

# Zijian Ding (Jason)

PhD Student in HCI/ML and Social Computing | [ding@umd.edu](mailto:ding@umd.edu) | [jason-ding.com](http://jason-ding.com) (Updated in Jul 2021)

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EDUCATION	<b>Ph.D in Information Science</b> , University of Maryland, College Park (UMD) 2021-2025 (Exp.)
	<b>M.S in Electrical &amp; Computer Eng</b> , University of California, San Diego (UCSD) 2018-2020
	<b>B.Eng in Electronic &amp; Information Eng</b> , The Hong Kong Polytechnic University (PolyU) 2014-2018
	<b>Summer Visiting</b> , Pembroke College, The University of Cambridge 2017
	<b>Exchange</b> , National University of Singapore (NUS) 2017
	<b>Summer Visiting</b> , The University of British Columbia (UBC) 2015
RESEARCH EXPERIENCE	<b>Graduate Research Assistant</b> , UMD HCI Lab Jul 2021–Present Supervised by <a href="#">Prof. Joel Chan</a> <ul style="list-style-type: none"><li>Explore how to engage, empower and scaffold novice community members in the design process</li></ul>
	<b>Graduate Research Assistant (Lab Assistant II)</b> , UCSD Design Lab Apr 2019–Present Supervised by <a href="#">Prof. Steven Dow</a> and <a href="#">Prof. Stephen MacNeil</a> (now with Temple University) <ul style="list-style-type: none"><li>Explore how to engage, empower and scaffold novice community members in the design process</li><li>Conduct a case study of Canvas which uses a discussion forum to crowdsource problems and solutions from its own end-users; analyze 1412 ideas and 18,335 associated comments shared on Canvas</li><li>Have developed 4 web-based interventions that leverage machine learning models and computation to help guide and scaffold design novices to work on creative tasks such as exploratory search</li><li>Resulted in three full papers accepted to CHI'21, CSCW'21 and C&amp;C'21&amp;22, one CHIIR'21 short paper and one UIST'21 demo paper (all as the second author), and three submissions in preparation</li></ul>
	<b>Visiting Research Intern</b> , Dept. of Computer Science and Engineering, HKUST Sep 2020–Present Supervised by <a href="#">Prof. Xiaojuan Ma</a> <ul style="list-style-type: none"><li>Lead a research project developing an interface to embed backchannel into conversation and collect spoken language biomarkers for screening and monitoring neurocognitive disorders of the elderly</li><li>Collaborate with <a href="#">Prof. Helen Meng (CUHK)</a> on a University Grants Committee (UGC) Theme-Based Research Scheme with funding HK\$50M (US\$6.45M) [<a href="#">Media appearance on IEEE Spectrum</a>]</li><li>Work with <a href="#">Prof. Pascale Fung</a>, <a href="#">Prof. Bertram Shi</a> and <a href="#">Prof. Qifeng Chen</a> (all from HKUST) on an ITF-Platform project with funding HK\$2.94M (US\$380K)</li></ul>
	<b>Undergraduate Student Researcher</b> , PolyU & Boud University Sep 2017–Aug 2018 Supervised by <a href="#">Prof. Hung-Lin Chi</a> and <a href="#">Dr. Ruidong Chang</a> (now with the University of Adelaide) <ul style="list-style-type: none"><li>Work on 3 computer-aided civil engineering projects with 3 publications and co-led a successful 3D printing building project with US\$46,000 funds</li></ul>
	<b>Undergraduate Capstone Project</b> , PolyU Apr 2017–May 2018 Supervised by <a href="#">Prof. Francis C. M. Lau</a> <ul style="list-style-type: none"><li>Build a CV-based wireless water-meter reading system (Best 50 Final Year Projects Award in HK)</li></ul>

## PUBLICATIONS **Conference Papers**

- [1] S. Palani, **Z. Ding**, A. Nguyen, A. Chuang, S. MacNeil, S. P. Dow. CoNotate: Suggesting Queries Based on Notes Promotes Knowledge Discovery. In *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems (CHI'21)*, Online, 2021.
- [2] S. MacNeil, **Z. Ding**, A. Boone, A. B. Grubbs, S. P. Dow. Finding Place in a Design Space: Challenges for Supporting Community Design Efforts at Scale. In *Proceedings of the 2021 Conference of Computer Supported Cooperative Work (CSCW'21)*, Online, 2021.
- [3] S. MacNeil, **Z. Ding**, K. Quan, T. J. Parashos, Y. Sun, S. P. Dow. Framing Creative Work: Helping Novices Frame Better Problems through Interactive Scaffolding. In *Proceedings of the 2021&2022 Conferences on Creativity and Cognition (C&C'21&22)*, Online, 2021.

- [4] S. MacNeil, **Z. Ding**, K. Quan, Z. Huang, K. Chen, S. P. Dow. ProbMap: Automatically Constructing Design Galleries through Feature Extraction and Semantic Clustering. In *Adjunct Proceedings of the 2021 Annual ACM Symposium on User Interface Software and Technology (UIST'21 Demo)*, Online, 2021.
- [5] S. Palani, **Z. Ding**, S. MacNeil, S. P. Dow. The "Active Search" Hypothesis: How Search Strategies Relate to Creative Learning. In *Proceedings of the 2021 Conference on Human Information Interaction and Retrieval (CHIIR'21 Poster)*, Online, 2021.
- [6] R. Chang, Q. Wang, **Z. Ding**. Revolutionizing Urban Energy Planning: A Roadmap Towards City-level Energy Modelling in Australia. In *Proceedings of the International Conference on Construction Project Management and Construction Engineering (iCCPMCE'18)*, Sydney, Australia. **(Best Paper 🏆)**.
- [7] Q. Wang, S. Zhang, D. Wei, **Z. Ding**. Additive Manufacturing (AM): A Revolutionized Power for Construction Industrialization. In *Proceedings of the 2018 International Conference on Construction and Real Estate Management (ICCREM'18)*, Charleston, USA. **(Best Paper 🏆)**

### Journals

- [1] S. Chang, Q. Wang, H. Hu, **Z. Ding**, H. Guo. An NNwC MPPT-Based Energy Supply Solution for Sensor Nodes in Buildings. *Energies*, 12(1), 1-20.
- [2] R. Chang, Q. Wang, **Z. Ding**. How is the Energy Performance of Buildings Assessed in Australia?- A Comparison between four Evaluation Systems. *International Journal of Structural and Civil Engineering Research*, 8(2), 133-137.

AWARDS (US\$88,100)	<b>UMD iSchool Dean's Fellowship</b> , US\$10,000	2021
	<b>UCSD ECE SRIP Fellowship</b> , US\$5,000	2019
	<b>Winner of the UCSD Design Lab Mobility Hub Designathon</b> , US\$1,000	2019
	<b>Best 40 FYP+ Award</b> , US\$2,500	2019
	<b>Finalist of UC Berkeley Big Ideas Proposal Contest</b> , 16% acceptance rate	2019
	<b>PolyU Entry Scholarship (Academic Excellence)</b> , US\$61,500	2014–2018
	<b>Best Paper Award</b> , Intl. Conference on Construction and Real Estate Management	2018
	<b>Best Paper Award</b> , Intl. Conference on Construction Project Management & Construction Eng.	2018
	<b>Best 50 Final Year Projects Award</b> , US\$2,500	2018
	<b>Bronze Award (IT Services)</b> , 4th China College Students' "Internet+" Innov. & Entr. Competition	2018
	<b>Bronze Award (Mfg)</b> , 4th China College Students' "Internet+" Innov. & Entr. Competition	2018
	<b>Hong Kong-Tsingtao Association Scholarship</b> , US\$1,300	2018
	<b>Best GPA Award</b> , Dept. of Electronic and Information Engineering, PolyU	2017
	<b>Twice on Dean Honors List</b> , Faculty of Engineering, PolyU	2015–2017
	<b>Wong Tit-shing Student Exchange Scholarship</b> , US\$2,000	2017
<b>PolyU Student Exchange Scholarship</b> , US\$2,300	2017	
FUNDS (US\$67,000)	<b>Don Norman Design Fund</b> , US\$890	2019
	<b>PolyU Student Entrepreneurial Proof-of-Concept Funding Scheme</b> , US\$4,000	2019
	<b>PolyU International Competition &amp; Conference Participation Scheme</b> , US\$5,910	2018
	<b>Mingxi Youth Fund</b> , US\$33,000	2018
	<b>PolyU Global Student Project Fund</b> , US\$13,000	2018
	<b>PolyU Oxbridge (Oxford &amp; Cambridge) Abroad Subsidy</b> , US\$6,400	2017
<b>PolyU Offshore WIE Sponsorship</b> , US\$3,800	2016	

TALKS & PRESENTATIONS	<p><b>Presentation at C&amp;C 2021</b>, Online 23 Jun 2021 Framing Creative Work: Helping Novices Frame Better Problems through Interactive Scaffolding.</p> <p><b>Presentation at CHI 2021</b>, Online 12 May 2021 CoNotate: Suggesting Queries Based on Notes Promotes Knowledge Discovery</p> <p><b>Poster at CHIIR 2021</b>, Online 16-18 Mar 2021 The "Active Search" Hypothesis: How Search Strategies Relate to Creative Learning</p> <p><b>Poster at World Innovation &amp; Entrepreneurship EXPO (WIEE)</b>, Tongji University 19 May 2018 Bright Building: Additive Construction for Post-Disaster Redevelopment</p> <p><b>Poster at Forum "From Disaster Management to Disaster Risk Reduction"</b>, PolyU 7 May 2018 Bright Building: Additive Construction for Post-Disaster Redevelopment</p> <p><b>Talk at Luncheon Research Seminar</b>, Dept of Building and Real Estate (BRE), PolyU 8 Mar 2018 Bright Building: Additive Construction for Post-Disaster Redevelopment</p>
COURSE PROJECTS	<p><b>Interaction Design (A+)</b>, Design and develop a <a href="#">budget web application</a> with JavaScript. Winter 2019</p> <p><b>Machine Learning for Image Processing (A)</b>, <a href="#">Implement YOLOv3 with PyTorch</a>. Spring 2019</p>
PROFESSIONAL EXPERIENCE	<p><b>Promotion Manager</b>, <a href="#">UCSD Design Lab Design for San Diego (D4SD) Challenge</a> Jan–Sep 2020</p> <p><b>Database Engineer Intern</b>, <a href="#">Moscow International Higher Business School (MIRBIS)</a> Jun–Aug 2016</p>
SKILLS	<p><b>Programming Languages</b> Python, Java, C/C++, R, Matlab, <math>\LaTeX</math></p> <p><b>Fullstack</b> JavaScript, React.js, Vue.js, Redux, Flask, Node.js, Docker, MySQL, Firebase, HTML, CSS</p> <p><b>Machine Learning &amp; NLP</b> pyTorch, TensorFlow, scikit-learn, NLTK, pandas, spaCy, Gensim</p> <p><b>Visualization</b> D3.js, ggplot2, Matplotlib, Seaborn, Plotly</p> <p><b>UI &amp; Design</b> Figma, Photoshop, InDesign, AutoCad, Final Cut Pro, Paper Prototyping</p> <p><b>Qualitative Research Methods</b> Interview, Usability Test, Qualitative Coding, Affinity Diagram</p> <p><b>Hardware</b> Microcontroller Programming (Arduino, STM32), PCB design, 3D Printing</p> <p><b>Languages</b> English (TOEFL:108, R:29 L:27 S:24 W:28), Chinese (Mandarin/Cantonese)</p>
MENTORING	<p><i>Undergraduate</i></p> <p><b>Kexin Quan</b> (B.S.) Major in Cognitive Science (ML &amp; Neural Computation), UCSD Apr 2020–Present</p>
VOLUNTEER SERVICE	<p><b>Panelist</b>, Professional Development Speaker Session, Hong Kong-Tsingtao Association 10 Apr 2021</p> <p><b>IT Advisor (prev. IT Secretary)</b>, PolyU Living &amp; Learning Communities–EHKC Dec 2015–Dec 2017</p> <p><b>VP (prev. External Secretary)</b>, PolyU Living &amp; Learning Communities–PDC Sep 2015–Apr 2017</p> <p><b>Conference Host</b>, Asian Venture Philanthropy Network (AVPN) Conference 2016 May 2016</p>
MEMBERSHIPS	ACM Student Member; Pembroke College Circle (Cambridge)
MEDIA APPEARANCES	<p><b>Interview "How to Make the Most of Your University Experience?"</b> 43,600+ views on YouTube</p> <p><b>Departmental Newsletter "Best Paper in 2018 ICCREM"</b> (on page 1)</p> <p><b>Alumni Sharing "PolyU Helps Me Establish 3 Pillars of Research Exploration"</b> (in Chinese).</p>
REFERENCES	<p><b>Prof. Joel Chan</b>, Assistant Professor, University of Maryland, College Park (UMD)</p> <p><b>Prof. Steven Dow</b>, Associate Professor, University of California, San Diego (UCSD)</p> <p><b>Prof. Stephen MacNeil</b>, Assistant Professor, Temple University</p> <p><b>Prof. Xiaojuan Ma</b>, Assistant Professor, Hong Kong University of Science and Technology (HKUST)</p> <p><b>Prof. Helen Meng</b>, Patrick Huen Wing Ming Professor, The Chinese University of Hong Kong (CUHK)</p>