

ZHENHUI PENG

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EMPLOYMENT / EDUCATION

Assistant Professor: School of Artificial Intelligence, **Sun Yat-sen University (SYSU)** 2021.11 - Present

Postdoctoral Researcher: School of Electronic Engineering, **Aalto University** 2021.04 - 2021.10

- Advisor: Antti Oulasvirta

Ph.D.: Computer Science, **Hong Kong University of Science and Technology (HKUST)** 2017.08 - 2021.03

- Advisor: Xiaojuan Ma
- Thesis: *Human-Centered Approaches to Designing Intelligent Agents' Manner for Supporting High-Level Thinking*

Visiting: Pervasive Computing Lab, **Tsinghua University** 2020.11 - 2021.01

- Advisor: Chun Yu

Internship: Algorithm Engineer in AI Group, WeBank 2019.09 - 2020.01

B.Sc.: Electronic and Computer Engineering, **Nanjing University** 2013.08 - 2017.07

RESEARCH INTERESTS

- **Human-Computer Interaction:** intelligent tutoring systems, robots and conversational agents, human-AI collaboration, writing and reading support tools
- **Social Computing:** social media data analysis, health informatics, user- and AI-generated content
- **Specific Application Domains:** visual design, education, healthcare, learning@scale

FUNDED PROJECTS

- **Natural Science Foundation of China - Young Scientists Fund**
No.62202509, **PI**, RMB 300,000 2023.01 - 2025.12
User Intentions of Creating Text-Image Posts in Online Mental Health Communities
- **Natural Science Foundation of Guangdong Province in China - General Research Fund**
No.2024A1515012226, **PI**, RMB 150,000 2024.01 - 2026.12
Modeling and Applying Textual and Visual Learning Resources in Online Design Communities
- **Natural Science Foundation of China - Enterprise Innovation Development Joint Fund (Key Supported Project)**
No.U22B2060, **CI**, RMB 2,540,000 2023.01 - 2026.12
Explainable Knowledge Graph Reasoning Technology Driven by Multimodal Data and Knowledge Integration

PUBLICATIONS

†: Corresponding author. *: Equal contribution.

37. Haoxiang Fan, Guanzheng Chen, Xingbo Wang, and **Zhenhui Peng** †. “LessonPlanner: Assisting Novice Teachers to Prepare Pedagogy-Driven Lesson Plans with Large Language Models”. In *The 37th Annual ACM Symposium on User Interface Software and Technology (UIST '24)*. Conditionally Accepted.
36. Tianjian Liu, Hongzheng Zhao, Yuheng Liu, Xingbo Wang, and **Zhenhui Peng** †. “ComPeer: A Generative Conversational Agent for Proactive Peer Support”. In *The 37th Annual ACM Symposium on User Interface Software and Technology (UIST '24)*. Conditionally Accepted.

35. **Zhenhui Peng**, Qiaoyi Chen, Zhiyu Shen, Xiaojuan Ma, and Antti Oulasvirta. “DesignQuizzer: A Community-Powered Conversational Agent for Learning Visual Design”. *Proc. ACM Hum.-Comput. Interact.* 8, CSCW1, Article 44 (April 2024), 40 pages.
34. Qiaoyi Chen, Siyu Liu, Kaihui Huang, Xingbo Wang, Xiaojuan Ma, Junkai Zhu, and **Zhenhui Peng**†. “RetAssist: Facilitating Vocabulary Learners with Generative Images in Story Retelling Practices”. In *Designing Interactive Systems Conference (DIS '24), July 1 – 5, 2024, IT University of Copenhagen, Denmark*. ACM, New York, NY, USA, 28 pages.
33. Shuailin Li, Shiwei Wu, Tianjian Liu, Han Zhang, Qingyu Guo, and **Zhenhui Peng**†. “Understanding the Features of Text-Image Posts and Their Received Social Support in Online Grief Support Communities”. In *The 18th International AAAI Conference on Web and Social Media (ICWSM), June 3–6, 2024, Buffalo, New York, USA*.
32. Qingyu Guo, Kangyu Yuan, Changyang He, **Zhenhui Peng**, and Xiaojuan Ma. “Exploring the Evolve-ment of Artwork Descriptions in Online Creative Community under the Surge of Generative AI: A Case Study of DeviantArt”. In *Extended Abstracts of the CHI Conference on Human Factors in Computing Systems (CHI EA '24), May 11–16, 2024, Honolulu, HI, USA*. ACM, New York, NY, USA, 7 pages.
31. Chengbo Zheng, Kangyu Yuan, Bingcan Guo, Reza Hadi Mogavi, **Zhenhui Peng**, Shuai Ma, and Xiaojuan Ma. “Charting the Future of AI in Project-Based Learning: A Co-Design Exploration with Students”. In *Proceedings of the CHI Conference on Human Factors in Computing Systems (CHI '24), May 11–16, 2024, Honolulu, HI, USA*. ACM, New York, NY, USA, 19 pages.
30. Qianyu Liu, Haoran Jiang, Zihao Pan, Qiushi Han, **Zhenhui Peng**, and Quan Li. “BiasEye: A Bias-Aware Real-time Interactive Material Screening System for Impartial Candidate Assessment”. In *29th International Conference on Intelligent User Interfaces (IUI '24), March 18–21, 2024, Greenville, SC, USA*. ACM, New York, NY, USA, 19 pages.
29. Qiushi Han, Haitong Chen, Haoxiang Fan, **Zhenhui Peng**†. “ReDBot: Exploring Conversational Recommendation for Decision-Making Support in Group Chats”. In *Chinese CHI 2023 (CHCHI 2023), November 13–16, 2023, Denpasar, Bali, Indonesia*. ACM, New York, NY, USA, 8 pages.
28. **Zhenhui Peng***, Xingbo Wang*, Qiushi Han, Junkai Zhu, Xiaojuan Ma, and Huamin Qu. “Storyfier: Exploring Vocabulary Learning Support with Text Generation Models”. In *The 36th Annual ACM Symposium on User Interface Software and Technology (UIST '23), October 29 – November 01, 2023, San Francisco, CA, USA*. ACM, New York, NY, USA, 16 pages.
27. Kangyu Yuan*, Hehai Lin*, Shilei Cao*, **Zhenhui Peng**†, Qingyu Guo, and Xiaojuan Ma. “CriTrainer: An Adaptive Training Tool for Critical Paper Reading”. In *The 36th Annual ACM Symposium on User Interface Software and Technology (UIST '23), October 29 – November 01, 2023, San Francisco, CA, USA*. ACM, New York, NY, USA, 17 pages.
26. Qingyu Guo, Chao Zhang, Hanfang Lyu, **Zhenhui Peng**, and Xiaojuan Ma. “What Makes Creators Engage with Online Critiques? Understanding the Role of Artifacts’ Creation Stage, Characteristics of Community Comments, and their Interactions”. In *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI '23), April 23–28, 2023, Hamburg, Germany*. ACM, New York, NY, USA, 17 pages.

25. Ryan Louie, Taewook Kim, and **Zhenhui Peng**. “Rawal: A Reflection Assistant with Active Listening for Peer Support Chats”. In *CHI 2023 Workshops “Integrating Individual and Social Contexts into Self-Reflection Technologies”*.
24. Chen Cheng, Ziang Li, **Zhenhui Peng**, and Quan Li. 2023. “ALens: An Adaptive Domain-Oriented Abstract Writing Training Tool for Novice Researchers”. In *HHME/CHCI 2023*.
23. **Zhenhui Peng**, Yuzhi Liu, Hanqi Zhou, Zuyu Xu, Xiaojuan Ma. “CReBot: Exploring Interactive Question Prompts for Critical Paper Reading”. *Int. J. Hum.-Comput. Stud. (IJHCS)* 167, C (Nov 2022).
22. Chenyang Zhang, Xiyuan Wang, Chuyi Zhao, Yijing Ren, Tianyu Zhang, **Zhenhui Peng**, Xiaomeng Fan, Xiaojuan Ma, Quan Li. “PromotionLens: Inspecting Promotion Strategies of Online E-commerce via Visual Analytics”. *IEEE Transactions on Visualization and Computer Graphics (Proc. IEEE VIS 2022)*
21. Chengzhong Liu, Zeyu Huang, Dingdong Liu, Shixu Zhou, **Zhenhui Peng**, Xiaojuan Ma. “PlanHelper: Supporting Activity Plan Construction with Answer Posts in Community-based QA Platforms”. *Proc. ACM Hum.-Comput. Interact.* 6, CSCW2, Article 454 (November 2022), 26 pages.
20. Chengzhong Liu, Shixu Zhou, Yuanhao Zhang, Dingdong Liu, **Zhenhui Peng**, Xiaojuan Ma. “Exploring the Effects of Self-Mockery to Improve Task-Oriented Chatbot’s Social Intelligence”, in *Designing Interactive Systems Conference (DIS ’22), June 13–17, 2022, Virtual Event, Australia*. ACM, New York, NY, USA, 15 pages.
19. Qingyu Guo, Siyuan Zhou, Yifeng Wu, **Zhenhui Peng**, Xiaojuan Ma. “Understanding and Modeling Viewers’ First Impressions with Images in Online Medical Crowdfunding Campaigns”. In *CHI Conference on Human Factor in Computing Systems (CHI ’22), April 29-May 5, 2022, New Orleans, LA, USA*. ACM, New York, NY, USA, 20 pages.
18. 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 *The 16th International AAAI Conference on Web and Social Media (ICWSM), 2022, Georgia, Atlanta, USA*.
17. **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 (Chinese CHI 2021), October 16–17, 2021, Online, Hong Kong*. ACM, New York, NY, USA, 7 pages.
16. Quan Li, Haipeng Zeng, **Zhenhui Peng**, Xiaojuan Ma. “Understanding Players’ Interaction Patterns with Mobile Game App UI via Visualizations”. In *The Ninth International Symposium of Chinese CHI (Chinese CHI 2021), October 16–17, 2021, Online, Hong Kong*. ACM, New York, NY, USA, 13 pages. **(Best Paper Award)**
15. Mingfei Sun, **Zhenhui Peng**, Meng Xia, Xiaojuan Ma. “Investigating the Effects of Robot Engagement Communication on Learning from Demonstration”. *International Journal of Social Robotics* 2021.
14. **Zhenhui Peng**, Xiaojuan Ma, Diyi Yang, Ka Wing Tsang, and Qingyu Guo. “Effects of Support-Seekers’ Community Knowledge on Their Expressed Satisfaction with the Received Comments in Mental Health Communities”. In *CHI Conference on Human Factors in Computing Systems (CHI ’21), May 8–13, 2021, Yokohama, Japan*. ACM, New York, NY, USA, 12 pages.

13. Liuping Wang, Dakuo Wang, Feng Tian, **Zhenhui Peng**, Xiangmin Fan, Zhan Zhang, Mo Yu, Xiaojuan Ma, and Hongan Wang. “CASS: Towards Building A Social Support Chatbot For An Online Health Community”. *Proc. ACM Hum.-Comput. Interact.* 5, CSCW1, Article 9 (April 2021), 31 pages.
12. **Zhenhui Peng**. “Designing and Evaluating Intelligent Agents’ Interaction Mechanisms for Assisting Human in High-Level Thinking Tasks”. In *Extended Abstracts of ACM CHI2021 Conference on Human Factors in Computing Systems, Doctoral Consortium*.
11. Quan Li, Huanbin Lin, Chunfeng Tang, Xiguang Wei, **Zhenhui Peng**, Xiaojuan Ma and Tianjian Chen. “Exploring the “Double-Edged Sword” Effect of Auto-Insight Recommendation in Exploratory Data Analysis”. In *Fourth IUI Workshop on Exploratory Search and Interactive Data Analytics (ESIDA’21)*.
10. Ziming Wu, Qianrao Xu, Yiding Liu, **Zhenhui Peng**, Yingqing Xu, and Xiaojuan Ma. “Exploring Designers’ Practice of Online Example Management for Supporting Mobile UI Design”. In *23rd International Conference on Mobile Human-Computer Interaction (MobileHCI’ 21), September 27-October 1, 2021, Toulouse & Virtual, France*. ACM, New York, NY, USA, 12 pages.
9. **Zhenhui Peng**, Qingyu Guo, Ka Wing Tsang, and Xiaojuan Ma. “Exploring the Effects of Technological Writing Assistance for Support Providers in Online Mental Health Community”. In *CHI Conference on Human Factors in Computing Systems (CHI ’20), April 25–30, 2020, Honolulu, HI, USA*. ACM, New York, NY, USA, 15 pages.
8. **Zhenhui Peng**, Kaixiang Mo, Xiaogang Zhu, Junlin Chen, Zhijun Chen, Qian Xu and Xiaojuan Ma. “Understanding User Perceptions of Robot’s Delay, Voice Quality-Speed Trade-off and GUI during Conversation”. In *Extended Abstracts of ACM CHI2020 Conference on Human Factors in Computing Systems (CHI ’20 EA), April 25–30, 2020, Honolulu, HI, USA*. ACM, New York, NY, USA, 8 pages.
7. Quan Li, **Zhenhui Peng**, Haipeng Zeng, Qiaoan Chen, Lingling Yi, Ziming Wu, Xiaojuan Ma, and Tianjian Chen. “Friend Network as Gatekeeper: A Study of WeChat Users’ Consumption of Friend-Curated Contents”. In *Eighth International Workshop of Chinese CHI2020*.
6. Qiangqiang Liu, Quan Li, Chunfeng Tang, Huanbin Lin, **Zhenhui Peng**, Zhiwei Li, and Tianjian Chen. “Visual Analysis of the Traffic Reimbursement Data for the Overtime”. In *EuroVIS 2020 Poster*.
5. **Zhenhui Peng** and Xiaojuan Ma. “A Survey on Construction and Enhancement Methods in Service Chatbots Design”. *CCF Transactions on Pervasive Computing and Interaction*. 1: 204-223. (2019)
4. **Zhenhui Peng**, Yunhwan Kwon, Jiaan Lu, Ziming Wu, and Xiaojuan Ma. “Design and Evaluation of Service Robot’s Proactivity in Decision Making Support Process”. In *CHI Conference on Human Factors in Computing Systems Proceedings (CHI2019), May 4–9, 2019, Glasgow, Scotland UK*. ACM, New York, NY, USA, 13 pages.
3. Taewook Kim, Jungsoo Lee, **Zhenhui Peng**, and Xiaojuan Ma. “Love in Lyrics: An Exploration of Supporting Textual Manifestation of Affection in Social Messaging”. *Proc. ACM Hum.-Comput. Interact.* 3, CSCW, Article 79 (November 2019), 27 pages.
2. **Zhenhui Peng**, Taewook Kim and Xiaojuan Ma. “GremoBot: Exploring Emotion Regulation in Group Chat”. In *2019 Computer Supported Cooperative Work and Social Computing Companion Publication (CSCW’ 19 Companion), November 9–13, 2019, Austin, TX, USA*. ACM, New York, NY, USA, 6 pages.

1. **Zhenhui Peng**, Jeehoon Yoo, Meng Xia, Sunghun Kim, and Xiaojuan Ma. “Exploring How Software Developers Work with Mention Bot in GitHub”. In *Proceeding of the Sixth International Symposium of Chinese CHI (2018)*.

TEACHING

- **Human-Computer Interaction (PG)** **Lecturer** (SYSU), Fall 2022-23
- **Data Structure and Algorithm and its lab sessions** **Lecturer** (SYSU), Fall 2022-23
- **Principles of Artificial Intelligence and its lab sessions** **Lecturer** (SYSU), Spring 2022-24
- **COMP4461 Human-Computer Interaction** **Teaching Assistant** (HKUST), Fall 2018, Fall 2020
- **COMP3711 Design and Analysis of Algorithms** **Teaching Assistant** (HKUST), Spring 2020
- **COMP2611 Computer Organization** **Teaching Assistant** (HKUST), Spring 2018

GRADUATE ADVISEES

- Haoxiang Fan, Master program Since Fall 2023
- Shiwei Wu, Master program Since Fall 2023
- Shuailin Li, Master program Since Fall 2022
- Han Zhang, Master program Since Fall 2022
- Qiushi Han, Master program Fall 2021 - Summer 2024

UNDERGRADUATE ADVISEES

- **Individual Thesis Project:**
 Qiaoyi Chen (**Outstanding Graduate, incoming PhD student in HKUST**),
 Kangyu Yuan (**Outstanding Graduate, incoming PhD student in HKUST**),
 Yiwei Yuan, Xueer Lin, Chenghan Xie, Guanzheng Chen 2023.10 - 2024.05
- **Research Project:** Qiaoyi Chen, Kaihui Huang, Siyu Liu **DIS 2024**, 2022.11 - 2024.04
- **Research Project:** Shilei Cao, Hehai Lin, Kangyu Yuan **UIST 2023**, 2022.11 - 2023.10
- **Research Project:** Qiaoyi Chen, Zhiyu Shen **CSCW 2024**, 2022.06 - 2022.09
- **Research Project:** Zimo Xia, Xichen Sun, Qiyu Pan **CHI 2024 Workshop**, 2023.08 - 2024.02
- **UIEP** (University Innovation and Entrepreneurship Project): Xueer Lin, Shun Wang,
 Jiao Wang, Jiaxin Cheng, Kexin Song. **ChineseCHI 2021 Late-Breaking Work**, 2021.12 - 2022.11
- **UIEP:** Guanzheng Chen, Chenghan Xie, Qijie Lu, Yifei Huang, Linxuan Miao
ChineseCHI 2021 Late-Breaking Work, 2021.12 - 2022.11
- **Research Project:** Yiwei Yuan, Xiucheng Zhang, Yichao Luo 2024.04 - present
- **Research Project:** Zhining Deng, Xia Chen 2024.04 - present
- **Research Project:** Xueer Lin, Xia Chen 2024.04 - present
- **Research Project:** Kangyu Yuan, Guanzheng Chen, Sizhe Liang, Hehai Lin 2023.10 - present
- **UIEP:** Yunjun Qian, Haojia Zheng, Xia Chen, Xinyue Chen, Weixin Hu 2022.12 - present
- **UIEP:** Xiucheng Zhang, Qichang Li, Yixin Zeng, Guanyi Chen 2023.12 - present
- **UIEP:** Tianjian Liu, Hongzheng Zhao, Yuheng Liu 2023.12 - present
- **UIEP:** Qiyu Pan, Jie Wang, Yihan Qiu, Junyu Liu, Jianqiao Zeng, Kangyu Yuan 2023.12 - present
- **UIEP:** Xuan Lin, Yuhuan Hong, Ziyi Zhang, Yue Li, Wenyaoy Liu 2023.12 - present
- **UIEP:** Zhendong He, Yitong Xie, Feiyu Li, Zongchan He, Zhupeng Huang 2023.12 - present

VISITING STUDENTS

- Zhiqing Wang, obtained master degree from Columbia University 2024.06 - present
- Qingyu Guo, Ph.D. candidate in HKUST 2023.11 - 2024.04
- Haitong Chen, now master student in University of Michigan 2023.04 - 2023.08
- Tianze Xie, now Ph.D. student in SUST 2022.04 - 2022.06

ACADEMIC SERVICES

- **Associate Chair:** CHI 2025&2024&2023, CSCW 2024&2023, ChineseCHI 2022 Late-Breaking Work
- **Reviewers:** TOCHI, Computers&Education, CHI 2022&2021&2020&2018, CHI-LBW 2020, WWW 2020, CSCW 2021&2020

TALKS

- “Supporting High-Order Thinking Tasks with User- and AI-Generated Content”. In Shenzhen University and Southern University of Science and Technology, 2024.01, Shenzhen.
- “Understanding and Facilitating Online Communication: the Roles and Challenges of AI”. In HKUST VisLab. 2021.10, online.
- “Designing and Evaluating Intelligent Agents’ Interaction Mechanisms for Assisting Human in High-Level Thinking Tasks”. In CHI Doctoral Consortium. 2021.05, online.
- “Exploring Future Design of Technological Assistance for Human Kinds in Online Mental Health Communities”. In International Workshop on Human-Engaged Computing (IWHEC). 2021.03, online.
- “Research Practices in Human Agent Interaction and Social Computing”. In Fudan-Guanghua International Forum for Young Scholars Sub-Forum of Computer Science. 2021.01, online.
- “Exploring the Effects of Technological Writing Assistance for Support Providers in Online Mental Health Community”. In HHME Thesis Communication. 2020.10, Chongqing.
- “Design and Evaluation of Conversational Agents in Human-Engaged Computing”. In ChinaCHI Summer School. 2019.07, Nanjing.

HONORS

- Best Paper Award, ChineseCHI 2021, Online 2021
- HKUST SENG Academic Award for Top Continuing PhD Students 2020
- Outstanding Graduate, Nanjing University 2017
- Intel Cup Undergraduate Electronic Embedded System Design Invitation Contest (first-class) 2016
- Xing Quan Ze Ren Scholarship (first-class), Nanjing University 2016
- Outstanding Student, Nanjing University 2016
- People’s Scholarship (first-class), Nanjing University 2015
- People’s Scholarship (second-class), Nanjing University 2014