

LIZI LIAO

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ABOUT ME

My research interest covers dialogue systems and multimedia analysis. Specifically, I aim at developing models that can understand human inputs in various forms (*e.g.* textual & visual) and communicate with humans to perform certain tasks.

My research can be summarized as the following aspects:

- 1) **multimodal dialogue systems**: belief state tracking, contextualized response generation, policy learning *etc.*
- 2) **recommendation**: neural collaborative filtering, conversational recommendation *etc.*
- 3) **multimedia analysis in fashion**: cross-modal retrieval, fashion compatibility modeling, fashion chatbot *etc.*

EDUCATION

National University of Singapore Ph.D. in Integrative Sciences & Engineering. Advisor: Prof. Tat-Seng Chua	2015.8 - 2019.11
Beijing Institute of Technology B.Eng. in Computer Science & Technology Top 10% of the cohort	2007.9 - 2011.6

RESEARCH EXPERIENCE

Research Fellow School of Computing, National University of Singapore, Singapore Director: Prof. Tat-Seng Chua	2019.11 - now
Research Intern FXPAL, Palo Alto, USA Advisor: Lyndon Kennedy & Lynn Wilcox	2018.6 - 2018.9
Research Assistant LARC, Singapore Management University, Singapore Advisor: Prof. Jing Jiang & Prof. Ee-Peng Lim	2013.8 - 2015.7
Research Assistant Beijing Institute of Technology, China Advisor: Prof. Heyan Huang	2011.9 - 2013.7

TEACHING EXPERIENCE

Co-Lecturer	NUS SOC 2018 Spring, CS4242 Social Media Computing
Teaching Assistant	NUS SOC 2016 Autumn, CS2108 Introduction to Media Computing
Organizer	NExT Weekly Dialogue Reading Group
Coordinator	Parallel Session: Projects on Trust in the 6th NExT++ Workshop 2019

PROFESSIONAL SERVICES

Program Design : ACM Multimedia(2019)
Senior Program Committee: IJCAI(2021)
Program Committee: SIGIR(2017-2021), MM(2020-2021), ACL(2020-2021), EMNLP(2020-2021), AAAI(2020)
Reviewer: TKDE, TMM, TOIS, JAIR, TKDD, KBS

SELECTED AWARDS

Best Paper Honorable Mention, ACM Multimedia	2018
Dean's Graduate Research Excellence Award, NUS	2019
Research Achievement Award, NUS	2018
National Scholarship, Beijing Institute of Technology	2013

MENTORING

Zheng Zhang (PhD student, Tsinghua University)
Yunshan Ma (PhD student, NUS)
Long Le Hong (Undergraduate, NUS)
Tongyao Zhu (Undergraduate, NUS)
Kaili Mao (Visting student, BUAA)

SELECTED PUBLICATIONS [[GOOGLE SCHOLAR](#)]

- [1] **Lizi Liao**, Long Le Hong, Zheng Zhang, Minlie Huang, Tat-Seng Chua. MMConv: An Environment for Multimodal Conversational Search across Multiple Domains. SIGIR 2021 
- [2] **Lizi Liao**, Tongyao Zhu, Le Hong Long, Tat-Seng Chua. Multi-domain Dialogue State Tracking with Recursive Inference. WWW 2021 
- [3] Kaili Mao, Jianwei Niu, Xuefeng Liu, Shaojie Tang, **Lizi Liao**, Tat-Seng Chua. A Patience-aware Recommendation Scheme for Shared Accounts on Mobile Devices. TKDE 2021 
- [4] **Lizi Liao**, Ryuichi Takanobu, Yunshan Ma, Xun Yang, Minlie Huang, Tat-Seng Chua. Topic-Guided Relational Conversational Recommender in Multiple Domains. TKDE 2020 
- [5] **Lizi Liao**, Le Hong Long, Yunshan Ma, Wenqiang Lei, Tat-Seng Chua. Dialogue State Tracking with Incremental Reasoning. TACL 2020 
- [6] Zheng Zhang*, **Lizi Liao***, Minlie Huang, Xiaoyan Zhu, Tat-Seng Chua. Neural Multimodal Belief Tracker with Adaptive Attention for Dialogue Systems. WWW 2019 
- [7] Yunshan Ma, Xun Yang, **Lizi Liao**, Yixin Cao, Tat-Seng Chua. Who, Where, and What to Wear? Extracting Fashion Knowledge from Social Media. ACM Multimedia 2019 
- [8] **Lizi Liao**, Yunshan Ma, Xiangnan He, Richang Hong, Tat-Seng Chua. Knowledge-aware Multimodal Dialogue Systems. ACM Multimedia 2018  (**Best Paper Final List**)
- [9] **Lizi Liao**, Xiangnan He, Bo Zhao, Chong-Wah Ngo, Tat-Seng Chua. Interpretable Multimodal Retrieval for Fashion Products. ACM Multimedia 2018 
- [10] **Lizi Liao**, Xiangnan He, Hanwang Zhang, Tat-Seng Chua. Attributed Social Network Embedding. TKDE 2018 
- [11] Xiangnan He, **Lizi Liao**, Hanwang Zhang, Liqiang Nie, Xia Hu, Tat-Seng Chua. Neural Collaborative Filtering. WWW 2017 
- [12] **Lizi Liao**, Xiangnan He, Zhaochun Ren, Liqiang Nie, Huan Xu, Tat-Seng Chua. Representativeness-aware Aspect Analysis for Brand Monitoring in Social Media. IJCAI 2017 
- [13] **Lizi Liao**, Qirong Ho, Jing Jiang, Ee-Peng Lim. SLR: a Scalable Latent Role Model for Attribute Completion and Tie Prediction in Social Networks. ICDE 2016 
- [14] **Lizi Liao**, Jing Jiang, Ying Ding, Heyan Huang, Ee-Peng Lim. Lifetime Lexical Variation in Social Media. AAAI 2014 