

# Rui Wang

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## Experience

Tenure-track Researcher, Advanced Translation Technology Laboratory, NICT, Kyoto, Japan, 2019.

Fixed-term Researcher, Advanced Translation Technology Laboratory, NICT, Kyoto, Japan, 2016-2018.

Ph.D. in Computer Science (summa cum laude), Shanghai Jiao Tong University, working with Bao-Liang Lu and Hai Zhao, Shanghai, China, 2012-2016.

— Joint Ph.D., CNRS-University Lyon1, working with Sabine Ploux, Lyon, France, 2014.

— Internship Research Fellow, NICT, working with Masao Utiyama, Isao Goto, Andrew Finch, and Eiichiro Sumita, Kyoto, Japan, 2013

Master in Computer Science, University of Chinese Academy of Sciences, Beijing & Urumqi, China, 2009-2012.

Bachelor in Computer Science, Harbin Institute of Technology, Harbin, China, 2005-2009.

## Academic Services

Area co-chair of CCL-2018.

Organization co-chair of PACLIC-29 and YCCL-2012.

PC member/Reviewer of ACL, EMNLP, NAACL, IJCNLP, AACL, and IWSLT et al.

Reviewer of IEEE/ACM TASLP and TALLIP, Computer Speech and Language, Language Resources and Evaluation, and Neural Processing Letters et al.

## Collaborating and Supervising

Haipeng Sun, Ph.D. candidate of Harbin Institute of Technology, co-supervised with Masao Utiyama, NICT, 2018.

Shu Jiang, Ph.D. candidate of Shanghai Jiao Tong University, co-supervised with Masao Utiyama, NICT, 2018.

Mingming Yang, Ph.D. candidate of Harbin Institute of Technology, co-supervised with Masao Utiyama, NICT, 2018.

Zhisong Zhang, Master candidate of Shanghai Jiao Tong University, co-supervised with Masao Utiyama, NICT, 2017.

Kehai Chen, Ph.D. candidate of Harbin Institute of Technology, co-supervised with Masao Utiyama, NICT, 2017.

## Selected Publications

### Shared Tasks

WMT-2018 (with Benjamin Marie): 1st places in four tasks (English<->Estonian and English<->Finnish) and tied 1st in other three tasks (Chinese->English and English<->Turkish).

WAT-2018 (with Chenchen Ding): 1st places in Myanmar (Burmese) <- English by BLEU.

CWMT-2018 (with Benjamin Marie): Tied 1st places in English<->Chinese by significance test.

### Journal Articles

*Sentence Seletion and Weighting for Neural Machine Translation Domain Adaptation.*

**Rui Wang**, Masao Utiyama, Andrew Finch, Lema Liu, Kehai Chen, and Eiichro Sumita.  
IEEE/ACM Transactions on Audio, Speech, and Language Processing (TASLP), accepted, 2018.

*Graph-based BilingualWord Embedding for Statistical Machine Translation.*

**Rui Wang**, Hai Zhao\*, Bao-Liang Lu, Sabine Ploux\*, Masao Utiyama, and Eiichro Sumita.  
ACM Transactions on Asian and Low-Resource Language Information Processing (TALLIP), accepted, 2018.

*A Neural Approach to Source Dependency-Based Context Model for Statistical Machine Translation.*

Kehai Chen, Tiejun Zhao, Muyun Yang, Lema Liu\*, Akihiro Tamura, **Rui Wang**, Masao Utiyama, and Eiichro Sumita.  
IEEE/ACM Transactions on Audio, Speech, and Language Processing (TASLP), Volume 26, Issue 2, 2017.

*Converting Continuous-Space Language Models into N-gram Language Models with Efficient Bilingual Pruning for Statistical Machine Translation.*

**Rui Wang**, Masao Utiyama\*, Isao Goto, Eiichro Sumita, Hai Zhao\*, and Bao-Liang Lu.  
ACM Transactions on Asian and Low-Resource Language Information Processing (TALLIP), Volume 15, Issue 3, 2016.

*Bilingual Continuous-Space Language Model Growing for Statistical Machine Translation.*

**Rui Wang**, Hai Zhao\*, Bao-Liang Lu, Masao Utiyama, and Eiichro Sumita.  
IEEE/ACM Transactions on Audio, Speech, and Language Processing (TASLP), Volume:23, Issue:7, 2015.

### Conference Proceedings

*A Survey of Domain Adaptation for Neural Machine Translation.*

Chenhui Chu and **Rui Wang**  
The 27th International Conference on Computational Linguistics (COLING-2018), Santa Fe, USA.

*Exploring Recombination for Efficient Decoding of Neural Machine Translation.*

Zhisong Zhang, **Rui Wang**\*, Masao Utiyama, Eiichiro Sumita, and Hai Zhao\*  
2018 Conference on Empirical Methods in Natural Language Processing (EMNLP-2018), Brussels, Belgium.

*Dynamic Sentence Sampling for Efficient Training of Neural Machine Translation.*

**Rui Wang**, Masao Utiyama, and Eiichiro Sumita.  
The 56th Annual Meeting of the Association for Computational Linguistics (ACL-2018), Melbourne, Australia.

*Syntax-Directed Attention for Neural Machine Translation*

Kehai Chen, **Rui Wang**<sup>\*</sup>, Masao Utiyama, Eiichiro Sumita, and Tiejun Zhao.

The Thirty-Second AAAI Conference on Artificial Intelligence (AAAI-2018), New Orleans, USA.

*Context-Aware Smoothing for Neural Machine Translation.*

Kehai Chen, **Rui Wang**<sup>\*</sup>, Masao Utiyama, Eiichiro Sumita, and Tiejun Zhao.

The 8th International Joint Conference on Natural Language Processing (IJCNLP-2017), Taipei.

*Instance Weighting for Neural Machine Translation Domain Adaptation.*

**Rui Wang**, Masao Utiyama, Lemao Liu, Kehai Chen, and Eiichiro Sumita.

Conference on Empirical Methods in Natural Language Processing (EMNLP-2017), Copenhagen, Denmark.

*Neural Machine Translation with Source Dependency Representation.*

Kehai Chen, **Rui Wang**<sup>\*</sup>, Masao Utiyama, Lemao Liu, Akihiro Tamura, Eiichiro Sumita, and Tiejun Zhao.

Conference on Empirical Methods in Natural Language Processing (EMNLP-2017), Copenhagen, Denmark.

*Sentence Embedding for Neural Machine Translation Domain Adaptation.*

**Rui Wang**, Andrew Finch, Masao Utiyama, and Eiichiro Sumita.

The 55th annual meeting of the Association for Computational Linguistics (ACL-2017), Vancouver, Canada.

*Connecting Phrase based Statistical Machine Translation Adaptation.*

**Rui Wang**, Hai Zhao<sup>\*</sup>, Bao-Liang Lu, Masao Utiyama<sup>\*</sup>, and Eiichiro Sumita.

The 26th International Conference on Computational Linguistics (COLING-2016), Osaka, Japan

*A Bilingual Graph-based Semantic Model for Statistical Machine Translation.*

**Rui Wang**, Hai Zhao<sup>\*</sup>, Sabine Ploux<sup>\*</sup>, Bao-Liang Lu, and Masao Utiyama.

25th International Joint Conference on Artificial Intelligence (IJCAI-16), New York, USA.

*Neural Network Based Bilingual Language Model Growing for Statistical Machine Translation.*

**Rui Wang**, Hai Zhao<sup>\*</sup>, Bao-Liang Lu, Masao Utiyama, and Eiichiro Sumita.

Proceedings of the 2014 Conference on Empirical Methods in Natural Language Processing (EMNLP-2014), Doha, Qatar.

*Converting Continuous-Space Language Models into N-gram Language Models for Statistical Machine Translation.*

**Rui Wang**, Masao Utiyama, Isao Goto, Eiichiro Sumita, Hai Zhao, and Bao-Liang Lu.

Proceedings of the 2013 Conference on Empirical Methods in Natural Language Processing (EMNLP-2013), Seattle, USA.

*Patent**Multi-domain Neural Machine Translation.*

Japanese Patent, submitted.

**Rui Wang** and Masao Utiyama.