media: A Case Study with Computational Toys and Kits. In *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems (CHI '21)*, 1-12. (Acceptance Rate: 26%)
- [C4] **Yu, J.**, Bai, C., & Roque, R. (2020). Considering Parents in Coding Kit Design: Understanding Parents' Perspectives and Roles. In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems (CHI '20)*, 1-14. (Acceptance Rate: 23.8%)
- [C3] **Yu, J.**, Zheng, C., Tamashiro, M. A., Gonzalez-millan, C., & Roque, R. (2020). CodeAttach: Engaging Young Children in Computational Thinking Through Physical

Play Activities. In *Proceedings of the Fourteenth International Conference on Tangible, Embedded, and Embodied Interaction (TEI '20)*, 453–459.

-  [C2] **Yu, J.**, & Roque, R. (2018). A Survey of Computational Kits for Young Children. In *Proceedings of the 17th ACM Conference on Interaction Design and Children (IDC '18)*, 289–299. (**Student Best Paper Award**, Top 5%; Acceptance Rate: 29%)
- [C1] **Yu, J.**, Ma, X., & Han, T. (2017). Usability Investigation on the Localization of Text CAPTCHAs: Take Chinese Characters as a Case Study. In *Proceedings of the Transdisciplinary Engineering-24th ISPE Inc., International Conference, 5*, 233–242.

## Patents

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**Yu, J.**, Ma, X., & Han, T. “A faucet with bacteria scanning function”, Chinese Patent, 2016: CN201610072274.0

## Posters, Talks, Presentations & Workshops

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- Jun 2023 IDC 2023 Paper Presentation, Chicago, USA
- Talk: “Exploring Computational Thinking with Physical Play Through Design”
- Jun 2023 ISLS 2023 Symposium on “Designing to Disrupt While Encountering Disruption: Engaging with the Unexpected in Educational Research and Practice”
- Yu, J. Symposium Poster: “Disruption of Gender Representation in Computational Toys and Kits for Young Children from a Design Perspective”
- Apr 2023 CHI 2023 Paper Presentation, Hamburg, Germany
- Talk: “Family Negotiation in Joint Making with Creative Computing”
- Apr 2023 CHI 2023 Workshop on Child-Centred AI Design: Definition, Operation and Considerations, Hamburg, Germany
- Zhou, Z., & Yu, J. Workshop Paper: “Adapt a Generic Human-Centered AI Design Framework in Children’s Context”
- Jun 2022 IDC 2022 Workshop on “Fun in Learning”
- Workshop paper: “Designing for Fun in Learning: Reflections from a Case Exploration of Combining Physical Play with Coding for Young People”
- Jan 2022 The Hong Kong Polytechnic University
- Talk: “Engaging Young People in Playful Computational Learning Experiences”
- Jan 2022 Beijing Institute of Technology
- Talk: “Broadening Participation in Computing: Designing Playful Computational Learning Experiences for Young People”
- Dec 2021 Shanghai Jiao Tong University
- Talk: “Broadening Participation in Computing: Designing Playful Computational Learning Experiences for Young People”
- Nov 2021 National University of Singapore

- Talk: “An Exploration of Leveraging Physical Play to Support Computational Learning for Young People”
  - Workshop: “Animate Yourself with Coding”
- Nov 2021 LSGSC 2021 Lightning Talk
- Talk: “Physical Activity as a Learning Medium: Characteristics and Opportunities”
- Oct 2021 The Hong Kong University of Science and Technology
- Talk: “An Exploration of Leveraging Physical Play to Support Computational Learning for Young People”
- Oct 2021 CSCW 2021 Paper Presentation
- Talk: “Parental Facilitation of Young Children’s Technology-based Learning Experiences from Nondominant Groups During the COVID-19 Pandemic”
- Jun 2021 IDC 2021 Workshop – “Translational IDC: Bridging the IDC Research-Practice Gap”
- May 2021 CHI 2021 Paper Presentation
- Talk: “Parental Mediation for Young Children’s Use of Educational Media: A Case Study with Computational Toys and Kits”
- Apr 2021 Information Science Seminar, University of Colorado Boulder
- Talk: “Parental Mediation for Young Children’s Use of Educational Media: A Case Study with Computational Toys and Kits”
- Jun 2018 IDC 2018 Paper Presentation, Trondheim, Norway
- Talk: “A Survey of Computational Kits for Young Children”

## Teaching

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### Instructor

- Summer 2023 SD5539 ISD Capstone Research Project  
[Graduate level] The Hong Kong Polytechnic University
- Spring 2023 SD4762 Studio II: Networks and Communities  
[Undergraduate level] The Hong Kong Polytechnic University
- Spring 2023 SD4771 Capstone Project II: Interactive Media  
[Undergraduate level] The Hong Kong Polytechnic University
- Fall 2022, 2023 SD5513 Theories in Interaction Design  
[Graduate level] The Hong Kong Polytechnic University
- Fall 2022, 2023 SD4761 Studio I: Information and Communication  
[Undergraduate level] The Hong Kong Polytechnic University
- Fall 2022, 2023 SD4770 Capstone Project I: Interactive Media  
[Undergraduate level] The Hong Kong Polytechnic University

### Teaching Assistant

- Fall 2022 SD5114, SD5115, SD5131 – IBD Interdisciplinary Essentials [Project Consultant]

	[Graduate level] The Hong Kong Polytechnic University
Spring 2020	INFO 1121 Designing Interactions [Undergraduate level] University of Colorado Boulder
Spring 2019	INFO 1201 Computational Reasoning I (Python) [Undergraduate level] University of Colorado Boulder
Spring&Fall 2018	INFO 1201 Computational Reasoning I (Python) [Undergraduate level] University of Colorado Boulder
Fall 2017	INFO 1201 Computational Reasoning I (Python) [Undergraduate level] University of Colorado Boulder
Spring 2015	AR 903 The Art of Design Innovation [Undergraduate level] Shanghai Jiao Tong University
Fall 2014	ID 310 Product Design II [Undergraduate level] Shanghai Jiao Tong University

### Guest Lecturer & Speaker

Oct 2023	ECE6248 Research Method in Early Childhood Education [Graduate] Education University of Hong Kong, led by Dr. Annie Yixun Li
Apr 2022	INFO 4609/5609 User Centered Design [Graduate and undergraduate] University of Colorado Boulder, led by Dr. Ricarose Roque
Feb 2020	INSC 598 Child-Computer Interaction [Graduate and undergraduate] University of Washington, led by Dr. Katie Davis
Fall 2020	INFO 3505 Designing for Creativity & Learning [Graduate and undergraduate] University of Colorado Boulder, led by Dr. Ricarose Roque

## Research Mentorship

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### Ph.D. Students

2024–2028	Xiang (Nathan) Qi (Ph.D. in Design, The Hong Kong Polytechnic University)
2024–2028	Kaiyue Jia (Ph.D. in Design, The Hong Kong Polytechnic University)

### Undergraduate/Graduate Research Assistants

2023–Now	Yangyu Huang (MSc in Multimedia and Entertainment Technology, The Hong Kong Polytechnic University)
2023–2024	Kaiyue Jia (Research Assistant, The Hong Kong Polytechnic University)
2022–2024	Xiang (Nathan) Qi (MDes in Smart Service Design, The Hong Kong Polytechnic University)
2023–2023	Irene Cheung (B.E. HCI, Hong Kong University of Science and Technology)
2022–2023	Siqi Yang (Master of Design in Intelligent System Design, The Hong Kong Polytechnic University)
2023	Teresa Leung (Research Assistant, The Hong Kong Polytechnic University)
2022–2023	Jingyao (Joan) Cen (Research Assistant, The Hong Kong Polytechnic University)
2021	Blanca Cerda Herrera (B.S. Neuroscience, University of Colorado Boulder)

2020	Julisa Granados (B.S. Psychology and Neuroscience, University of Colorado Boulder)
2019–2020	Andrea Devore (B.S. Technology, Arts, and Media, University of Colorado Boulder)
2019–2020	Christopher Gonzalez-millan (B.S. Computer Science, University of Colorado Boulder)
2019	Chenke Bai (B.S. Information Science, University of Colorado Boulder)
2018	Elizabeth Robinson (B.S. Computer Science, University of Colorado Boulder)

### **Ph.D. Confirmation Committee**

2023	Jingyi Wan (Ph.D. in Design, The Hong Kong Polytechnic University)
2023	Gui Shun (Ph.D. in Design, The Hong Kong Polytechnic University)

## **Academic & Community Services**

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### **Editorial Board**

10/2023–Now	Associate Editor, International Journal of Child-Computer Interaction
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### **Conference Committee & Organization**

2024	CHI 2024 Workshop: Organizing Committee for the Workshop on Methods for Family-Centered Design
2024	CHI 2024: Associate Chair for Late-Breaking Work
2023	CSCW 2023 January Cycle: Associate Chair for Paper Session
2023	ISLS 2023: Program Committee Member
2023	CHI 2023: Associate Chair for Late-Breaking Work
2022	CSCW 2023 July Cycle: Associate Chair for Paper Session
2022	CSCW 2022: Associate Chair for Poster Session

### **Reviewer**

#### **Proceedings:**

- CHI: 2019 – Now (**Special Recognition for Outstanding Reviews**)
- CSCW: 2020 – Now (**Special Recognition for Outstanding Reviews**)
- IDC: 2019 – Now
- TEI: 2019 – Now
- DIS: 2020 – Now
- Creativity & Cognition: 2021
- LSGSC 2021

#### **Journals:**

- Educational Research Review (**Recognized Reviewer**)
- Computers & Education (**Recognized Reviewer**)
- International Journal of Child-Computer Interaction (**Recognized Reviewer**)
- Journal of Research in Childhood Education
- Behaviour & Information Technology
- International Journal of Human-Computer Interaction

### **Departmental Service**



- 2023–Now Member of School Research Committee, School of Design, The Hong Kong Polytechnic University
- Review internal grant applications
  - Review Ph.D. applications
  - Review graduate student performance
  - Other research-related issues in the department
- 2023–Now Undergraduate Admission Material Review and Interviews
- 2022 Member of the PolyU Design bidding team for 2024 Design Research Society Conference
- Outreach Programs**
- Apr 2021 Remote Coding Workshops for Young Children  
In collaboration with Boulder Public Library & I Have A Dream Foundation
- Feb 2020 Workshops on Coding & Physical Play for Children  
In collaboration with the Museum of Boulder
- Jul 2019 Computational Physical Play Workshops for Children  
In collaboration with the University of Colorado Museum of Natural History
- Volunteer**
- Oct 2021 Student Volunteer for CSCW 2021 Conference
- Feb 2021 Computer Science Education Week 2021  
Boulder Public Library, Boulder, CO, USA. Led by Celeste Moreno
- Spring 2020 Youth Maker Hangout Event  
Boulder Public Library, Boulder, CO, USA
- 2015 & 2016 The Fourth and Fifth Summer Camp of Innovative Design Elites  
Shanghai Jiao Tong University, Shanghai, China
- Summer 2014 Asia Leadership Programme  
Zhejiang University & Singapore University of Technology and Design, Hangzhou, China