

Associate Professor

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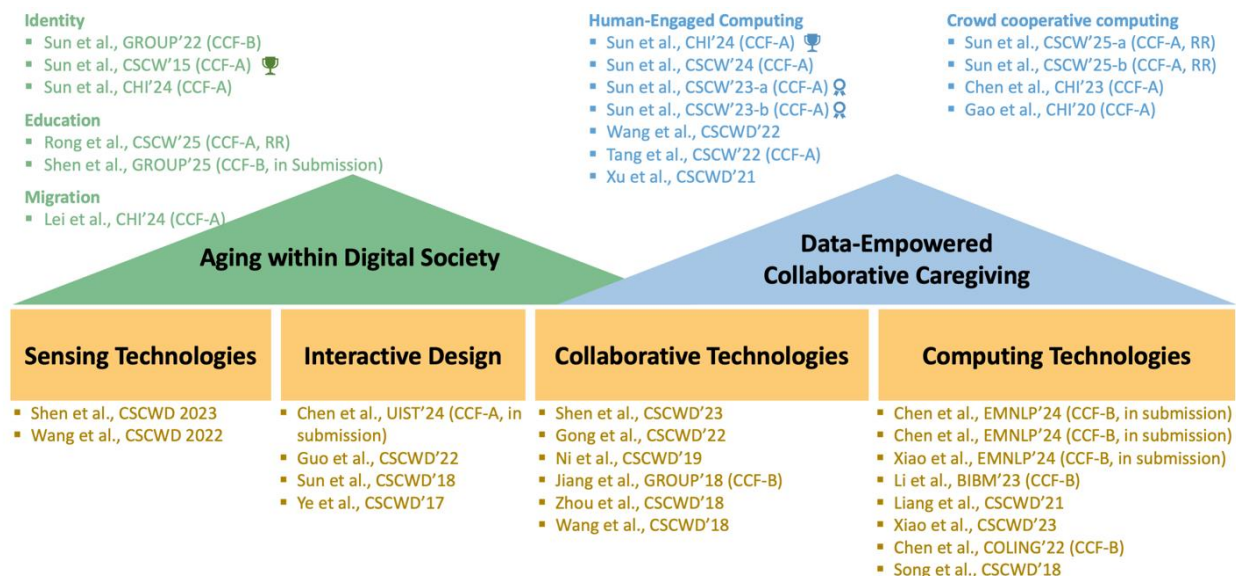
W. <https://www.yulingsun.net/>

Short Bio

I am an Associate Professor in the School of Computer Science and Technology at East China Normal University, Shanghai, China, and before that a post-doctoral fellow at Institute of Computer Applications of East China Normal University with Prof. Liang He. I received my Ph.D. in Computer Science at Fudan University, Shanghai, China in 2016. My advisor was Prof. Ning Gu.

My research lies at Human-computer Interaction (HCI), Computer Supported Collaborative Work (CSCW), and Social Computing. My current work primarily focuses on issues of human-AI/data interaction, particularly in elderly care, healthcare, education, urban management and governance, and rural revitalization. I adopt socio-technical approaches including qualitative, ethnographic, human-engaged computing, participatory design, crowdsourcing and others for better digital service. In addition, I have extensively collaborated with machine learning and AI researchers on various topics such as education, healthcare, aging and digital governance. By combining social and technical approaches, my goal is that computing technologies can be designed to unlock the potential of individuals, support collaborations, promote individual and social wellbeing, and create positive societal impact.

My research has been published in top venues of HCI and social computing fields, such as ACM CSCW, ACM CHI, ACM GROUP, etc., winning several impactful academic and technological awards, such as CSCW best paper award, CHI best paper award, CSCW recognition for contribution to diversity and inclusion, CSCW impact recognition award, Shanghai technological progress award etc. I have been invited to give talks at many impactful international conferences and forums, such as 2023 UNESCO Digital Learning Week, 2022 World Artificial Intelligence Conference, 2021 Global Smart City Conference, etc. My researchers are funded by National Natural Science Foundation of China, Shanghai Science and Technology Innovation Action Plan Project, Shanghai Informationization Development Special Fund Project, etc.



Research Interests

Human-Computer Interaction, Computer-Supported Collaborative Work, Social Computing
Human-centered AI, Human-Engaged Computing, Human-AI Collaboration

Specific application domains: Aging, healthcare, education, rural revitalization, urban management and governance

Education

2012.09-2016.06	Computer Science, Fudan University	Ph.D.
	Thesis: <i>Socio-Technical Analysis Method and Design for Vulnerable Group</i>	
2009.09-2012.06	School of Computer Science, Shandong Normal University	M.S.
2005.09-2009.06	Information Science, Shandong Normal University	B.Sc.

Appointments

2024.10-2025.06	Hughes Fellow, University of Michigan
2022.10-2023.05	Project Assistant, Center for Chinese Studies, University of Michigan
2018.12-Present	Associate Professor, East China Normal University
2018.06-Present	Director, ECNU-izhaohu Joint Laboratory of Data-driven Elderly Care
2016.07-2018.12	Postdoctoral Scholar, East China Normal University

Selected Awards

Hughes Fellowship. University of Michigan, 2024.

Best Paper Award. Technology-Mediated Non-pharmacological Interventions for Dementia: Needs for and Challenges in Professional, Personalized and Multi-Stakeholder Collaborative Interventions, ACM CHI 2024, 1/5.

Recognition for Contribution to Diversity and Inclusion Award. Care Workers' Wellbeing in Data-Driven Healthcare Workplace: Identity, Agency, and Social Justice, ACM CSCW 2023, 1/4.

Impact Recognition Award. Data Work of Frontline Care Workers: Practices Problems and Opportunities in the Context of Data-Driven Long-Term Care ACM CSCW 2023, 1/4.

DiMTAIC Second Prize. AIGC-based Real-Time Care Solution for Alzheimer's Disease. 2023 Digital Medicine Technology and Application Innovation Competition (DiMTAIC), 2023.

CCF Technical Public Welfare Case. Intelligent Care Center: Data-Driven Inclusive Long-Term Care Platform for Older Adults Aging-in-place, 2023.

Shanghai Technological Progress Award. Family Smart Care Center: Data-Driven Inclusive Long-Term Care Platform for Elderly in Family Settings, 2022, 1/10.

Classic Case. Data-Driven Inclusive Care Service System for Elderly Aging in the Communities. China Healthy Aging Development Blue Book, 2022.

Classic Case. Intelligent All-Coverage Care Community (IACC). China Healthy Aging Development Blue Book, 2021.

Best Paper Award. Reliving the past & making a harmonious society today: A study of elderly electronic hackers in China, ACM CSCW 2015, 1/5.

Chinese National Scholarship.

Book or Book Chapter

Xinyuan Wang, **Yuling Sun**. Rethinking Data in Healthcare: Exploring Vernacular Digital Practices and Narrative Data in An Elderly Care Institute. *Digital Anthropology in China*, 2024, in press. **AI4Aging**

Yuling Sun, et al. The International Strategies for Bridging Digital Divide. *Bridge The Digital Divide*. Xuefeng Sheng (Ed.). Tongji Press, 2023. **AI4Aging**

Papers in Submission (name* is corresponding author)

Yuling Sun*, Sam Ankenbauer, Zhifan Guo, Yuchen Chen, Xiaojuan Ma, Liang He. Rethinking Technological Solutions for Community-Based Older Adult Care: Insights from ‘Older Partners’ in China. CSCW 2024 (major revision). **CCF-A AI4Aging**

Yuling Sun*, Yuchen Chen, Xiaojuan Ma, Liang He. Community Group Buying as a Form of Solidarity Movement: Infrastructure and Infrastructuring. CSCW 2024 (major revision). **CCF-A AI4Governance**

Yuling Sun*, Xiaomu Zhou, Bingsheng Yao, Kai Zhang, Dakuo Wang, Jiaju Chen, Liang Le. Who Changed the Destiny of Rural Students, and How?: Unpacking ICT-Mediated Remote Education in Rural China. CSCW 2024 (major revision). **CCF-A AI4EDU-Children**

Ethan Rong, Jifan Shen, **Yuling Sun***, Zhicong Lu. Infrastructure, Collaboration, and Engagement: Self-Organized and Autonomous Ecosystems that supports Live-Streaming-Based Learning for Older Adults. CSCW 2024 (major revision). **CCF-A AI4EDU-Aging**

Jiaju Chen, Yuxuan Lu, Bingsheng Yao, et al., Dakuo Wang, **Yuling Sun***. SciSpark: An Interactive Storytelling System for Young Children's Science Education with Large Language Model (LLM) and Retrieval-Augmented Generation (RAG). UIST 2024 (in submission). **CCF-A AI4EDU-Children**

Jiaju Chen, Yuxuan Lu, Shao Zhang, Bingsheng Yao, et al., Dakuo Wang, **Yuling Sun***. Exploring Domain Adaptation with LLMs for Real-World Augmented Question Answer Generation (RA-QAG) in Children Storytelling. EMNLP 2024 (in submission). **CCF-A AI4EDU-Children**

Jiaju Chen, Yuxuan Lu, Shao Zhang, Bingsheng Yao, et al., Dakuo Wang, **Yuling Sun***. StorySpark: Expert-Annotated QA Pairs with Real-World Knowledge for Children Storytelling. EMNLP 2024 (in submission). **CCF-B AI4EDU-Children**

He Xiao, Xingjiao Wu, Jialiang Tong, Li Bangyan, **Yuling Sun***. Chinese Elderly Healthcare-Oriented Conversation: CareQA Dataset and Its Knowledge Distillation Based Generation Framework. EMNLP 2024 (in submission). **CCF-B AI4Aging**

Jifan Shen, **Yuling Sun***. Exploring Elderly Learners’ Interaction Practices and Experiences in Online Learning. GROUP 2024 (in submission). **CCF-B AI4EDU-Aging**

Published Papers (name* is corresponding author)

2024 **Yuling Sun**, Jiaju Chen, Bingsheng Yao, Dakuo Wang, Xiaojuan Ma, et al. Exploring Parent’s Needs for Children-Centered AI to Support Preschoolers’ Storytelling and Reading Activities. *Proceedings of the ACM on Human-Computer Interaction*, 7(CSCW1) (CSCW 2024). **CCF-A AI4EDU-Children**

Yuling Sun, Zhennan Yi, Xiaojuan Ma, Junyan Mao, Xin Tong. Technology-Mediated Non-pharmacological Interventions for Dementia: Needs for and Challenges in Professional, Personalized and Multi-Stakeholder Collaborative Interventions. *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems 2024 (CHI 2024)*. (**Best Paper Award**) **CCF-A AI4Aging**

Ying Lei, Shuai Ma, **Yuling Sun***. Unpacking ICT-supported Social Connections and Support of Late-life Migration: From the Lens of Social Convoys. *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems 2024 (CHI 2024)*. CCF-A AI4Aging

Min Wang, **Yuling Sun***. A Systematic Literature Review of Current Research on Smart Technologies for the Elderly. *Computer Application and Software*, 2024.

2023 Bangyan Li, Xingjiao Wu, **Yuling Sun***, Liang He. A Dynamic Composite Ensemble Learning Framework for Multi-Stage Dementia Prediction. *Proceedings of 2023 IEEE International Conference on Bioinformatics and Biomedicine (BIBM 2023)*. CCF-B AI4Aging

Yuling Sun, Xiaojuan Ma, Silvia Lindtner, Liang He. Care Workers' Wellbeing in Data-driven Healthcare Workplace: Identity, Agency, and Social Justice. *Proceedings of the ACM on Human-Computer Interaction*, 7(CSCW2) (CSCW 2023) (**Recognition for Contribution to Diversity and Inclusion Award**). CCF-A AI4Aging

Yuling Sun, Xiaojuan Ma, Silvia Lindtner, Liang He. Data Work of Frontline Care Workers: Practices, Problems, and Opportunities in Data-Driven Long-term Care. *Proceedings of the ACM on Human-Computer Interaction*, 7(CSCW1) (CSCW 2023) (**Impact Recognition Award**). CCF-A AI4Aging

Yuchen Chen, **Yuling Sun***, Silvia Lindtner. Maintainers of Stability: The Labor of China's Data-Driven Governance and Dynamic Zero-COVID. *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI 2023)*. CCF-A AI4Governance

Jifan Shen, **Yuling Sun***. Privacy-Preserved Video Monitoring Method with 3D Human Pose Estimation. *Proceedings of 2023 26th International Conference on Computer Supported Cooperative Work in Design (CSCWD 2023)*. CCF-C AI4Aging

He Xiao, **Yuling Sun***. "Policies Look for the Elderly": A Knowledge Graph Based Care Information Recommendation System. *Proceedings of 2023 26th International Conference on Computer Supported Cooperative Work in Design (CSCWD 2023)*. CCF-C AI4Aging

Ruiqi Chen, Shuhe Wang, Xuhai Xu, Lan Wei, **Yuling Sun**, Xin Tong. Design and Evaluation of a VR Therapy for Patients with Mild Cognitive Impairment and Dementia: Perspectives from Patients and Stakeholders. *Proceedings of 2023 IEEE Conference on Virtual Reality and 3D User Interfaces Abstracts and Workshops*.

2022 Shaobin Chen, Jie Zhou, **Yuling Sun***, Liang He. An Information Minimization Based Contrastive Learning Model for Unsupervised Sentence Embeddings Learning. *Proceedings of the 29th International Conference on Computational Linguistics (COLING 2022)*. CCF-B AI4Aging

Xinru Tang, **Yuling Sun***, Bowen Zhang, Zimi Liu, Ray LC, Zhicong Lu, and Xin Tong. "I Never Imagined Grandma Could Do So Well with Technology": Evolving Roles of Younger Family Members in Older Adults' Technology Learning and Use. *Proceedings of the ACM on Human-Computer Interaction*, 6(CSCW2) (CSCW 2022). CCF-A AI4Aging

Yuling Sun, Xiaojuan Ma, Kai Ye, Liang He. Exploring Crowdworkers' Identity, Perception and Practices in Micro-Task Crowdsourcing. *Proceedings of the ACM on Human-Computer Interaction*, 6(GROUP) (GROUP 2022). CCF-B Crowd Intelligent

Yong Ding, **Yuling Sun**, Xiaoying Qu. Digital Technology driven Inclusive Care System for Elderly Community. *Blue Book of The Development of Healthy Aging in China*, 246-269, 2022.

Bin Wang, Jin Zhao, **Yuling Sun***. Caregiving in Digital Healthcare Setting: Impacts of Data-driven Technologies to Caregivers in Practice. *Proceedings of 2022 IEEE 25th International Conference on Computer Supported Cooperative Work in Design (CSCWD 2022)*. CCF-C AI4Aging

Jiancong Guo, Bin Wang, Jin Zhao, **Yuling Sun***. CareMap: Human-Space-Service Based Healthcare Modeling and Quantifying for the Elderly Aging in Place. *Proceedings of 2022 IEEE 25th International Conference on Computer Supported Cooperative Work in Design (CSCWD 2022)*. CCF-C AI4Aging

Bin Wang, Xingjiao Wu, et al., **Yuling Sun***. Lightweight Network Based Real-time Anomaly Detection Method for Caregiving at Home. *Proceedings of 2022 IEEE 25th International Conference on Computer Supported Cooperative Work in Design (CSCWD 2022)*. CCF-C AI4Aging

2021 Mengwen Liang, Jie Zhou, **Yuling Sun***, Liang He. Working with Few Samples: Methods that Help Analyze Social Attitude and Personal Emotion. *Proceedings of 2021 IEEE 24th International Conference on Computer Supported Cooperative Work in Design (CSCWD 2021)*. CCF-C AI4Aging

Qingyu Xu, **Yuling Sun***, Liang He. Design Considerations for Information Collaboration in Long-term Senior Care System. *Proceedings of 2021 IEEE 24th International Conference on Computer Supported Cooperative Work in Design (CSCWD 2021)*. CCF-C AI4Aging

2020 Ge Gao, **Yuling Sun***, Yongle Zhang. Engaging the Commons in Participatory Sensing: Practice, Problems, and Promise in the Context of Dockless Bikesharing. *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems (CHI 2020)*. CCF-A Crowd Intelligent

2019 Liuqian Ni, **Yuling Sun***, Yanqin Yang, Liang He. Human-Engaged Health Care Services Recommendation for Aging and Long-term Care. *Proceedings of 2019 IEEE 23rd International Conference on Computer Supported Cooperative Work in Design (CSCWD 2019)*. CCF-C AI4Aging

Miaomiao Gong, **Yuling Sun***, Liang He. A Social Network Engaged Crowdsourcing Framework for Expert Tasks. *Proceedings of 2019 IEEE 23rd International Conference on Computer Supported Cooperative Work in Design (CSCWD 2019)*. CCF-C Crowd Intelligent

2018 **Yuling Sun***, Yan Tang, Liang He. USee: An Online-Offline Hybrid Danmaku Social System. *Proceedings of 2018 IEEE 22nd International Conference on Computer Supported Cooperative Work in Design (CSCWD 2018)*. CCF-C Crowd Intelligent

Yu Jiang, **Yuling Sun***, Jing Yang, Xin Lin, Liang He. Enabling Uneven Task Difficulty in Micro-Task Crowdsourcing. *Proceedings of the 2018 ACM International Conference on Supporting Group Work (GROUP 2018)*. CCF-B Crowd Intelligent

Jie Zhou, **Yuling Sun***, Liang He. A Data Driven Collaborative Caring Framework for Aging in Place in China. *Proceedings of 2018 IEEE 22nd International Conference on Computer Supported Cooperative Work in Design (CSCWD 2018)*. CCF-C AI4Aging

Meihong Wang, **Yuling Sun***, Jing Yang, Liang He. Enabling the Disagreement among Crowds: A Collaborative Crowdsourcing Framework. *Proceedings of 2018 IEEE 22nd International Conference on Computer Supported Cooperative Work in Design (CSCWD 2018)*. CCF-C Crowd Intelligent

Yang Song, **Yuling Sun***, Qinmin Hu, Liang He. An Interaction Embedded Framework for Healthcare Search. *Proceedings of 2018 IEEE 22nd International Conference on Computer Supported Cooperative Work in Design (CSCWD 2018)*. CCF-C AI4Aging

Jie Zhou, **Yuling Sun***, Liang He. Multi-Model Hybrid Traffic Flow Forecast Algorithm Based on Multivariate Data. *Proceedings of 13th CCF Conference of Computer Supported Cooperative Work and Social Computing (ChineseCSCW 2018)*.

- 2017 **Yuling Sun**, Tun Lu, Ning Gu. A Method of Electronic Health Data Quality Assessment: Enabling Data Provenance. *Proceedings of 2017 IEEE 21st International Conference on Computer Supported Cooperative Work in Design (CSCWD 2017)*. CCF-C AI4Aging

Kai Ye, **Yuling Sun***, Jing Yang, and Liang He. Enabling Social Network: An Exploration of Crowdsourcing System. *Proceedings of the 12th Chinese Conference on Computer Supported Cooperative Work and Social Computing (ChineseCSCW 2017)*.

Kai Ye, **Yuling Sun***, Jing Yang, Liang He. WeCrowd: A WeChat based Mobile Crowdsourcing Platform. *Proceedings of 2017 IEEE 21st International Conference on Computer Supported Cooperative Work in Design (CSCWD 2017)*. CCF-C Crowd Intelligent

Tun Lu, **Yuling Sun**, Ning Gu. CSCW 2017 - Conference on Computer-Supported Cooperative Work and Social Computing. *CCF Communications*, Vol. 13, No. 4, April 2017: 68-71.

Yuling Sun, Kai ye, Liang He. Ageing with the Help of AT: Learning from a Study of Seniors Using AT in China. In *ACM CSCW 2017 Workshop*.

- 2015 **Yuling Sun**, Tun Lu, Ning Gu. A Provenance-based Personalized Recommendation Method in Assistive Device Matching for Disabled. *Proceedings of the 10th Chinese Conference on Computer Supported Cooperative Work and Social Computing (ChineseCSCW 2015)*.

Yuling Sun, Silvia Lindtner, Xianghua Ding, Tun Lu, Ning Gu. Reliving the Past & Making a Harmonious Society Today: A Study of Elderly Electronic Hackers in China. *Proceedings of the 18th ACM Conference on Computer Supported Cooperative Work & Social Computing (CSCW 2015)* (**Best Paper Award**). CCF-A AI4Aging

- 2014 **Yuling Sun**, Xianghua Ding, Silvia Lindtner, Tun Lu, Ning Gu. Being senior and ICT: a study of seniors using ICT in China. *Proceedings of the SIGCHI Conference on Human factors in Computing System 2014 (CHI 2014)*. CCF-A AI4Aging

- Earlier Hong Liu, **Yuling Sun***. Task Assignment Approach in a Multi-Agent System. *Proceedings of the 2012 IEEE 16th International Conference on Computer Supported Cooperative Work in Design (CSCWD 2012)*. CCF-C Crowd Intelligent

Hong Liu, **Yuling Sun**, Yuanyuan Li. Modeling and Path Generation Approaches for Crowd Simulation Based on Computational Intelligence, *Chinese Journal of Electronics*, 2012, 21(4): 636-641.

CCF-A Crowd Intelligent

Yuling Sun, Hong Liu. Dynamic Path Planning Algorithm for Artificial Bee Colony Based on Octree Modeling, *Computer Engineering*, 2012, 38(20): 120-124.

Xiaowei Zhang, Hong Liu, **Yuling Sun**. A Player Tracking Algorithm of Multi-Feature Adaptive Fusion, *Computer Engineering*, 2012, 38(17): 214-218.

Huijie Zheng, Hong Liu, Xiangwei Zheng, **Yuling Sun**. Group Search Optimization Algorithm of Differential Variation Based on Simulated Annealing. *Computer Engineering*, 2012, 38(17): 178-181.

Hong Liu, **Yuling Sun**. A Dynamic Task Assignment Approach Based on Artificial Bee Colony Algorithm in a Multi-Agent Cooperative Design System. *Proceedings of Asian Conference on Design and Digital Engineering 2011 (ACDDE 2011)*.

Hong Liu, **Yuling Sun**. A Role Modelling Approach for Crowd Animation in a Multi-Agent Cooperative System. *Proceedings of the 2011 15th International Conference on Computer Supported Cooperative Work in Design (CSCWD 2011)*. CCF-C Crowd Intelligent

Yuling Sun, Hong Liu. Path generation Method of Group Animation based on Artificial Bee Colony Algorithm, *Computer Engineering*, 2011, 37(22): 131-133.

Hong Liu, **Yuling Sun**. A Cooperative Crowd Simulation System Based on Computational Intelligence. In *ACM CSCW 2011 workshop*.

Jie Cao, **Yuling Sun**. Concurrency Control Mechanism in Maya Collaborative Design System, *Computer Engineering*, 2011, 37(23): 291-293.

Patents

Jialiang Tong, **Yuling Sun**. A SuStain-Advance Based Disease Staging and Subtype Identification Method. 202410369229.6.

Jialiang Tong, **Yuling Sun**. A Care Q&A Model Training Method Based on Transfer Learning and Expert Feedback. 202311528596.8.

Yuling Sun, Bangyan Li. A Cognitive Disorder Prediction Method Based on Composite Ensemble Learning. 202311519864.X.

Yuling Sun, Shaobin Chen. An Unsupervised Sentence Representation Learning Method Without Negative Samples. 202310581403.9.

Yuling Sun, Shaobin Chen. An Unsupervised Sentence Representation Learning Method Based on Redundant Information Filtering. 202310508625.8.

Yuling Sun. A Work Quantification Method for Grassroots Care Workers. 202310514770.7.

Yuling Sun. An Unsupervised Sentence Representation Learning Method Based on Synthetic Data. 202310546138.0.

Yuling Sun, Dong Yao, Liang He. A Rule-Driven Collaborative Interactive Space Layout Automatic Design Method. ZL202010021651.4.

Selected Talks

Invited Speaker. Shandong University, Weihai, China 2024.04
“Data-driven Collaborative Care for People with Dementia: Practices, Problems and Promise”

Invited Speaker. Duke Kunshan University, Kunshan, China 2024.01
“Unpacking Technology-Mediated Collaborative Care for People with Dementia”

Invited Speaker. China Healthcare Innovation & Development Forum, Shanghai, China 2024.01
“AIGC-based long-term care solution”

Invited Speaker. "Sci-Tech China" Intelligent Health Forum, Beijing, China 2023.10
“Family Wisdom Care: A data-driven inclusive long-term care platform”

Invited Speaker. UNESCO 2023 Digital Learning Week, Paris, France “EduChat: A Large Language Model Based Chatbot System for Intelligent Education”	2023.09
Invited Speaker. ChineseCSCW Summer School, Suzhou, China Qualitative Study in CSCW	2023.08
Invited Speaker. Tsinghua University, Beijing, China “Being Senior and ICT”	2022.12
Invited Speaker. 2022 World Artificial Intelligence Conference, Shanghai, China “Artificial Intelligence for the Elderly: Empowerment or Negativity”	2022.09
Invited Speaker. Shanghai Jiaotong University, Shanghai, China “Data-driven or Labor-driven? Unpacking Data-driven Elderly Care”	2022.01
Invited Speaker. 2021 Global Smart City Conference, Shanghai, China Exploring Smart Life from the Perspective of Social Computing	2021.11

Funded Projects

Shanghai Science and Technology Innovation Action Plan Project. The Theory, Design, and Practices for Artificial Intelligence Governance (21511104500). Co-PI, 2021.11-2024.10, RMB 2,000,000.

National Intelligent Social Governance Project. Shanghai Changning District Elderly Characteristic Experimental Base. CI. 2021/10-2024/10.

Shanghai Informationization Development Special Fund Project. Facility, Community, and Family Integrated Data-Driven Elderly Healthcare and Large-Scale Application Demonstration. CI, 2021/12-2023/12. RMB 400,000.

Open Project of Shanghai Key Laboratory of Intelligent Information Processing. Research on Multi-Discipline Knowledge Sharing and Collaborating Mechanism in Elderly Healthcare. PI, 2021/10-2022/10, RMB 30,000.

Tongji University. Social Supporting System Research and Analysis in Kongjiang District Shanghai. PI, 2021/01-2021/11. RMB 550,000.

Shanghai City Running Center. Digital signs of Future Digital City. PI, 2020.12-2021.2. RMB 100,000.

ACM SIGCHI Early Career Grants. Issues of aged-care in Digital World, PI, 2019/09-2020/09, USD 2,200.

Shanghai izhaohu Care Center. Future Data-driven Elderly Care. PI, 2018/06/01-2021/06/01, RMB 750,000.

National Natural Science Foundation of China – Youth Program. Research on Modeling and Interactive Mechanism of Situated Collaborative Caring Behavior Oriented Home-Based Elderly. PI, 2018/01/01-2020/12/31, RMB 310,000.

Shanghai Action Projects of Technological Innovation. Medical Healthcare Oriented Big Data Mining Platform and Application Paradigm. CI, 2017/07-2019/06, RMB 100,000.

National Natural Science Foundation of China – General Program. Research on Crowdsourcing-based Knowledge Graph Refinement. Main participant. CI, 2018/01/01-2021/12/31.

National Key Research and Development Program of China “Intelligent Robot” Key Special Projects. Biological-Computational Intelligent Interaction and Biological-Computational-Electrical Integration Robotics Technology. CI, 2018/01/01-2020/12/31.

Open Project of Shanghai Key Laboratory of Multidimensional Information Processing. Research on Social Ecology Embedded Knowledge Sharing and Interaction in Aged Care. PI, 2017/06-2018/06, RMB 20,000.

Open Project of Shanghai Key Laboratory of Data Science. Research on Context-Based Caring Behavioral Analysis and Interactive Mechanism Oriented Home-Based Elderly. PI, 2017/10/01-2018/10/01, RMB 20,000.

Shanghai Post-doctoral Innovation Practice Program. Internet-Based Affordable Educational Programming Robot. Co-PI, 2017/10-2018/10, RMB 50,000.

National Natural Science Foundation of China – Major Program. Theories and Methods for Social Order Oriented Social Computing. Participant, 2014/01-2018/12.

Mentoring Experience

Jiali Liu, PhD student (2024-), Institute of AI Education, Shanghai

Hao Tong, PhD student (2023-), Institute of AI Education, Shanghai

Bangyan Li, Master student (2023-), School of Computer Science, ECNU

Jifan Shen, Master candidate (2022-), School of Computer Science, ECNU

He Xiao, Master candidate (2022-), School of Computer Science, ECNU

Jiancong Guo, Master candidate (2021-2024), School of Computer Science, ECNU

Mengwen Liang, Master student (2020-2023), School of Computer Science, ECNU

Shaobin Chen, Master student (2020-2023), School of Computer Science, ECNU

Jin Yang, Master student (2020-2023), School of Computer Science, ECNU

Qingyu Xu, Master student (2019-2022), School of Computer Science, ECNU

Liuqian Ni, Master student (2018-2021), School of Computer Science, ECNU

Miaomiao Gong, Master student (2018-2021), School of Computer Science, ECNU

Meihong Wang, Master student (2018-2021), School of Computer Science, ECNU

Yu Jiang, Master student (2017-2020), School of Computer Science, ECNU

Kai Ye, Master student (2017-2020), School of Computer Science, ECNU

Languages

Chinese (native)

English (fluent)

副研究员

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个人简介

孙玉灵, 女, 华东师范大学博士后, 计算机科学与技术学院副研究员; 2016 年获复旦大学计算机软件与理论专业博士学位, 师从顾宁教授。主要研究方向为人机交互(HCI)、计算机支持的协同工作(CSCW)、社会计算(Social Computing)等。自攻读博士学位以来, 孙玉灵博士长期关注数字老龄社会中的人机交互与社会计算研究, 融合社会科学、心理学、计算科学、人机交互、人工智能等跨学科的理论与方法, 从人、技术、交互、计算等多角度开展为老智能服务技术设计与分析, 推进“以人为本”的数字养老生态建设。近年来, 她尤其关注养老服务者(如护理人员、基层工作者、医护人员等)的服务需求与行为模型, 并基于研究发现进行多角色协同养老服务技术与体系设计。

在学术研究的过程中, 孙玉灵博士坚持产学研深度结合、多学科协同的科研模式。一方面与国内知名数字养老机构上海爱照护养老服务有限公司联合成立了数字养老实验室, 致力于推进符合实际需求的养老科技研究与应用; 另一方面, 与来自人工智能、社会学科、心理学等领域的学者协同合作, 共同探索数字老龄社会的复杂议题; 此外, 她与来自香港科技大学、香港城市大学、密歇根大学、美国东北大学等知名高校的学者也有着十分深度的学术合作。

孙玉灵博士的研究成果主要发表在人机交互、计算机支持的协同工作、社会计算领域的顶级国际学术会议上, 包括 ACM CSCW (CCF-A)、ACM CHI (CCF-A)、ACM GROUP (CCF-B)等; 曾获 **ACM CHI 最佳论文 (全球 Top 1%)**、**ACM CSCW 最佳论文 (全球 Top 1%, 创会以来亚洲唯一一篇)**、**ACM CSCW 影响力贡献奖 (全球共 5 篇)**、**ACM CSCW 社会包容性贡献奖 (全球共 15 篇)**等学术奖励; 参与了“智慧城市 2035”《弥合数字鸿沟》图书的编写工作; 获得了国家自然科学基金、上海市经信委专项项目、上海市科委人工智能专项项目、美国计算机学会 (ACM) 青年学者基金、中国博士后基金等资助。她主持研发的“家庭智养院: 数智驱动的普惠型家庭长期照护平台”项目, 获 **2022 年上海市科技进步二等奖 (第一排名)**; 主持研发的“面向居家老人的跌倒检测技术”获 **2018 全球物联网峰会“最佳方案”**; 与企业合作推进的“面向机构、社区、居家三位一体的互联网+养老示范”项目连续两年(2021/2022)被《中国老年健康蓝皮书》以经典案例收录。此外, 孙玉灵博士所开展的老龄相关科研工作取得了较高的社会认可和反响, 多次受邀参与国内外有影响力的会议 (如 **2021 全球智慧城市大会**、**2022 世界人工智能大会**、**2023 联合国教科文组织数字学习周**), 并进行主题发言; 媒体也多次报道了她的研究工作。



研究兴趣

人机交互、计算机支持的协同工作、社会计算、以人为本的人工智能、群智协同
关注领域：老龄、健康、教育、数字治理、乡村振兴

教育背景

2012.09-2016.06	复旦大学 计算机软件与理论专业	博士
	博士论文：面向弱势群体的社会技术分析方法与应用设计	
2009.09-2012.06	山东师范大学 计算机软件与理论专业	硕士
2005.09-2009.06	山东师范大学 计算机科学与技术专业	学士

科研经历

2024.10 - 2025.06	美国密歇根大学 Hughes Fellow
2022.10 - 2023.06	美国密歇根大学 项目助理
2018.12 - 至今	华东师范大学 副研究员
2018.06 - 至今	华东师范大学-爱照护数字养老联合实验室 主任
2016.07 - 2018.12	华东师范大学 博士后研究员

部分奖励

- Hughes Fellowship.** 美国密歇根大学, 2024.
- 最佳论文 /Best Paper Award.** Technology-Mediated Non-pharmacological Interventions for Dementia: Needs for and Challenges in Professional, Personalized and Multi-Stakeholder Collaborative Interventions, ACM CHI 2024 (CCF-A, 全球 Top 1%), 1/5.
- 社会包容贡献奖/Recognition for Contribution to Diversity and Inclusion Award.** Care Workers' Wellbeing in Data-Driven Healthcare Workplace: Identity, Agency, and Social Justice, ACM CSCW 2023 (CCF-A, 全球共 15 篇), 1/4.
- 影响力贡献奖 /Impact Recognition Award.** Data Work of Frontline Care Workers: Practices Problems and Opportunities in the Context of Data-Driven Long-Term Care ACM CSCW 2023 (CCF-A, 全球共 5 篇), 1/4.
- 上海市科技进步二等奖/Shanghai Technological Progress Award.** 家庭智养院：数智驱动的普惠型家庭养老长期照护平台, 2022, 1/10.
- 数字医学技术与应用创新大赛二等奖.** 基于专家交互的阿尔茨海默病全天候实时照护解决方案. 数字医学技术与应用创新大赛 DiMTAIC 2023.
- CCF 技术公益案例.** 家庭智养院：数智驱动的普惠型家庭养老长期照护平台. 2023.
- 《中国健康老龄化发展蓝皮书（2022）》经典案例.** 基于数智技术的老年社区普惠照护服务体系设计, 2022.
- 《中国健康老龄化发展蓝皮书（2021）》经典案例.** 智能化全覆盖照料社区(IACC). 2021.
- 最佳论文/Best Paper Award.** Reliving the past & making a harmonious society today: A study of elderly electronic hackers in China, ACM CSCW 2015 (CCF-A, 创会以来亚洲唯一一篇), 1/5.
- 国家奖学金/Chinese National Scholarship.**

图书/图书章节

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Yuling Sun, et al. The International Strategies for Bridging Digital Divide. *Bridge The Digital Divide*. Xuefeng Sheng (Ed.). Tongji Press, 2023. 智慧养老

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Yuling Sun*, Yuchen Chen, Xiaojuan Ma, Liang He. Community Group Buying as a Form of Solidarity Movement: Infrastructure and Infrastructuring. CSCW 2024 (major revision). CCF-A 社区治理

Yuling Sun*, Xiaomu Zhou, Bingsheng Yao, Kai Zhang, Dakuo Wang, Jiaju Chen, Liang Le. Who Changed the Destiny of Rural Students, and How?: Unpacking ICT-Mediated Remote Education in Rural China. CSCW 2024 (major revision). CCF-A 农村教育

Ethan Rong, Jifan Shen, **Yuling Sun***, Zhicong Lu. Infrastructure, Collaboration, and Engagement: Self-Organized and Autonomous Ecosystems that supports Live-Streaming-Based Learning for Older Adults. CSCW 2024 (major revision). CCF-A 老年教育

Jiaju Chen, Yuxuan Lu, Bingsheng Yao, et al., Dakuo Wang, **Yuling Sun***. SciSpark: An Interactive Storytelling System for Young Children's Science Education with Large Language Model (LLM) and Retrieval-Augmented Generation (RAG). UIST 2024 (in submission). CCF-A 儿童教育

Jiaju Chen, Yuxuan Lu, Shao Zhang, Bingsheng Yao, et al., Dakuo Wang, **Yuling Sun***. Exploring Domain Adaptation with LLMs for Real-World Augmented Question Answer Generation (RA-QAG) in Children Storytelling. EMNLP 2024 (in submission). CCF-A 儿童教育

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Jifan Shen, **Yuling Sun***. Exploring Elderly Learners' Interaction Practices and Experiences in Online Learning. GROUP 2024 (in submission). CCF-B 老年教育

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2024 **Yuling Sun**, Jiaju Chen, Bingsheng Yao, Dakuo Wang, Xiaojuan Ma, et al. Exploring Parent's Needs for Children-Centered AI to Support Preschoolers' Storytelling and Reading Activities. *Proceedings of the ACM on Human-Computer Interaction*, 7(CSCW1) (CSCW 2024). CCF-A 儿童教育

Yuling Sun, Zhennan Yi, Xiaojuan Ma, et al. Technology-Mediated Non-pharmacological Interventions for Dementia: Needs for and Challenges in Professional, Personalized and Multi-Stakeholder Collaborative Interventions. *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems 2024 (CHI 2024)*. (Best Paper Award) CCF-A 智慧养老

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Jifan Shen, **Yuling Sun***. Privacy-Preserved Video Monitoring Method with 3D Human Pose Estimation. *Proceedings of 2023 26th International Conference on Computer Supported Cooperative Work in Design (CSCWD 2023)*. CCF-C 智慧养老

He Xiao, **Yuling Sun***. "Policies Look for the Elderly": A Knowledge Graph Based Care Information Recommendation System. *Proceedings of 2023 26th International Conference on Computer Supported Cooperative Work in Design (CSCWD 2023)*. CCF-C 智慧养老

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Yong Ding, **Yuling Sun**, Xiaoying Qu. Digital Technology driven Inclusive Care System for Elderly Community. *Blue Book of The Development of Healthy Aging in China*, 246-269, 2022.

Bin Wang, Jin Zhao, **Yuling Sun***. Caregiving in Digital Healthcare Setting: Impacts of Data-driven Technologies to Caregivers in Practice. *Proceedings of 2022 IEEE 25th International Conference on*

Computer Supported Cooperative Work in Design (CSCWD 2022).

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Jiancong Guo, Bin Wang, Jin Zhao, **Yuling Sun***. CareMap: Human-Space-Service Based Healthcare Modeling and Quantifying for the Elderly Aging in Place. *Proceedings of 2022 IEEE 25th International Conference on Computer Supported Cooperative Work in Design (CSCWD 2022).*

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Bin Wang, Xingjiao Wu, et al., **Yuling Sun***. Lightweight Network Based Real-time Anomaly Detection Method for Caregiving at Home. *Proceedings of 2022 IEEE 25th International Conference on Computer Supported Cooperative Work in Design (CSCWD 2022).*

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- 2021 Mengwen Liang, Jie Zhou, **Yuling Sun***, Liang He. Working with Few Samples: Methods that Help Analyze Social Attitude and Personal Emotion. *Proceedings of 2021 IEEE 24th International Conference on Computer Supported Cooperative Work in Design (CSCWD 2021).* CCF-C 智慧养老

Qingyu Xu, **Yuling Sun***, Liang He. Design Considerations for Information Collaboration in Long-term Senior Care System. *Proceedings of 2021 IEEE 24th International Conference on Computer Supported Cooperative Work in Design (CSCWD 2021).*

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- 2020 Ge Gao, **Yuling Sun***, Yongle Zhang. Engaging the Commons in Participatory Sensing: Practice, Problems, and Promise in the Context of Dockless Bikesharing. *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems (CHI 2020).*

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- 2019 Liuqian Ni, **Yuling Sun***, Yanqin Yang, Liang He. Human-Engaged Health Care Services Recommendation for Aging and Long-term Care. *Proceedings of 2019 IEEE 23rd International Conference on Computer Supported Cooperative Work in Design (CSCWD 2019).* CCF-C 智慧养老

Miaomiao Gong, **Yuling Sun***, Liang He. A Social Network Engaged Crowdsourcing Framework for Expert Tasks. *Proceedings of 2019 IEEE 23rd International Conference on Computer Supported Cooperative Work in Design (CSCWD 2019).*

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- 2018 **Yuling Sun***, Yan Tang, Liang He. USee: An Online-Offline Hybrid Danmaku Social System. *Proceedings of 2018 IEEE 22nd International Conference on Computer Supported Cooperative Work in Design (CSCWD 2018).*

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Yu Jiang, **Yuling Sun***, Jing Yang, Xin Lin, Liang He. Enabling Uneven Task Difficulty in Micro-Task Crowdsourcing. *Proceedings of the 2018 ACM International Conference on Supporting Group Work (GROUP 2018).*

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Jie Zhou, **Yuling Sun***, Liang He. A Data Driven Collaborative Caring Framework for Aging in Place in China. *Proceedings of 2018 IEEE 22nd International Conference on Computer Supported Cooperative Work in Design (CSCWD 2018).*

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Meihong Wang, **Yuling Sun***, Jing Yang, Liang He. Enabling the Disagreement among Crowds: A Collaborative Crowdsourcing Framework. *Proceedings of 2018 IEEE 22nd International Conference on Computer Supported Cooperative Work in Design (CSCWD 2018).*

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Yang Song, **Yuling Sun***, Qinmin Hu, Liang He. An Interaction Embedded Framework for Healthcare Search. *Proceedings of 2018 IEEE 22nd International Conference on Computer Supported Cooperative Work in Design (CSCWD 2018).*

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Jie Zhou, **Yuling Sun***, Liang He. Multi-Model Hybrid Traffic Flow Forecast Algorithm Based on Multivariate Data. *Proceedings of 13th CCF Conference of Computer Supported Cooperative Work and Social Computing (ChineseCSCW 2018)*.

- 2017 **Yuling Sun**, Tun Lu, Ning Gu. A Method of Electronic Health Data Quality Assessment: Enabling Data Provenance. *Proceedings of 2017 IEEE 21st International Conference on Computer Supported Cooperative Work in Design (CSCWD 2017)*. CCF-C 智慧养老

Kai Ye, **Yuling Sun***, Jing Yang, and Liang He. Enabling Social Network: An Exploration of Crowdsourcing System. *Proceedings of the 12th Chinese Conference on Computer Supported Cooperative Work and Social Computing (ChineseCSCW 2017)*.

Kai Ye, **Yuling Sun***, Jing Yang, Liang He. WeCrowd: A WeChat based Mobile Crowdsourcing Platform. *Proceedings of 2017 IEEE 21st International Conference on Computer Supported Cooperative Work in Design (CSCWD 2017)*. CCF-C 群智协同

Tun Lu, **Yuling Sun**, Ning Gu. CSCW 2017 - Conference on Computer-Supported Cooperative Work and Social Computing. *CCF Communications*, Vol. 13, No. 4, April 2017: 68-71.

Yuling Sun, Kai ye, Liang He. Ageing with the Help of AT: Learning from a Study of Seniors Using AT in China. In *ACM CSCW 2017 Workshop*.

- 2015 **Yuling Sun**, Tun Lu, Ning Gu. A Provenance-based Personalized Recommendation Method in Assistive Device Matching for Disabled. *Proceedings of the 10th Chinese Conference on Computer Supported Cooperative Work and Social Computing (ChineseCSCW 2015)*.

Yuling Sun, Silvia Lindtner, Xianghua Ding, Tun Lu, Ning Gu. Reliving the Past & Making a Harmonious Society Today: A Study of Elderly Electronic Hackers in China. *Proceedings of the 18th ACM Conference on Computer Supported Cooperative Work & Social Computing (CSCW 2015) (Best Paper Award)*. CCF-A 智慧养老

- 2014 **Yuling Sun**, Xianghua Ding, Silvia Lindtner, Tun Lu, Ning Gu. Being senior and ICT: a study of seniors using ICT in China. *Proceedings of the SIGCHI Conference on Human factors in Computing System 2014 (CHI 2014)*. CCF-A 智慧养老

- 更早 Hong Liu, **Yuling Sun***. Task Assignment Approach in a Multi-Agent System. *Proceedings of the 2012 IEEE 16th International Conference on Computer Supported Cooperative Work in Design (CSCWD 2012)*. CCF-C 群智协同

Hong Liu, **Yuling Sun**, Yuanyuan Li. Modeling and Path Generation Approaches for Crowd Simulation Based on Computational Intelligence, *Chinese Journal of Electronics*, 2012, 21(4): 636-641. CCF-A 群智协同

Yuling Sun, Hong Liu. Dynamic Path Planning Algorithm for Artificial Bee Colony Based on Octree Modeling, *Computer Engineering*, 2012, 38(20): 120-124.

Xiaowei Zhang, Hong Liu, **Yuling Sun**. A Player Tracking Algorithm of Multi-Feature Adaptive Fusion, *Computer Engineering*, 2012, 38(17): 214-218.

Huijie Zheng, Hong Liu, Xiangwei Zheng, **Yuling Sun**. Group Search Optimization Algorithm of Differential Variation Based on Simulated Annealing. *Computer Engineering*, 2012, 38(17): 178-181.

Hong Liu, **Yuling Sun**. A Dynamic Task Assignment Approach Based on Artificial Bee Colony Algorithm in a Multi-Agent Cooperative Design System. *Proceedings of Asian Conference on Design and Digital Engineering 2011 (ACDDE 2011)*.

Hong Liu, **Yuling Sun**. A Role Modelling Approach for Crowd Animation in a Multi-Agent Cooperative System. *Proceedings of the 2011 15th International Conference on Computer Supported Cooperative Work in Design (CSCWD 2011)*. **CCF-C** **群智协同**

Yuling Sun, Hong Liu. Path generation Method of Group Animation based on Artificial Bee Colony Algorithm, *Computer Engineering*, 2011, 37(22): 131-133.

Hong Liu, **Yuling Sun**. A Cooperative Crowd Simulation System Based on Computational Intelligence. In *ACM CSCW 2011 workshop*.

Jie Cao, **Yuling Sun**. Concurrency Control Mechanism in Maya Collaborative Design System, *Computer Engineering*, 2011, 37(23): 291-293.

专利

- 童佳亮, 孙玉灵. 一种基于 SuStaln-Advance 的疾病分期与亚型识别方法, 202410369229.6.
- 童佳亮, 孙玉灵. 一种基于迁移学习与专家反馈的照护问答模型训练方法, 202311528596.8.
- 孙玉灵, 陈少斌. 一种基于冗余信息过滤的无监督句子表征学习方法, 202310508625.8.
- 孙玉灵. 面向基层护理工作者的数据工作量化方法, 202310514770.7.
- 孙玉灵. 一种基于合成数据的无监督句子表征学习方法, 202310546138.0.
- 孙玉灵. 一种去负样本的无监督句子表征学习方法, 202310581403.9.
- 孙玉灵, 李邦彦. 一种基于复合集成学习的认知症预测方法, 202311519864.X.
- 孙玉灵, 姚栋, 贺樑. 一种规则驱动的协同交互式空间布局自动设计方法, ZL202010021651.4.

部分演讲与报告

山东大学，威海，中国	2024.04
Data-driven Collaborative Care for People with Dementia: Practices, Problems and Promise	
杜克昆山大学，昆山，中国	2024.01
Unpacking Technology-Mediated Collaborative Care for People with Dementia Through the Lens of Human-Centered Design	
中国智慧康养创新与发展论坛，上海，中国	2024.01
基于 AIGC 的认知症患者长期照护解决方案	
科创中国-智能康养论坛，北京，中国	2023.10
家庭智养院：数字驱动的普惠型长期照护平台	
联合国教科委数字学习周，法国，巴黎	2023.09
EduChat: A Large Language Model Based Chatbot System for Intelligent Education	
ChineseCSCW Summer School，苏州，中国	2023.08
Qualitative Study in CSCW	
清华大学，北京，中国	2022.12
Being Senior and ICT	
世界人工智能大会，上海，中国	2022.09
Artificial Intelligence for the Elderly: Empowerment or Negativity	

上海交通大学, 上海, 中国	2022.01
Data-driven or Labor-driven? Unpacking Data-driven Elderly Care	
全球智慧城市大会, 上海, 中国	2021.11
Exploring Smart Life from the Perspective of Social Computing	

部分资助项目

上海市科委人工智能科技支撑专项项目. 老人智能服务应用系统社会实验(21511104500). Co-PI, 2021.11-2024.10, RMB 2,000,000.

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上海市信息化发展专项资金项目. 面向机构、社区、居家三位一体的互联网+养老服务及规模化应用示范. CI, 2021.12-2023.12. RMB 400,000.

上海市智能信息处理重点实验室开放课题. 面向养老照护的多角色协同信息共享机制研究. PI, 2021.10-2022.10, RMB 30,000.

同济大学. 面向老龄社区的数智驱动优化方案. PI, 2021.01-2021.11. RMB 550,000.

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