

# Chen Qu

Last update on October 12, 2020

Center for Intelligent Information Retrieval  
College of Information and Computer Sciences  
University of Massachusetts Amherst

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## Education

University of Massachusetts Amherst

**Ph.D. in Computer Science**

Advisor: Prof. W. Bruce Croft, ACM Fellow

AMHERST, MA, US

Sep. 2018 – Jun. 2021 (expected)

University of Massachusetts Amherst

**M.S. in Computer Science (GPA: 3.917/4.0)**

Advisor: Prof. W. Bruce Croft, ACM Fellow

AMHERST, MA, US

Sep. 2017 – May 2020

Dalian University of Technology

**B.E. in Computer Science and Technology**

DALIAN, CHINA

Sep. 2013 – Jul. 2017

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## Research Experience

Center for Intelligent Information Retrieval, UMass Amherst

**M.S./Ph.D. Student and Research Assistant**

Advisor: Prof. W. Bruce Croft

- Working on conversational search, information retrieval, and natural language processing
- Analyzed and modeled user intent in information-seeking conversations
- Studied conversation history modeling approaches using BERT
- Introduced an open-retrieval conversational QA framework that features a learnable retriever

AMHERST, MA, US

Sep. 2017 – Present

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## Internship Experience

Google Research

**Research Intern (Natural Language Understanding)**

Mentors and managers: [Weize Kong](#), [Liu Yang](#), [Mingyang Zhang](#), and [Michael Bendersky](#)

- Worked on text content understanding under local privacy constraints
- Utilized distributed TPU and GPU infrastructures for language model pretraining
- Leveraged MapReduce infrastructures for large-scale data processing
- Produced a research paper (under submission)

MOUNTAIN VIEW, CA, US

May 2020 – Sep. 2020

Microsoft Research

**Research Intern (Information Retrieval)**

Mentors and managers: [Chenyan Xiong](#) and [Paul Bennett](#)

- Worked at the [Information and Data Sciences](#) group
- Studied conversational document ranking with Transformers
- Produced a SIGIR paper

REDMOND, WA, US

May 2019 – Aug. 2019

Alibaba Group

**Research Intern (Natural Language Processing)**

Mentors and managers: [Feng Ji](#), [Minghui Qiu](#), and [Haiqing Chen](#)

- Worked at the AliMe team on retrieval-based question answering
- Focused on reinforcement learning and transfer learning for data selection
- Produced a WSDM paper

HANGZHOU, CHINA

May 2018 – Aug. 2018

Tencent

**Software Engineer Intern (Backend)**

- Worked at the Mobile Internet Group
- Participated in the development of a large-scale web crawler
- Engaged in the implementation of a Content Management System

SHENZHEN, CHINA

Jul. 2016 – Aug. 2016

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## Technical Skills

**Programming:** proficient in Python and skillful in C++ and Java

**Systems:** Linux/Unix, Windows, MySQL

**Frameworks & Tools:** TensorFlow, PyTorch, Numpy, SciPy, Pandas, Scikit-learn, Keras, NLTK, etc.

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## Honors and Awards

Outstanding Synthesis Project Award. 2020.

Passed portfolio with distinction. 2020.

W. Bruce Croft Graduate Scholarship in Computer Science. 2019.

SIGIR Student Travel Grant: SIGIR 2020, CIKM 2019, CHIIR 2019, and SIGIR 2018.

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## Professional Services

**Program Committee Member:** ECIR 2021, CIKM 2020, ECIR 2020, DAPA@WSDM 2019, EARS@SIGIR 2019

**Conference Reviewer:** KDD 2019-2020, AAAI 2019, NAACL 2019, ICTIR 2018

**Invited Journal Reviewer:** ACM Transactions on Information Systems (TOIS)

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## Publications

1. Open-Retrieval Conversational Question Answering. **SIGIR 2020**. Full Paper.  
**Chen Qu**, Liu Yang, Cen Chen, Minghui Qiu, W. Bruce Croft and Mohit Iyyer.
  2. Contextual Re-Ranking with Behavior Aware Transformers. **SIGIR 2020**. Short Paper.  
**Chen Qu**, Chenyan Xiong, Yizhe Zhang, Corby Rosset, W. Bruce Croft and Paul Bennett.
  3. IART: Intent-aware Response Ranking with Transformers in Information-seeking Conversation Systems. **WWW 2020**. Short Paper.  
Liu Yang, Minghui Qiu, **Chen Qu**, Cen Chen, Jiafeng Guo, Yongfeng Zhang, W. Bruce Croft and Haiqing Chen.
  4. Attentive History Selection for Conversational Question Answering. **CIKM 2019**. Full Paper.  
**Chen Qu**, Liu Yang, Minghui Qiu, Yongfeng Zhang, Cen Chen, W. Bruce Croft and Mohit Iyyer.
  5. A Hybrid Retrieval-Generation Neural Conversation Model. **CIKM 2019**. Full Paper.  
Liu Yang, Junjie Hu, Minghui Qiu, **Chen Qu**, Jianfeng Gao, W. Bruce Croft, Xiaodong Liu, Yelong Shen and Jingjing Liu.
  6. BERT with History Answer Embedding for Conversational Question Answering. **SIGIR 2019**. Short Paper.  
**Chen Qu**, Liu Yang, Minghui Qiu, W. Bruce Croft, Yongfeng Zhang and Mohit Iyyer.
  7. User Intent Prediction in Information-seeking Conversations. **CHIIR 2019**. Full Paper.  
**Chen Qu**, Liu Yang, Bruce Croft, Yongfeng Zhang, Johanne R Trippas and Minghui Qiu.
  8. Answer Interaction in Non-factoid Question Answering Systems. **CHIIR 2019**. Short Paper.  
**Chen Qu**, Liu Yang, W. Bruce Croft, Falk Scholer and Yongfeng Zhang.
  9. Learning to Selectively Transfer: Reinforced Transfer Learning for Deep Text Matching. **WSDM 2019**. Full Paper.  
**Chen Qu**, Feng Ji, Minghui Qiu, Liu Yang, Zhiyu Min, Haiqing Chen, Jun Huang and W. Bruce Croft.
  10. Analyzing and Characterizing User Intent in Information-seeking Conversations. **SIGIR 2018**. Short Paper.  
**Chen Qu**, Liu Yang, W. Bruce Croft, Johanne R Trippas, Yongfeng Zhang, Minghui Qiu.
  11. Response Ranking with Deep Matching Networks and External Knowledge in Information-seeking Conversation Systems. **SIGIR 2018**. Full Paper.  
Liu Yang, Minghui Qiu, **Chen Qu**, Jiafeng Guo, Yongfeng Zhang, W. Bruce Croft, Jun Huang, Haiqing Chen.
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## Languages

English (*full professional proficiency*), Chinese (*mother tongue*).