

## WORK EXPERIENCE

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**2018–present**      Data Scientist at **Microsoft**

## EDUCATION

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**2012–2018**      University of Maryland, College Park  
Advisor: Dr. Douglas W. Oard  
**Ph.D. in Information Studies**  
Thesis: Towards Knowledge Base Population from Conversational Sources

**2009–2012**      Peking University  
Advisor: Dr. Zhi-hong Deng  
**M.S. in Electronic Engineering and Computer Science**

**2005–2009**      Peking University  
**B.S. in Electronic Engineering and Computer Science**

## PEER-REVIEWED CONFERENCE PAPERS

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### 1. Entity Linking to One Thousand Knowledge Bases

**Ning Gao**, and Silviu Cucerzan

*Proceedings of the 39th European Conference on Information Retrieval (ECIR 2017).*

Acceptance rate 27%

### 2. Reducing Reliance on Relevance Judgments for System Comparison by Using Expectation-Maximization

**Ning Gao**, William Webber, and Douglas W. Oard

*Proceedings of the 36th European Conference on Information Retrieval (ECIR 2014): pp. 1-12.*

Acceptance rate 23%.

### 3. Active Entity Recognition in Low Resource Settings

**Ning Gao**, Nikos Karampatziakis, Rahul Potharaju, and Silviu Cucerzan

*Proceedings of the 28th ACM International Conference on Information and Knowledge Management (CIKM 2019): pp. 2261-2264.*

Acceptance rate 21%.

### 4. Leveraging Side Information for Speaker Identification with the Enron Conversational Telephone Speech Collection

**Ning Gao**, Gregory Sell, Douglas W. Oard, and Mark Dredze

*IEEE Automatic Speech Recognition and Understanding Workshop (ASRU 2017).*

Acceptance rate 45%.

### 5. Support for Interactive Identification of Mentioned Entities in Conversational Speech

**Ning Gao**, Douglas W. Oard, and Mark Dredze

*Proceedings of the 40th International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2017).*

Acceptance rate 30%.

**6. Pearson Rank: A Head-Weighted Gap-Sensitive Score-Based Correlation Coefficient**

**Ning Gao**, Mossaab Bagdouri, and Douglas W. Oard

*Proceedings of the 39th International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2016)*: pp. 941-944.

Acceptance rate 31%.

**7. A Head-Weighted Gap-Sensitive Correlation Coefficient**

**Ning Gao**, and Douglas W. Oard

*Proceedings of the 38th international ACM SIGIR conference on Research & development in information retrieval (SIGIR 2015)*: pp. 799-802.

Acceptance rate 31%.

**8. Enhancing Scientific Collaboration Through Knowledge Base Population and Linking for Meetings**

**Ning Gao**, Mark Dredze, and Douglas Oard

*Hawaii International Conference on System Sciences (HICSS 2017)*.

**9. Knowledge Base Population for Organization Mentions in Email**

**Ning Gao**, Mark Dredze, and Douglas W. Oard

*5th Workshop on Automated Knowledge Base Construction (AKBC 2016)*, 5 pages.

**10. HLTCOE participation in TAC KBP 2015: Cold start and TEDL**

Tim Finin, Dawn Lawrie, Paul McNamee, James Mayfield, Douglas Oard, Nanyun Peng, **Ning Gao**, Yiu-Chang Lin, Josh MacLin, and Tim Dowd

*Proceedings of the Eighth Text Analysis Conference (TAC 2015)*, 14 pages.

**11. A Test Collection for Email Entity Linking**

**Ning Gao**, Douglas W. Oard, and Mark Dredze

*NIPS Workshop on Automated Knowledge Base Construction (AKBC 2014)*, 5 pages.

**12. Guess What I Want: Inferring the Semantics of Keyword Queries Using Evidence Theory**

Jia-Jian Jiang, Zhi-Hong Deng, **Ning Gao**, and Sheng-Long Lv

*Asia-Pacific Web Conference (APWeb 2012)*: pp. 388-398.

**13. Report on the SIGIR Workshop on "Entertain Me": supporting complex search tasks**

Nicholas J. Belkin, Charles L. A. Clarke, **Ning Gao**, Jaap Kamps, and Jussi Karlgren

*ACM SIGIR Forum (2011)*: pp. 51-59.

**14. Fully Utilize Feedbacks: Language Model Based Relevance Feedback in Information Retrieval**

Sheng-Long Lv, Zhi-Hong Deng, Hang Yu, **Ning Gao**, and Jia-Jian Jiang

*Advanced Data Mining and Applications (ADMA 2011)*: pp. 395-405.

**15. ListOPT: Learning to Optimize for XML Ranking**

**Ning Gao**, Zhi-Hong Deng, Hang Yu, and Jia-Jian Jiang

*Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD 2011)*: pp. 482-492.

Acceptance Rate 27%.

**16. Adaptive Top-k Algorithm in SLCA-Based XML Keyword Search**

Hang Yu, Zhi-Hong Deng, Yong-Qing Xiang, and **Ning Gao**

*Asia-Pacific Web Conference (APWeb 2010)*: pp. 364-366.

**17. A New Indexing Strategy for XML Keyword Search**

Yong-Qing Xiang, Zhi-Hong Deng, Hang Yu, Sijing Wang, and **Ning Gao**

**18. Combining Strategies for XML Retrieval**

**Ning Gao**, Zhi-Hong Deng, Jia-Jian Jiang, Sheng-Long Lv, and Hang Yu  
*Initiative for the Evaluation of XML Retrieval (INEX 2010)*: pp. 319-331.  
**(INEX 2010 Best Student Paper Award)**

**19. A Learning-to-Rank Method for XML Keyword Search**

**Ning Gao**, Zhi-Hong Deng, Yong-Qing Xiang, and Hang Yu  
*Initiative for the Evaluation of XML Retrieval (INEX 2009)*: pp. 81-87.

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**PEER-REVIEWED JOURNAL PAPERS**

**20. Person Entity Linking in Email with NIL Detection**

**Ning Gao**, Mark Dredze, and Douglas W. Oard  
*Journal of the Association for Information Science and Technology* (2017).

**21. XDist: An Effective XML Keyword Search System With Re-ranking Model Based on Keyword Distribution**

**Ning Gao**, ZhiHong Deng, and ShengLong Lv  
*Science China Information Sciences* 57.5 (2014): pp. 1-17.

**22. LAF: A New XML Encoding and Indexing Strategy for Keyword-based XML Search**

Zhi-Hong Deng, Yong-Qing Xiang, and **Ning Gao**  
*Concurrency and Computation: Practice and Experience* 25(11) (2013): pp. 1604-1621.

**23. Efficient Top-k Algorithm for eXtensible Markup Language Keyword Search**

Hang Yu, Zhi-Hong Deng, and **Ning Gao**  
*IET Software* 6(4) (2012): pp. 342-349.

**24. MAXLCA: A New Query Semantic Model for XML Keyword Search**

**Ning Gao**, Zhi-Hong Deng, Jia-Jian Jiang, and Hang Yu  
*Journal of Web Engineering* 11(2) (2012): pp. 131-145.

**25. Mop: An Efficient Algorithm for Mining Frequent Pattern with Subtree Traversing**

Zhi-Hong Deng, **Ning Gao**, and Xiaoran Xu  
*Fundamenta Informaticae*. 111(4)(2011): pp. 373-390.

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**AWARDS AND SCHOLARSHIPS**

|                    |   |
|--------------------|---|
| <b>2016 ~ 2017</b> | <b>iFellows Doctoral Fellowship</b><br>The Andrew W. Mellon Foundation.   |
| <b>2015</b>        | <b>SIGIR Travel Grant</b><br>38th international ACM SIGIR conference on Research & development in information retrieval.          |
| <b>2014</b>        | <b>Jacob K. Goldhaber Travel Grant</b><br>Office of the President and the Graduate School, University of Maryland.                |
| <b>2014</b>        | <b>International Conference Student Support Award</b><br>Office of the President and the Graduate School, University of Maryland. |

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|--------------------|---|
| <b>2012</b>        | <b>Best Poster Award Runner-up</b><br>iSchool Doctoral Research Day, Information Studies, University of Maryland. |
| <b>2011</b>        | <b>Founder Scholarship</b><br>Peking University Founder Group Co.,Ltd (For best student in AI)                    |
| <b>2010</b>        | <b>Best Student Paper Award</b><br>Workshop of INitiative for the Evaluation of XML Retrieval (INEX)              |
| <b>2009 ~ 2012</b> | <b>College Scholarship</b><br>School of Electronic Engineering and Computer Science, Peking University            |

## PROFESSIONAL MEMBERSHIP

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- Program Committee Member of **iConference 2016**
- Program Committee Member of **iConference 2015**
- Co-organizer of **SIGIR 2011 Workshop on “Entertain Me”**  
*Other Co-organizers:*
  - Nick Belkin, Rutgers, USA
  - Charlie Clarke, Waterloo, Canada
  - Jaap Kamps, University of Amsterdam, The Netherlands
  - Jussi Karlgren, SICS Stockholm, Sweden
- Program Committee Member of **Initiative for the Evaluation of XML retrieval (INEX) 2010**

## INTERNSHIP

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|-----------------------|---|
| <b>2015 May ~ Aug</b> | Microsoft Cloud and Information Service Lab, Redmond<br>Advisor: Nikos Karampatziakis |
| <b>2014 Jun ~ Aug</b> | Microsoft Research, Redmond<br>Advisor: Silviu-Petru Cucerzan                         |

## SKILLS

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- **Language:** English (Fluent), Chinese-Mandarin (Native)