

QIUCHI LI

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Personal Academic Website: qiuchili.github.io

EDUCATION

University of Padua

Ph.D in Engineering

Department of Information Engineering

October 2017 - October 2020

Tsinghua University

Bachelor of Engineering

Department of Electronic Engineering

September 2011 - July 2015

RESEARCH INTERESTS

My general research interests are Information Retrieval (IR) and Natural Language Processing (NLP). My primary interests are within the interdisciplinary field of quantum computing and natural language processing. I am working on building quantum-theoretic frameworks for language representation and understanding, with application to IR and NLP tasks by complex-valued neural networks or tensor networks. In the meantime, I am keen on addressing NLP and IR problems with models that could be implemented on quantum devices.

EXPERIENCES

Postdoctoral Researcher, University of Copenhagen

January 2021 -

- Automatic generation of contact messages from job recruiters to job seekers

Visiting Researcher, University of Montreal, Canada

January 2020 - April 2020

- Quantum-inspired models for multimodal sentiment analysis
- Advisor: Prof. Jian-yun Nie

Visiting Researcher, University of Copenhagen, Denmark

August 2019 - December 2019

- Quantum-inspired models for multimodal sentiment analysis
- Advisor: Prof. Christina Lioma

Visiting Researcher, Beijing Institute of Technology, China

January 2019 - March 2019

- Quantum-inspired models for sentiment analysis
- Advisor: Prof. Dawei Song

Early-stage Researcher (ESR), University of Padua, Italy

October 2017 - Present

- Investigation of quantum-theoretic frameworks for accessing and retrieving multimodal data.
- Advisor: Prof. Massimo Melucci

Research Student, Tsinghua University, China

October 2014 - July 2015

- Opinion mining and sentiment analysis on micro-blog data.
- Advisor: Prof. Ji Wu

RESEARCH PROJECTS

Machine Learning for Personalized and Persuasive Job Recommendation (JobMatch) *January 2021 -*

- Role: Postdoctoral Researcher, primarily involved in scientific development

Quantum Information Access and Retrieval Theory (QUARTZ) *October 2017 - September 2020*

- Supported by the European Union's Horizon 2020 research and innovation programme under the Marie Skodowska-Curie grant agreement No. 721321.
- Role: Early-stage Researcher (ESR)

Quantum Information Access and Retrieval Theory and Applications *April 2018 - January 2021*

- Intergovernmental Cooperation and Innovation Program supported by the China Innovation Fund-ing 2017YFE0111900.
- Role: Researcher

Retrieving New Vulnerability Information from Evolving Software Development *October 2015 - October 2017*

- Funded by the department of Computing & Communications, Open University
- Role: Researcher

SELECTED PUBLICATIONS

- **Qiuchi Li**, Dimitris Gkoumas, Alessandro Sordoni, Jianyun Nie, and Massimo Melucci. "Quantum-inspired Neural Network for Conversational Emotion Recognition," *Thirty-Fifth AAAI Conference on Artificial Intelligence (AAAI)*, 2021.
- **Qiuchi Li**, Dimitris Gkoumas, Christina Lioma, Massimo Melucci. "Quantum-inspired Multi-modal Fusion for Video Sentiment Analysis," *Information Fusion* (Impact Factor: 13.669), 2020.
- Benyou Wang, Donghao Zhao, Christina Lioma, **Qiuchi Li**, Peng Zhang, and Jakob Grue Simonsen. "Encoding Word Order in Complex Embeddings," *International Conference on Learning Representations (ICLR)*, 2020.
- **Qiuchi Li***, Benyou Wang*, and Massimo Melucci. "CNM: An Interpretable Complex-Valued Network for Matching." *The North American Chapter of the Association for Computational Linguistics (NAACL)*, 2019. (*Equal Contribution) (**Best Explainable NLP Paper**)
- Chen Zhang, **Qiuchi Li**, and Dawei Song. "Syntax-Aware Aspect-Level Sentiment Classification with Proximity-Weighted Convolution Network," *International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR)*, 2019.
- **Qiuchi Li**, Jingfei Li, Peng Zhang, and Dawei Song. "Modeling Multi-Query Retrieval Tasks Using Density Matrix Transformation," *International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR)*, 2015.

AWARDS AND HONOURS

- **Best Explainable NLP Paper Award** of the 2019 Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL) *June 2019*
- The paper "**Quantum-inspired Multimodal Fusion for Video Sentiment Analysis**" has been reported by TechXplore at [this webpage](#)

- Proceedings co-chair of Italian Information Retrieval Workshop (IIR) *September 2019*
- Proceedings co-chair of ACM SIGIR International Conference on the Theory of Information Retrieval (ICTIR) *September 2018*
- Second Prize in the 15th “Challenge Cup” science and technology innovation competition for college students *April 2013*
- Outstanding Student Scholarship of Tsinghua University *November 2012*

SKILLS

- **Languages:** Mandarin/English
- **Toolbox/Software:** PyTorch, TensorFlow, Keras, CUDA, cuDNN, LATEX
- **Programming Languages:** Python, MATLAB, R, C/C++, Java, Verilog

EXTRA-CURRICULUM ACTIVITIES

- **GO:** Second-class athletes of China, Tsinghua University Go Team Member, Co-Champion of the 43rd London Open Go Tournament
- **Jianzi (Shuttlecock):** Finalist of the 8th National Traditional Sports Games in Beijing, Champion & Record Setter of Tsinghua University Freshmen Sports Meeting
- **Bridge:** 10th place in the Bridge Championship for High School Students, Beijing, China