

LIANGMING PAN

Fourth-year Ph.D. Candidate

Integrative Sciences and Engineering Programme (ISEP), NUS Graduate School
National University of Singapore

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EDUCATION

Jan. 2018 – Jan. 2022 (expected)

Ph.D. Candidate, Integrative Sciences and Engineering Programme (ISEP)
National University of Singapore, Singapore

- Thesis Topic: Towards Generating Human-like Deep Questions
- Research Interests: Language Generation, Fact-Checking, Multi-modal Learning
- Supervisor: Prof. [Min-Yen Kan](#), Co-Supervisor: Prof. [Tat-Seng Chua](#)

Aug. 2020 – Jun. 2021

Visiting Ph.D. Student, UC Santa Barbara Natural Language Processing Group (UCSB-NLP)
Santa Barbara, California, United States

- Advisor: Prof. [William Yang Wang](#)
- Research Topic: Question Generation, Question Answering

Sep. 2014 – Jun. 2017

Master's Degree, Computer Science and Technology
Tsinghua University, Beijing, China

- Thesis Topic: Course Concept Extraction and Relation Learning in Massive Open Online Courses (MOOCs)
- Supervisor: Prof. [Juanzi Li](#), and Prof. [Jie Tang](#)

Sep. 2010 – Jun. 2014

Bachelor of Engineering, Software Engineering
Beihang University, Beijing, China

EMPLOYMENTS

Jul. 2017 – Dec. 2017

Research Assistant, Knowledge Engineering Group (KEG), Tsinghua University

- Advisor: Prof. [Juanzi Li](#), and Prof. [Jie Tang](#)
- Research Focus: Concept evolution in scholarly documents of computer science

INVITED AND CONFERENCE TALKS

Aug. 2021	Invited Talk, Nanyang Technological University	[Abstract] [Slides] [Video]
Aug. 2021	Oral Presentation, ACL-IJCNLP 2021, Online	[Presentation] [Slides]
Jun. 2021	Oral Presentation, NAACL 2021, Online	[Presentation]
Feb. 2021	Invited Talk, National University of Singapore	[Abstract]
Oct. 2020	Oral Presentation, ACM MM 2020, Online	
Aug. 2020	Invited Talk, Fudan University, Shanghai, China	
Jul. 2020	Oral Presentation, ACL 2020, Online	[Presentation]

PREPRINTS

1. **Liangming Pan**, Wenhua Chen, Min-Yen Kan, William Yang Wang. [ContraQA: Question Answering under Contradicting Contexts](#). *arXiv:2110.07803* (2021)
2. Yunxiang Zhang, **Liangming Pan**, Samson Tan, Min-Yen Kan. [Causally Estimating the Sensitivity of Neural NLP Models to Spurious Features](#). *arXiv:2110.07159* (2021)
3. Jiaxin Shi, Shulin Cao, **Liangming Pan**, Yutong Xiang, Lei Hou, Juanzi Li, Hanwang Zhang, Bin He. [KQA Pro: A Large-Scale Dataset with Interpretable Programs and Accurate SPARQLs for Complex Question Answering over Knowledge Base](#). *arXiv:2007.03875* (2020)
4. **Liangming Pan**, Wenqiang Lei, Tat-Seng Chua, Min-Yan Kan. [Recent Advances in Neural Question Generation](#). *arXiv:1905.08949* (2019)

CONFERENCE PUBLICATIONS

1. **Liangming Pan**, Wenhua Chen, Wenhan Xiong, Min-Yen Kan, William Yang Wang. [Zero-shot Fact Verification by Claim Generation](#). Proceedings of the Joint Conference of the 59th Annual Meeting of the Association for Computational Linguistics and the 11th International Joint Conference on Natural Language Processing (ACL-IJCNLP 2021)
2. **Liangming Pan**, Wenhua Chen, Wenhan Xiong, Min-Yen Kan, William Yang Wang. [Unsupervised Multi-hop Question Answering by Question Generation](#). Proceedings of the 2021 Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL 2021)
3. **Liangming Pan**, Yuxi Xie, Yansong Feng, Min-Yen Kan, Tat-Seng Chua. [Semantic Graphs for Deep Question Generation](#). Proceedings of the 58th Annual Meeting of the Association for Computational Linguistics (ACL, 2020)
4. Yuxi Xie, **Liangming Pan**, Dongzhe Wang, Min-Yen Kan, Yansong Feng. [Exploring Question-Specific Rewards for Generating Deep Questions](#). Proceedings of the 28th International Conference on Computational Linguistics (COLING 2020)

5. **Liangming Pan**, Jingjing Chen, Jianlong Wu, Shaoteng Liu, Chong-Wah Ngo, Min-Yen Kan, Yu-Gang Jiang, Tat-Seng Chua. [Multi-modal Cooking Workflow Construction for Food Recipes](#). Proceedings of the 28th ACM International Conference on Multimedia (ACM MM, 2020)
6. Zhiyuan Liu, Yixin Cao, **Liangming Pan**, Juanzi Li, Tat-Seng Chua. [Exploring and Evaluating Attributes, Values, and Structures for Entity Alignment](#). Proceedings of the 2020 Conference on Empirical Methods in Natural Language Processing (EMNLP 2020)
7. Yixin Cao, Ruihao Shui, **Liangming Pan**, Min-Yen Kan, Zhiyuan Liu, Tat-Seng Chua. [Expertise Style Transfer: A New Task Towards Better Communication between Experts and Laymen](#). Proceedings of the 58th Annual Meeting of the Association for Computational Linguistics (ACL, 2020)
8. Shaoteng Liu, Jingjing Chen, **Liangming Pan**, Chong-Wah Ngo, Tat-Seng Chua, Yugang Jiang. [Hyperbolic Visual Embedding Learning for Zero-Shot Recognition](#). Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition (CVPR, 2020)
9. Jingjing Chen, **Liangming Pan**, Zhipeng Wei, Xiang Wang, Chong-Wah Ngo, Tat-Seng Chua. [Zero-shot Ingredient Recognition by Multi-Relational Graph Convolutional Network](#). Proceedings of the 34th AAAI Conference on Artificial Intelligence (AAAI, 2020)
10. Jifan Yu, **Liangming Pan**, Juanzi Li, and Xiaoping Du. [Predicting Concept-based Research Trends with Rhetorical Framing](#). Proceedings of the 3th China Conference on Knowledge Graph and Semantic Computing (CCKS, 2018)
11. **Liangming Pan**, Chengjiang Li, Juanzi Li, and Jie Tang. [Prerequisite Relation Learning for Concepts in MOOCs](#). In Proceedings of the 55th Annual Meeting of the Association for Computational Linguistics (ACL, 2017)
12. **Liangming Pan**, Xiaochen Wang, Chengjiang Li, Juanzi Li, and Jie Tang. [Course Concept Extraction in MOOCs via Embedding-Based Graph Propagation](#). In Proceedings of the 8th International Joint Conference on Natural Language Processing (IJCNLP, 2017)
13. **Liangming Pan**, Zhigang Wang, Juanzi Li, and Jie Tang. [Domain Specific Cross-lingual Knowledge Linking based on Similarity Flooding](#). In Proceedings of the 9th International Conference on Knowledge Science, Engineering and Management (KSEM, 2016)
14. Zhigang Wang, **Liangming Pan**, Juanzi Li, Shuangjie Li, Mingyang Li, and Jie Tang. [Boosting to Build a Large-scale Cross-lingual Ontology](#). In Proceedings of the 1th China Conference on Knowledge Graph and Semantic Computing (CCKS, 2016)
15. Yan Zhang, Hailong Jin, **Liangming Pan**, and Juanzi Li. [RiMOM results for OAEI 2016](#). In Proceedings of the 11th International Workshop on Ontology Matching (OM@ISWC, 2016)

JOURNAL PUBLICATIONS

1. **Liangming Pan**, Jingjing Chen, Shaoteng Liu, Chong-Wah Ngo, Min-Yen Kan, Tat-Seng Chua. [A Hybrid Approach for Detecting Prerequisite Relations in Multi-modal Food Recipes](#). *IEEE Transactions on Multimedia*. 2020 Dec 9.

2. Yahui An, **Liangming Pan**, Min-Yen Kan, Qiang Dong, Yan Fu. [Resource Mention Extraction for MOOC Discussion Forums](#). *IEEE Access* 7 (2019): 87887-87900.
3. Weiwei Wang, Zhigang Wang, **Liangming Pan**, Yang Liu, and Jiangtao Zhang. Research on the Construction of Bilingual Movie Knowledge Graph. *Journal of Acta Scientiarum Naturalium Universitatis Pekinensis* 2016 (paper in Chinese)

HONORS AND AWARDS

Jan. 2021	Dean's Graduate Research Excellence Award, National University of Singapore (awarding rate: less than 2%)
Oct. 2020	Research Achievement Reward, National University of Singapore (awarding rate: less than 5%)
Jun. 2017	Excellent master postgraduate of CS department, Tsinghua (awarding rate: less than 5%)
Oct. 2016	First prize of 'Friends of Tsinghua — Renrendai scholarship' (awarding rate: less than 10%)
Apr. 2013	Meritorious Winner of Mathematical Contest in Modeling

PROFESSIONAL SERVICES

Conference Program Committee Member / Reviewer

Reviewer of ACL Rolling Review (ARR)

Senior PC member of IJCAI 2021

PC member of EMNLP 2021

PC member of ACL 2021

PC member of NAACL 2021

PC member of EMNLP 2020

PC member of ACL 2020

Journal Reviewer

IEEE/ACM Transactions on Audio, Speech, and Language Processing (TASLP)

IEEE Access

Other Activities

Organizer of the [WING NUS Natural Language Processing \(NLP\) Seminar 2021](#)

SKILLS

Programming	Python/Java/Matlab/JavaScript/SQL/C++/CSS/HTML/Latex
Deep Learning	PyTorch/Tensorflow/Scikit-learn/Numpy/Matplotlib/Colab
Operating Systems	Linux/Windows/Mac OS

Languages

Chinese (Mandarin)	Native Fluency
English	Advanced Proficiency

Hobbies

Badminton, StarCraft 2, Table tennis, Basketball, Football, Travel