

# Zijian Ding (Jason)

PhD Student in HCI and ML with 5 years' research experience and publications in CHI, CSCW and UIST  
ding@umd.edu | jason-ding.com | LinkedIn | Google Scholar | Last update: November 24, 2022

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EDUCATION	<b>Ph.D. in Information Studies</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

## PUBLICATIONS **Full Conference Papers** (CHI and CSCW are the top 2 HCI venues ranked by [Google Scholar](#))

- [1] **Z. Ding**, E. Kamrah, M. Fuge, J. Chan. [Hidden title because of anonymity check]. In *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI'23)*, Hamburg, Germany, 2023. (Recommended for Revise & Resubmit to the final round)
- [2] **Z. Ding**, J. Kang, T.O.T. Ho, K.H. Wong, H.H. Fung, H. Meng, X. Ma. TalkTive: A Conversational Agent Using Backchannels to Engage Older Adults in Neurocognitive Disorders Screening . In *Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems (CHI'22)*, New Orleans, USA, 2022.
- [3] 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.
- [4] 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.
- [5] 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 Conferences on Creativity and Cognition (C&C'21)*, 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** 🏆)

## Short Conference Papers

- [8] 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.
- [9] 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.

## Journals (Non-HCI)

- [10] E. Kamrah, S. F. Ghoreishi, **Z. Ding**, J. Chan, M. Fuge. [Hidden title because of anonymity check]. *ASME Journal of Mechanical Design*. (Under Review)
- [11] 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.

- [12] 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.

## SKILLS

**Machine Learning & NLP** pyTorch, TensorFlow, scikit-learn, NLTK, pandas, spaCy, Gensim

**Qual. Methods** Interview, Usability Test, Thematic Analysis, Affinity Diagram, Grounded Theory

**UI & Design** Figma, Photoshop, InDesign, AutoCad, Final Cut Pro, Paper Prototyping

**Visualization** D3.js, ggplot2, Matplotlib, Seaborn, Plotly

**Programming Languages** Python, Java, C/C++, R, Matlab,  $\LaTeX$

**Fullstack** JavaScript, React.js, Vue.js, Redux, Flask, Node.js, Docker, MySQL, Firebase, HTML, CSS

## RESEARCH EXPERIENCE

**Ph.D. Research Intern (HCI)**, Human AI Innovation (HAI) team, Dataminr Inc. May 2022–Aug 2022  
Supervised by [Dr. Alison Smith-Renner](#) and [Dr. Isabel Zhang](#)

- Studied human-AI interaction in the context of news headline generation; proposed and completed a research project with two studies in 11 weeks; prepare a first-authored paper submission to ACL'23
- Featured in Dataminr intern spotlight (the only research intern of 2022 cohort)

**Graduate Research Assistant**, HCI Lab, UMD College of Information Studies Jul 2021–Present  
Supervised by [Prof. Joel Chan](#)

- Investigate the effect of interface presentations of examples on solution quality in both machine learning and creativity domains; lead the human-centered angle and submitted a first-authored full paper submission to CHI'23 and a journal paper to ASME Journal of Mechanical Design (JMD); presented the project as a talk & poster at 2022 HCIL annual symposium
- Study using GPT-3 to generate analogies to support design problem framing; prepare a full paper submission to CSCW'23 as the first author

**Visiting Research Intern**, Dept. of Computer Science and Engineering, HKUST Sep 2020–Sep 2021  
Supervised by [Prof. Xiaojuan Ma](#)

- Led 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; resulted in a first-authored full paper accepted to CHI'22
- Collaborated with [Prof. Helen Meng \(CUHK\)](#) on a University Grants Committee (UGC) Theme-Based Research Scheme with funding HK\$50M (US\$6.45M) [[Media appearance on IEEE Spectrum](#)]
- Worked with [Prof. Pascale Fung](#), [Prof. Bertram Shi](#) and [Prof. Qifeng Chen](#) (all from HKUST) on an ITF-Platform project with funding HK\$2.94M (US\$380K)

**Graduate Research Assistant (Lab Assistant II)**, UCSD Design Lab Apr 2019–Jul 2021  
Supervised by [Prof. Steven Dow](#) and [Prof. Stephen MacNeil](#) (now with Temple University)

- Explored how to engage, empower and scaffold novice community members in the design process; resulted in four full papers accepted to CHI'21, CSCW'21, C&C'21 and DIS'22, one CHIIR'21 short paper and one UIST'21 demo paper
- Conducted 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
- 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

**Undergraduate Research Assistant**, PolyU & Boud University Sep 2017–Aug 2018  
Supervised by [Prof. Hung-Lin Chi](#) and [Prof. Ruidong Chang](#) (now with the University of Adelaide)

- Worked on 3 computer-aided civil engineering projects with 3 publications and co-led a successful 3D printing building project with US\$46,000 funds

**Undergraduate Capstone Project**, PolyU Apr 2017–May 2018  
Supervised by [Prof. Francis C. M. Lau](#)

- Built a CV-based wireless water-meter reading system (Best 50 Final Year Projects Award in HK)

AWARDS (US\$89,650)	<b>Dataminr intern spotlight</b> , featured in Dataminr Intranet	2022
	<b>UMD iSchool Dr. Dana Rotman Doctoral Student Travel Award (for CHI'22)</b> , US\$1,550	2022
	<b>UMD iSchool iStar</b> , featured in Dean's monthly email to all iSchool faculty, staff, and students	2021
	<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>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>Norman Design Fund</b> , donated by <a href="#">Don Norman</a> , 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	<b>Talk &amp; Poster at 2022 HCIL Annual symposium</b> , University of Maryland	26 May 2022
	Computational Analogy: Supporting Creative Problem Reformulation with AI-generated Analogies	
	<b>Talk &amp; Poster at 2022 HCIL Annual symposium</b> , University of Maryland	26 May 2022
	Exploring Presentation Interaction Effects on Mechanism of Inspiration from Diverse Examples	
	<b>Paper Presentation at CHI 2022</b> , New Orleans, LA	2 May 2022
	TalkTive: A Conversational Agent Using Backchannels to Engage Older Adults in Neurocognitive Disorders Screening	
	<b>Talk at UMD HCIL Brown Bag Series</b> , Online	10 Feb 2022
	Computational Analogy: Supporting Creative Problem Reformulation with AI-generated Analogies	
	<b>Demo at UIST 2021</b> , Online	12-13 Oct 2021
	Automatically Constructing Design Galleries through Feature Extraction and Semantic Clustering	
<b>Paper Presentation at C&amp;C 2021</b> , Online	23 Jun 2021	
Framing Creative Work: Helping Novices Frame Better Problems through Interactive Scaffolding		
<b>Paper Presentation at CHI 2021</b> , Online	12 May 2021	
CoNotate: Suggesting Queries Based on Notes Promotes Knowledge Discovery		
<b>Poster at CHIIR 2021</b> , Online	16-18 Mar 2021	
The "Active Search" Hypothesis: How Search Strategies Relate to Creative Learning		
<b>Poster at World Innovation &amp; Entrepreneurship EXPO (WIEE)</b> , Tongji University	19 May 2018	
Bright Building: Additive Construction for Post-Disaster Redevelopment		

**Poster at Forum "From Disaster Management to Disaster Risk Reduction"**, PolyU 7 May 2018  
Bright Building: Additive Construction for Post-Disaster Redevelopment

**Talk at Luncheon Research Seminar**, Dept of Building and Real Estate (BRE), PolyU 8 Mar 2018  
Bright Building: Additive Construction for Post-Disaster Redevelopment

MEMBERSHIPS Member of Organization Teams & Technology Society (OTTRS); Member of Pembroke College Circle, the University of Cambridge; Member of Association for Computing Machinery (ACM).

MEDIA **Interview "UMD iSchool iStar Spotlight"**, 2021.

APPEARANCES **Alumni Sharing "PolyU Helps Me Establish 3 Pillars of Research Exploration"** (in Chinese), 2020.

**Interview "How to Make the Most of Your University Experience?"** 43,600+ views, 2019.

**Departmental Newsletter "Best Paper in 2018 ICCREM"** (on page 1), 2018.

REFERENCES **Available upon request.**