

## Jianbin Qin

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### Personal Information

First Name: Jianbin  
Last Name: Qin

Gender: Male  
Nationality: Australia

### Education

**Ph.D.** Computer Science and Engineering, The University of New South Wales, Australia. *2009 - 2013.*

Thesis: Efficient String Similarity Search with an Edit Distance Threshold.  
Supervisor: Prof. Wei Wang, Co-Supervisor Prof. Xuemin Lin.

**B.E.** Computer Science and Engineering, Northeastern University, China. *2003 - 2007.*

### Professional Experience

*11/2017 - 11/2019: Postdoc Research Associate (Contract Signed).*

The Database Group at Edinburgh, University of Edinburgh, United Kingdom.

*04/2013 - 11/2017: Research Associate.*

Database Research Group, University Of New South Wales, Australia.

*02/2012 - 09/2012: Intern Software Engineer.*

Knowledge Graph Group, Google Inc. Australia.

*11/2011 - 02/2012: Intern Software Engineer.*

Bing Index Serve Group, Microsoft Inc. USA.

*01/2005 - 03/2009: Research and Development Engineer.*

Baidu Search Engine Development Group, Baidu Inc. Beijing, China.

### Teaching Experience

- 08/2017 - 11/2017: COMP6714 Information Retrieval and Search Engines*, Teaching Assistant, The University of New South Wales, Australia.
- 02/2017 - 07/2017: COMP9318 Data Warehousing and Data Mining*, Teaching Assistant, The University of New South Wales, Australia.
- 08/2016 - 11/2016: COMP6714 Information Retrieval and Search Engines*, Teaching Assistant, The University of New South Wales, Australia.
- 02/2011 - 07/2011: COMP1927 Introduction to Data structures and algorithms*, Tutorial Chair, The University of New South Wales, Australia.

### Professional Activities

#### Program Committee

- Program Committee Member: APWeb-WAIM Joint Conference on Web and Big Data, 2017.
- Program Committee Member: Australasian Database Conference (ADC), 2016.
- Program Committee Member: Australasian Database Conference (ADC), 2015.

### **Referee Service**

- The Very Large Database Journal.
- IEEE Transactions on Knowledge and Data Engineering (TKDE).
- World Wide Web Journal.
- Journal of Information Science (JIS).

### **External conference Reviewer**

- The Proceedings of the VLDB Endowment PVLDB (2015, 2016).
- International Conference on Data Engineering ICDE (2012, 2015).
- ACM International Conference on Information and Knowledge Management CIKM (2016).
- International Conference on Web Information System Engineering WISE (2014).
- International Conference on Database Systems for Advanced Applications DASFAA (2014).
- International Conference on Database and Expert Systems Applications DEXA (2014).
- International Conference on Web-Age Information Management WAIM (2012).

### **Leadership**

- 2016 Local Co-Chair for Australian Database Conference ADC.
- 2014 Local Co-Chair for The International Asia-Pacific Web Conference APWeb.

### **Students Supervised**

#### **Current**

1. Yaoshu Wang (Co Supervised PhD., University of New South Wales 2014 – present). Topic: Similarity Query Processing.
2. Zishuo Ding (Joint Supervised PhD, University of New South Wales 2016 – present). Topic: Entity Disambiguation.
3. Yukai Miao (Joint Supervised PhD., University of New South Wales 2017 – present). Topic: Knowledge Graph Construction.

#### **Graduated**

1. Xiaoyang Zhang (Co Supervised, Master, University of New South Wales 2011–2013). Topic: Hamming Similarity Search.
2. Chen Chen (Assisted in supervision, PhD. University of New South Wales 2012–2016). Topic: Process big data using approximation methods.
3. Xiaoling Zhou (Assisted in supervision, PhD. University of New South Wales 2012–2016). Topic: Index-based Query Processing Methods for Text and Spatial Databases.
4. Wei Song (Assisted in supervision, Master. University of New South Wales 2013–2016). Topic: Spatial RkNN Search.

### **Research Interests**

My research interests mainly focus on data management and query processing in database systems, including

1. similarity searches and its applications (near-duplicate detection, record linkage, etc.),
2. query autocompletion and instant search,
3. data cleaning and data integration, and
4. information extraction, knowledge graph and entity disambiguation etc.

## Research Grants

1. *2016 – 2019: Data to Decision CRC Research Grant*, “Domain Specific Knowledge Graph Construction and Querying”, Technique Leader (Investigator: Prof. Wei Wang), total amount:1,400,000 AUD.
2. *2013 – 2016: Australian Research Council Discovery Project*, “On Effective and Efficient Similarity Query Processing Methods that Improve Record Linkage in Real Application”, Research Associate, (Investigator: Prof. Wei Wang), 350,000 AUD.
3. *2013 – 2014: University of New South Wales Faculty Early Career Research Grants*, “Memory Adaptive String Similarity Query Processing.”, Main Investigator, 20,000 AUD.

## Research Projects

1. Efficient Similarity Query Processing (previously “Efficient Exact Similarity Join”), 2007 – present. <http://www.cse.unsw.edu.au/~weiw/project/simjoin.html>
2. Domain Specific Knowledge Graph Construction and Querying, 2016 – present.

## Publications

(\* Corresponding Author)

### Journal Articles

1. Chuan Xiao, Jianbin Qin\*, Pei Wang, Jie Zhang, Wei Wang, Xiaoyang Zhang, and Yoshiharu Ishikawa. Towards Local Similarity Search on Unstructured Text. Submitted to the VLDB Journal (**VLDBJ**). CCF Rank A. SCI Indexed.
2. Chuan Xiao, Jianbin Qin\*, Sheng Hu, Wei Wang, Yoshiharu Ishikawa, Koji Tsuda, and Kunihiko Sadakane. Efficient Query Autocompletion with Error Tolerance. Submitted to the VLDB Journal (**VLDBJ**). CCF Rank A. SCI Indexed.
3. Wei Song, Jianbin Qin\*, Muhammad Aamir Cheema and Wei Wang. Pre-computed Region Guardian Sets Based Reverse kNN Queries. Data Science and Engineering. (**DSE**) 2017.
4. Xiaoling Zhou, Jianbin Qin\*, Chuan Xiao, Wei Wang, Xuemin Lin, and Yoshiharu Ishikawa. BEVA: An Efficient Query Processing Algorithm for Error Tolerant Autocompletion. ACM Transactions on Database Systems (**TODS**), vol. 41(1), pp. 5:1-5:44, 2016 (invited as poster at SIGMOD 2016). CCF Rank A. SCI Indexed.
5. Jianbin Qin, Wei Wang, Chuan Xiao, Yifei Lu, Xuemin Lin, and Haixun Wang. Asymmetric Signature Schemes for Efficient Exact Edit Similarity Query Processing. ACM Transactions on Database Systems (**TODS**), vol. 38(3), pp. 16:1-16:44, 2013 (invited paper). CCF Rank A. SCI Indexed.
6. Wei Wang, Jianbin Qin, Chuan Xiao, Xuemin Lin, and Heng Tao Shen. VChunkJoin: An Efficient Algorithm for Edit Similarity Joins. IEEE Transactions on Knowledge and Data Engineering (**TKDE**), vol. 25(8), pp. 1916-1929, 2013. SCI Indexed. CCF Rank A. SCI Indexed.

### Conference Papers

1. Jianbin Qin, Yaoshu Wang, Chuan Xiao, Wei Wang, Xuemin Lin, and Yoshiharu Ishikawa. GPH: Similarity Search in Hamming Space. Under Review for the 34th IEEE International Conference on Data Engineering (**ICDE**), 2018. CCF Rank A.
2. Jianbin Qin and Chuan Xiao. Set Similarity Query Processing. The 18th International Conference on Web Information System Engineering (**WISE**), 2017 (tutorial). CCF Rank C.
3. Yaoshu Wang, Jianbin Qin and Wei Wang. Efficient Approximate Entity Matching Using Jaro-Winkler Distance. The 18th International Conference on Web Information System Engineering (**WISE**), 2017. CCF Rank C.

4. Yukai Miao, Jianbin Qin\*, Wei Wang. Graph Summarization for Entity Relatedness Visualization. The 40th International ACM SIGIR Conference on Research and Development in Information Retrieval (**SIGIR**), 2017. CCF Rank A.
5. Wei Song, Jianbin Qin, Muhammad Aamir Cheema and Wei Wang. Pre-computed : Region Guardian Sets Based Reverse kNN Queries. International Conference on Database Systems for Advanced Applications (**DASFAA**), 2016. CCF Rank B.
6. Pei Wang, Chuan Xiao, Jianbin Qin, Wei Wang, Xiaoyang Zhang, and Yoshiharu Ishikawa. Local Similarity Search for Unstructured Text. ACM SIGMOD Conference (**SIGMOD**), pp. 1991-2005, 2016 (student travel award). CCF Rank A.
7. Chen Chen, Jianbin Qin and Wei Wang. Gapped Set Intersection Size Estimation. International Conference on Information and Knowledge Management (**CIKM**), 2015. CCF Rank A.
8. Yifang Sun, Wei Wang, Jianbin Qin, Ying Zhang and Xuemin Lin. SRS: Solving c-Approximate Nearest Neighbor Queries in High Dimensional Euclidean Space with a Tiny Index. Proceedings of the VLDB Endowment (**PVLDB**), 2015. CCF Rank A.
9. Yifang Sun, Jianbin Qin and Wei Wang. Near Duplicate Text Detection Using Frequency Biased Signatures. Web Information Systems Engineering (**WISE**), 2013. CCF Rank C.
10. Xiaoyang Zhang, Jianbin Qin\*, Wei Wang, Yifang Sun and Jiaheng Lu. Hmsearch: An Efficient Hamming Distance Query Processing Algorithm. Scientific and Statistical Database Management (**SSDBM**), 2013. CCF Rank C.
11. Chuan Xiao, Jianbin Qin, Wei Wang, Yoshiharu Ishikawa, Koji Tsuda, and Kunihiko Sadakane. Efficient Error-tolerant Query Autocompletion. Proceedings of the VLDB Endowment (**PVLDB**), vol. 6(6), pp. 373-384, 2013 (presented at VLDB 2013). CCF Rank A.
12. Jianbin Qin, Xiaoling Zhou, Wei Wang, and Chuan Xiao. Trie-based Similarity Search and Join. Scalable String Similarity Search/Join (workshop held in conjunction with **EDBT**), pp. 392-396, 2013.
13. Jianbin Qin, Chuan Xiao, Wei Wang, and Xuemin Lin. A Space-Efficient Indexing Algorithm for Boolean Query Processing. The 13th International Conference on Web Information System Engineering (**WISE**), LNCS vol. 7651, pp. 638-644, 2012. CCF Rank C.
14. Jianbin Qin, Wei Wang, Yifei Lu, Chuan Xiao, and Xuemin Lin. Efficient Exact Edit Similarity Query Processing with the Asymmetric Signature Scheme. ACM SIGMOD Conference (**SIGMOD**), pp. 1033-1044, 2011 (best paper nominee), (2011 CiSRA Best Research Paper Award). CCF Rank A.

### Invited Talks

1. Jianbin Qin, Efficient Similarity Query Processing, Northeastern University of China, 2017.
2. Jianbin Qin, Knowledge Graph Construction and Its Application in Social Network, University of Technology of Sydney, 2017.
3. Jianbin Qin, Processing of String Similarity Query, University of New South Wales, Workshop for Big Data Processing, 2015.

### Presentations

1. Jianbin Qin and Chuan Xiao. Set Similarity Query Processing. WISE 2017 (tutorial). WISE 2017.
2. Yukai Miao, Jianbin Qin\*, Wei Wang. Graph Summarization for Entity Relatedness Visualization. SIGIR 2017.
3. Chuan Xiao, Jianbin Qin, Wei Wang, Yoshiharu Ishikawa, Koji Tsuda, and Kunihiko Sadakane. Efficient Error-tolerant Query Autocompletion. PVLDB 2013.
4. Jianbin Qin, Chuan Xiao, Wei Wang, and Xuemin Lin. A Space-Efficient Indexing Algorithm for Boolean Query Processing. WISE 2012.

5. Jianbin Qin, Wei Wang, Yifei Lu, Chuan Xiao, and Xuemin Lin. Efficient Exact Edit Similarity Query Processing with the Asymmetric Signature Scheme. SIGMOD 2011.

### **Programming Skills**

Proficient: C, C++, SQL, Python

Familiar: Java, Bash.

### **Honors and Prizes**

1. 2016 DASFAA Best Student Paper Award.
2. 2012 UNSW Faculty Early Career Research Grant Award.
3. 2012 CiSRA Best Research Paper Award.
4. 2008 Baidu Best Employee Award.
5. 2005 ACM/ICPC Asia Regional (Bronze Medal).
6. 2004 Undergraduate Excellence Award, Northeast University, China.
7. 2003 Undergraduate Excellence Award, Northeast University, China.