Rui Wang

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Experience

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

Postdoctoral Researcher, Advanced Translation Technology Laboratory, NICT, Kyoto, Japan, 2016-2019.

Ph.D. in Computer Science, 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, working with Xiao li and Xi Zhou, Beijing & Urumqi, China, 2009-2012.

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

Academic Services

Area co-chair of CCL-2019 and CCL-2018.

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

PC member/Reviewer of ACL, EMNLP, NAACL, AAAI, IJCAI, etc

Reviewer of IEEE/ACM TASLP, TALLIP, Computer Speech and Language, etc.

Hosting and Supervising

2020 @NICT: Sufeng Duan (Ph.D. student of SJTU) and Yingyao Wang (Ph.D. student of HIT).

2019 @NICT: Zhuosheng Zhang (master student of SJTU), Zuchao Li (Ph.D. student of SJTU), Chaoqun Duan (Ph.D. student of HIT), and Fengshun Xiao (master student of SJTU).

2018 @NICT: Haipeng Sun (Ph.D. student of HIT), Shu Jiang (Ph.D. student of SJTU), and Mingming Yang (Ph.D. student of HIT/Soochow University).

2017 @NICT: Kehai Chen (Ph.D. of HIT->researcher of NICT) and Zhisong Zhang (master of SJTU->CMU).

Grants and Fundings

2019-2021: PI of NICT tenure-track startup fund: "Toward Intelligent MT".

2019-2022 (19K20354): PI of JSPS grant-in-aid for early-career scientists (national fund of Japan): "Unsupervised NMT in Universal Scenarios".

Selected Publications

Shared Tasks

CONLL-2019 (with Zuchao Li): 1st in the DM sub-task and the 2nd overall.

WMT-2019 (with Haipeng, Benjamin, and Kehai): 1st in the only unsupervised MT task (German-Czech) by BLEU and human evaluation

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

Neural Machine Translation with Target-Attention Model
Mingming Yang, Min Zhang, Kehai Chen, **Rui Wang**, and Tiejun Zhao.
IEICE Transactions on Information and Systems, Vol.E103-D, No.03, 2020.

Neural Machine Translation with Sentence-level Topic Context
Kehai Chen, **Rui Wang**# (as the supervisor), Masao Utiyama, Eiichro Sumita, and Tiejun Zhao.
IEEE/ACM Transactions on Audio, Speech, and Language Processing (TASLP), Volume 27 Issue 12, 2019.

Sentence Selection and Weighting for Neural Machine Translation Domain Adaptation.
Rui Wang, Masao Utiyama, Andrew Finch, Lemao Liu, Kehai Chen, and Eiichro Sumita.
IEEE/ACM Transactions on Audio, Speech, and Language Processing (TASLP), Volume: 26, Issue: 10, 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, Lemao 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

Data-dependent Gaussian Prior Objective for Language Generation
Zuchao Li, **Rui Wang***, Kehai Chen, Masao Utiyama, Eiichiro Sumita, Zhuosheng Zhang, and Hai Zhao*
International Conference on Learning Representations (ICLR-2020), Addis Ababa, Ethiopia
Note: this is a full-score paper and a long-time talk presentation

Neural Machine Translation with Universal Visual Representation
Zhuosheng Zhang, Kehai Chen, **Rui Wang***, Masao Utiyama, Eiichiro Sumita, Zuchao Li, and Hai Zhao*
International Conference on Learning Representations (ICLR-2020), Addis Ababa, Ethiopia

Explicit Sentence Compression for Neural Machine Translation
Zuchao Li, **Rui Wang***, Kehai Chen, Masao Utiyama, Eiichiro Sumita, Zhuosheng Zhang, and Hai Zhao*
Thirty-Fourth AAAI Conference on Artificial Intelligence (AAAI-2020), New York, USA

SG-Net: Syntax-Guided Machine Reading Comprehension
Zhuosheng Zhang, Yuwei Wu, Junru Zhou, Sufeng Duan, Hai Zhao*, and **Rui Wang***
Thirty-Fourth AAAI Conference on Artificial Intelligence (AAAI-2020), New York, USA

Recurrent Positional Embedding for Neural Machine Translation
Kehai Chen, **Rui Wang***, Masao Utiyama, and Eiichiro Sumita
2019 Conference on Empirical Methods in Natural Language Processing and 9th International Joint Conference on Natural Language Processing (EMNLP-IJCNLP2019), Hong Kong, China

Unsupervised Bilingual Word Embedding Agreement for Unsupervised Neural Machine Translation
Haipeng Sun, **Rui Wang***, Kehai Chen, Masao Utiyama, Eiichiro Sumita, and Tiejun Zhao*
The 57th Annual Meeting of the Association for Computational Linguistics (ACL-2019), Florence, Italy

Neural Machine Translation with Reordering Embeddings
Kehai Chen, **Rui Wang***, Masao Utiyama, and Eiichiro Sumita
The 57th Annual Meeting of the Association for Computational Linguistics (ACL-2019), Florence, Italy

Sentence-Level Agreement for Neural Machine Translation
Mingming Yang, **Rui Wang***, Kehai Chen, Masao Utiyama, Eiichiro Sumita, Min Zhang*, and Tiejun Zhao
The 57th Annual Meeting of the Association for Computational Linguistics (ACL-2019), Florence, Italy

Lattice-Based Transformer Encoder for Neural Machine Translation
Fengshun Xiao, Jiangtong Li, Hai Zhao, **Rui Wang**, and Kehai Chen
The 57th Annual Meeting of the Association for Computational Linguistics (ACL-2019), Florence, Italy

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 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***, Masao Utiyama, Eiichiro Sumita, and Tiejun Zhao.
The Thirty-Second AAAI Conference on Artificial Intelligence (AAAI-2018), New Orleans, USA.

Instance Weighting for Neural Machine Translation Domain Adaptation.
Rui Wang, Masao Utiyama, Lemao Liu, Kehai Chen, and Eiichro Sumita.
Conference on Empirical Methods in Natural Language Processing (EMNLP-2017), Copenhagen, Denmark.

Neural Machine Translation with Source Dependency Representation.
Kehai Chen, **Rui Wang***, 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*, Bao-Liang Lu, Masao Utiyama*, and Eiichro 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*, Sabine Ploux*, 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*, Bao-Liang Lu, Masao Utiyama, and Eiichro 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, Eiichro 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.