

# LIZI LIAO

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## ABOUT ME

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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

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

## RESEARCH EXPERIENCE

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

## TEACHING EXPERIENCE

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

## PROFESSIONAL SERVICES

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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

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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

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

## SELECTED PUBLICATIONS [\[GOOGLE SCHOLAR\]](#)

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- [1] **Lizi Liao**, Le Hong Long, 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 