

# Xiaoman Pan

Contact

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## *Research Interests*

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My research interests lie in Natural Language Processing, especially Information Extraction, Entity Linking, Entity Typing and Knowledge Base Population.

## *Education*

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**Rensselaer Polytechnic Institute (RPI)**

Troy, NY

*Ph.D., Computer Science*

*Aug. 2015 - Present*

Advisor: Prof. Heng Ji

**Rensselaer Polytechnic Institute (RPI)**

Troy, NY

*B.S., Computer Science*

*Dec. 2014*

*Minor in Psychology*

*GPA 3.93/4.0*

## *Publications*

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2017

[13] **Xiaoman Pan**, Boliang Zhang, Jonathan May, Joel Nothman, Kevin Knight and Heng Ji. Cross-lingual Name Tagging and Linking for 282 Languages. Proc. the 55th Annual Meeting of the Association for Computational Linguistics (ACL2017).

[12] Lifu Huang, Jonathan May, **Xiaoman Pan**, Heng Ji, Xiang Ren, Jiawei Han, Lin Zhao and James Hendler. Liberal Entity Extraction: Rapid Construction of Fine-Grained Entity Typing Systems. Big Data, Mar 2017, 5(1): 19-31.

2016

[11] Dongxu Zhang, Boliang Zhang, **Xiaoman Pan**, Xiaocheng Feng, Heng Ji, Weiran Xu. 2016. Bitext Name Tagging for Cross-lingual Entity Annotation Projection. Proc. the 26th International Conference on Computational Linguistics (COLING 2016).

[10] Tao Ge, Qing Dou, **Xiaoman Pan**, Heng Ji, Lei Cui, Baobao Chang, Zhifang Sui, Ming Zhou. 2016. Aligning Coordinated Text Streams through Burst Information Network Construction and Decipherment. arXiv preprint arXiv:1609.08237.

[9] Ellie Pavlick, Heng Ji, **Xiaoman Pan**, Chris Callison-Burch. 2016. The Gun Violence Database: A new task and data set for NLP. Proc. Conference on Empirical Methods in Natural Language Processing (EMNLP 2016).

[8] Ying Lin, **Xiaoman Pan**, Aliya Deri, Heng Ji, Kevin Knight. 2016. Leveraging Entity Linking and Related Language Projection to Improve Name Transliteration. Proc. ACL2016 Workshop on Named Entities.

[7] Di Lu, **Xiaoman Pan**, Nima Pourdamghani, Shih-Fu Chang, Heng Ji, Kevin Knight. 2016. A Multi-media Approach to Cross-lingual Entity Knowledge Transfer. Proc. the 54th Annual Meeting of the Association for Computational Linguistics (ACL 2016).

[6] Lifu Huang, Jonathan May, **Xiaoman Pan**, Heng Ji. 2016. Building a Fine-Grained Entity Typing System Overnight for a New X (X= Language, Domain, Genre). arXiv preprint arXiv:1603.03112.

- [5] Chuan Wang, Sameer S Pradhan, **Xiaoman Pan**, Heng Ji, Nianwen Xue. 2016. CAMR at SemEval-2016 Task 8: An Extended Transition-based AMR Parser. Proc. NAACL-HLT 2016 Workshop on Semantic Evaluation (SemEval-2016).
- [4] Boliang Zhang, **Xiaoman Pan**, Tianlu Wang, Ashish Vaswani, Heng Ji, Kevin Knight, Daniel Marcu. 2016. Name Tagging for Low-resource Incident Languages based on Expectation-driven Learning. Proc. the 2016 Conference of the North American Chapter of the Association for Computational Linguistics Human Language Technologies (NAACL-HLT 2016).

2015

- [3] Boliang Zhang, Hongzhao Huang, **Xiaoman Pan**, Sujian Li, Chin-Yew Lin, Heng Ji, Kevin Knight, Zhen Wen, Yizhou Sun, Jiawei Han, Bulent Yener. 2015. Context-aware Entity Morph Decoding. Proc. the 53rd Annual Meeting of the Association for Computational Linguistics (ACL 2015).
- [2] **Xiaoman Pan**, Taylor Cassidy, Ulf Hermjakob, Heng Ji, Kevin Knight. 2015. Entity Linking with Abstract Meaning Representation. Proc. the 2015 Conference of the North American Chapter of the Association for Computational Linguistics Human Language Technologies (NAACL HLT 2015).

2014

- [1] Boliang Zhang, Hongzhao Huang, **Xiaoman Pan**, Heng Ji, Kevin Knight, Zhen Wen, Yizhou Sun, Jiawei Han, Bulent Yener. 2014. Be Appropriate and Funny: Automatic Entity Morph Encoding. Proc. the 52nd Annual Meeting of the Association for Computational Linguistics (ACL 2014).

### *System Description*

Pavlos Papadopoulos, Ruchir Travadi, Colin Vaz, Nikolaos Malandrakis, Ulf Hermjakob, Nima Pourdamghani, Michael Pust, Boliang Zhang, Xiaoman Pan, Di Lu, Ying Lin, Ondrej Glembek, Murali Karthick B, Martin Karafiat, Lukas Burget, Mark Hasegawa-Johnson, Heng Ji, Jonathan May, Kevin Knight and Shrikanth Narayanan. 2017. Team ELISA System for DARPA LORELEI Speech Evaluation 2016. Proc. Interspeech2017.

Ulf Hermjakob, Qiang Li, Jonathan May, Sebastian Mielke, Nima Pourdamghani, Michael Pust, Xing Shi, Kevin Knight, Daniel Marcu, Nikolaos Malandrakis, Anil Ramakrishna, Victor Martinez, Elisabeth Staruk, Tanner Sorensen, Dogan Can, Shrikanth Narayanan, Tomer Levinboim, Kenton Murray, David Chiang, Boliang Zhang, Xiaoman Pan, Di Lu, Lifu Huang, Xiaocheng Feng, Heng Ji. 2016. ELISA System Description for LoReHLT 2016. Proc. NIST LoReHLT 2016 Workshop.

Dian Yu, Xiaoman Pan, Boliang Zhang, Lifu Huang, Di Lu, Spencer Whitehead, Heng Ji. 2016. RPI BLENDER TAC-KBP2016 System Description. Proc. Text Analysis Conference (TAC 2016).

Yu Hong, Di Lu, Dian Yu, Xiaoman Pan, Xiaobin Wang, Yadong Chen, Heng Ji. 2015. RPI BLENDER TAC-KBP2015 System Description. Proc. Text Analysis Conference (TAC 2015).

Yu Hong, Xiaobin Wang, Yadong Chen, Jian Wang, Tongtao Zhang, Jin Zheng, Dian Yu, Qi Li, Han Wang, Xiaoman Pan, Heng Ji. 2014. RPI-Soochow KBP2014 System Description. Proc. Text Analysis Conference (TAC 2014).

### *Research Experience*

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#### **Blender Lab**

*Research Assistant*

RPI

*Aug. 2013 - Present*

**Advisor:** Professor Heng Ji

**Project:** Unsupervised Entity Discovery and Linking (EDL) System

- Unsupervised EDL system based on rich semantic knowledge
- Reach above 94% linking accuracy
- Rank top 1 in 2015 NIST Text Analysis Conference Knowledge Base Population Entity Linking Diagnostic Tasks

**Project:** EL with Abstract Meaning Representation (AMR)

- Exploit AMR annotations, link AMR named entities to the corresponding Wikipedia titles, and extract Knowledge Base properties for AMR named entities

**Project:** Low Resource Languages Named Entity Recognition (NER)

- Universal NER system for low resource languages

## *Work Experience*

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### **Facebook Research - Applied Machine Learning**

1 Hacker Way, Menlo Park, CA

*Research Internship*

*Feb. 2017 - May 2017*

**Mentor:** Dr. Yang Liu

Entity Linking on social media.

### **Bosch Research and Technology Center**

4005 Miranda Ave #200, Palo Alto, CA

*Research Internship*

*May 2015 - Jul. 2015*

**Mentor:** Dr. Lin Zhao

Unsupervised concept typing on specific domain.

## *Professional Skills*

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Programming Languages: Python, C/C++, Java, SQL

Operating Systems: OS X, Linux, Windows

## *Awards & Honors*

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Marsh, Prince and Wait Research Fellowship . . . . . 2014  
 Dean's List . . . . . RPI