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# Chuhan Shi

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## Education

- The Hong Kong University of Science and Technology | PhD 2019 - 2023
- Supervised by **Prof. Xiaojuan Ma** and **Prof. Qiong Luo**
  - Research interests: Human-AI Collaboration, Interactive AI for Science, Data Visualization, Visual Analytics
- Shandong University | Bachelor of Engineering 2015 - 2019
- Major in Software Engineering
  - Second Major in Financial Mathematics

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## Publications

- [11] Hanfang Lyu, Yuanchen Bai, Xin Liang, Ujaan Das, **Chuhan Shi**, Leiliang Gong, Yingchi Li, Mingfei Sun, Ming Ge, Xiaojuan Ma. FARPLS: A Feature-Augmented Robot Trajectory Preference Labeling System to Assist Human Labelers' Preference Elicitation. Accepted by *Proceedings of the ACM Conference on Intelligent User Interfaces (IUI'24)*. **CCF B**
- [10] **Chuhan Shi**, Weiwei Cui, Chengzhong Liu, Chengbo Zheng, Haidong Zhang, Qiong Luo, Xiaojuan Ma. NL2Color: Refining Color Palettes for Charts with Natural Language. In *IEEE Transactions on Visualization and Computer Graphics (Proceedings of VIS'23, oral)*. **CCF A / SCIE T1**
- [9] Qingyu Guo, **Chuhan Shi**, Zhuohao Yin, Chengzhong Liu, Xiaojuan Ma. Exploring the Effects of Event-induced Sudden Influx of Newcomers to Online Pop Music Fandom Communities: Content, Interaction, and Engagement. In *Proceedings of the ACM on Human-Computer Interaction. CSCW (2023) (CSCW'23, oral)*. **CCF A**
- [8] **Chuhan Shi**, Yicheng Hu, Shenan Wang, Shuai Ma, Chengbo Zheng, Xiaojuan Ma, Qiong Luo. RetroLens: A Human-AI Collaborative System for Multi-step Retrosynthetic Route Planning. In *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI'23, oral)*. **CCF A**
- [7] Shuai Ma, Ying Lei, Xinru Wang, Chengbo Zheng, **Chuhan Shi**, Ming Yin, Xiaojuan Ma. Who Should I Trust: AI or Myself? Leveraging Human and AI Correctness Likelihood to Promote Appropriate Trust in AI-Assisted Decision-Making. In *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI'23, oral)*. **CCF A**
- [6] Chengbo Zheng, Yuheng Wu, **Chuhan Shi**, Shuai Ma, Jiehui Luo, Xiaojuan Ma. Competent but Rigid: Identifying the Gap in Empowering AI to Participate Equally in Group Decision-Making. In *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI'23, oral)*. **CCF A**
- [5] **Chuhan Shi**, Fei Nie, Yicheng Hu, Yige Xu, Lei Chen, Xiaojuan Ma, Qiong Luo. MedChemLens: An Interactive Visual Tool to Support Direction Selection in Interdisciplinary Experimental Research of Medicinal Chemistry. In *IEEE Transactions on Visualization and*

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- Computer Graphics (Proceedings of VIS'22, oral).* **CCFA / SCIE T1**
- [4] **Chuhan Shi**, Zhihan Jiang, Xiaojuan Ma, Qiong Luo. A Personalized Visual Aid for Selections of Appearance Building Products with Long-term Effects. In *Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems (CHI' 22, oral)*. **CCFA**
- [3] Wenjie Yang, Sitong Wang, Zhenhui Peng, **Chuhan Shi**, Xiaojuan Ma, Diyi Yang. Know it to Defeat it: Exploring Health Rumor Characteristics and Debunking Efforts on Chinese Social Media During COVID-19 Crisis. In *Proceedings of the International AAI Conference on Web and Social Media (ICWSM' 22)*. **CCF B**
- [2] Zhenhui Peng, **Chuhan Shi**, Xiaojuan Ma. Exploring User Experience and Design Opportunities of Desktop Social Virtual Reality for Group Learning Activities. In *The Ninth International Symposium of Chinese CHI (ChineseCHI' 21 Late-Breaking Work)*.
- [1] Zhida Sun, Sitong Wang, Wenjie Yang, Onur Yürüten, **Chuhan Shi**, and Xiaojuan Ma. "A Postcard from Your Food Journey in the Past": Promoting Self-Reflection on Social Food Posting. In *Proceedings of the Designing Interactive Systems Conference (DIS' 20)*. **CCF C**

## Internship Experience

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- Research Intern | DK1 Group, **Microsoft Research Asia** 2022.10 – 2023.04
- Supervised by principal researcher **Weiwei Cui**.
  - Conduct research on AI-powered data visualization generation and manipulation.
- Software Developer | Industry Baseline Solution Development Center, Huawei 2018.07 - 2018.12
- Supervised by **Baocheng Chen**.
  - Participated in the development and testing of smart park products.

## Projects

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- AI-assisted Decision-making for Natural Science Research 2021.04 - Present
- Interdisciplinary Experimental Research Direction Selection Support System
    - Designed and implemented an interactive visual scientific literature analytic system.
    - Applied BERT model automatically extracting and integrating relevant research data based on molecular characteristics.
  - Human-AI Collaboration for Synthetic Organic Chemistry Research
    - Developed a human-AI collaborative system to support multi-step research path planning.
    - Applied multi-criteria decision-making algorithms to help backtrack and locate potential problems in the multiple rounds of decision-making.
  - Human evaluation proved the systems facilitated faster task completion, generated better outcomes, and lowered cognitive load (nearly HKD 500K fund).
- Evaluation Model of Critical Dimensions for Brand Differentiation 2020.06 - 2020.12
- Designed and implemented computational models using machine learning algorithms to compare the visual styles of mobile user interfaces for different brands.
  - Helped the company to identify the difference with the competitive products and guided the future design of the mobile user interfaces (over HKD 400K fund).

## Awards

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- 2019-2023 Postgraduate Scholarship (over HKD 200K annually), HKUST

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2019	Outstanding Graduate in Shandong Province
2018	Excellent Student Second-Class Scholarship, Shandong University
2016-2017	<b><u>National Scholarship, Ministry of Education of China</u></b> (Twice)
2017	National Undergraduate Innovation and Entrepreneurship Training Program Fund
2017	Excellent Student of Shandong Province, <b><u>the only one in Software College</u></b>
2016-2017	Excellent Student First-Class Scholarship, Shandong University (Twice)
2016-2017	Second Prize in Province, Mathematic Competition of Chinese College (Twice)
2016-2017	Merit Student, Shandong University (Twice)
2016-2017	Excellent Student Cadre, Shandong University (Twice)
2016	First Prize in Province, National Mathematical Modeling Contest

## **Academic Engagement**

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Reviewer: ACM Conference on Human Factors in Computing Systems (CHI)	2022, 2023, 2024
Reviewer: ACM Conference on Computer Supported Cooperative Work (CSCW)	2022, 2023
Reviewer: Chinese CHI	2022
Reviewer: ACM CHI Late Breaking Works (CHI LBW)	2020

## **Teaching**

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Spring 2023	Teaching Assistant, Human-Computer Interaction, HKUST
Spring 2023	Teaching Assistant, Advanced Topics in Human-Computer Interaction, HKUST
Fall 2021	Teaching Assistant, Principles of Programming Languages, HKUST
Fall 2020	Teaching Assistant, Human-Computer Interaction, HKUST
Spring 2020	Teaching Assistant, Database Management Systems, HKUST