Hao Fei 费豪

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https://scofield7419.github.io/
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https://scholar.google.com/citations?user=YGDX46AAAAAJ

I am a Ph.D. candidate majoring in natural language processing (NLP) at *School of Cyber Science and Engineering*, *Wuhan University*, China. During my Ph.D. researching phase, I have paid the major focus on the structure-aware NLP, including *Semantics/Syntax Parsing*, *Affective Computing*, as well as *Information Extraction* etc. I am apt to construct models with deep learning technique, but sometimes I believe the data-driven methods can be more powerful. As future directions, I will dedicate my efforts to 1) continuing the structure-aware tasks, but with broader scenario, i.e., *integrating syntax/semantic structure into text generation*, such as summarization, dialog, translation, multimodal etc; 2) co-modeling the syntactic skeleton and semantic meaning of texts, e.g., by defining graphs; 3) developing explainable NLP; and 4) building highly-robust NLP models and applications.

Education

2018.9–now **Wuhan University**, Wuhan, China.
Ph.D. candidate in Computer Science.
Advisor: Prof. Donghong Ji.
Associate Advisors: Yafeng Ren, Yue Zhang, Meishan Zhang.

2016.9–2018.7 **Wuhan University**, Wuhan, China.
M.S. in Computer Science.
Advisor: Prof. Donghong Ji.

2012.9–2016.7 **XiDian University**, Xi'an, China.
B.S. in Physics.

Publications (Selected)

▶*Semantics/Syntax Parsing*

1. **Hao Fei**, Shengqiong Wu, Yafeng Ren, Fei Li and Donghong Ji. Better Combine Them Together! Integrating Syntactic Constituency and Dependency Representations for Semantic Role Labeling. Findings of **ACL**. 2021.
2. **Hao Fei**, Meishan Zhang, Bobo Li, Donghong Ji. End-to-end Semantic Role Labeling with Neural Transition-based Model. Proceedings of **AAAI**. 2021.
3. **Hao Fei**, Fei Li, Bobo Li, Donghong Ji. Encoder-Decoder Based Unified Semantic Role Labeling with Label-Aware Syntax. Proceedings of **AAAI**. 2021.
4. **Hao Fei**, Shengqiong Wu, Yafeng Ren, Donghong Ji. Second-order Semantic Role Labeling with Global

Structural Refinement. IEEE **TASLP**. 2021.

5. **Hao Fei**, Meishan Zhang, Donghong Ji. Cross-Lingual Semantic Role Labeling with High-Quality Translated Training Corpus. Proceedings of **ACL**. 2020.
6. **Hao Fei**, Meishan Zhang, Fei Li, Donghong Ji. Cross-lingual semantic role labeling with model transfer. IEEE **TASLP**. 2020.
7. **Hao Fei**, Yafeng Ren, Donghong Ji. Retrofitting Structure-aware Transformer Language Model for End Tasks. Proceedings of **EMNLP**. 2020.
8. **Hao Fei**, Yafeng Ren, Donghong Ji. Mimic and Conquer: Heterogeneous Tree Structure Distillation for Syntactic NLP. Findings of **EMNLP**. 2020.
9. **Hao Fei**, Yafeng Ren, Donghong Ji. Improving Text Understanding via Deep Syntax-Semantics Communication. Findings of **EMNLP**. 2020.
10. **Hao Fei**, Yafeng Ren, Donghong Ji. High-order Refining for End-to-end Chinese Semantic Role Labeling. Proceedings of **AACL-IJCNLP**. 2020.

►*Affective Computing*

1. **Hao Fei**, Yafeng Ren, Bobo Li, Shengqiong Wu, Donghong Ji. Latent Target-Opinion as Prior for Document-Level SentimentClassification: A Variational Approach from Fine-Grained Perspective. Proceedings of **WWW**. 2021.
2. Shengqiong Wu*, **Hao Fei***, Yafeng Ren, Donghong Ji, Jingye Li. Learn from Syntax: Improving Pair-wise Aspect and Opinion Terms Extraction with Rich Syntactic Knowledge. Proceedings of **IJCAI**. 2021. (∗ Equal contribution)
3. **Hao Fei**, Yue Zhang, Yafeng Ren, Donghong Ji. Latent Emotion Memory for Multi-Label Emotion Classification. Proceedings of **AAAI**. 2020.
4. Jingye Li*, **Hao Fei***, Donghong Ji. Modeling Local Contexts for Joint Dialogue Act Recognition and Sentiment Classification with Bi-channel Dynamic Convolutions. Proceedings of **COLING**. 2020. (∗ Equal contribution)
5. **Hao Fei**, Donghong Ji, Yue Zhang, Yafeng Ren. Topic-Enhanced Capsule Network for Multi-Label Emotion Classification. IEEE **TASLP**. 2020.
6. **Hao Fei**, Yafeng Ren, Chenliang Li, Meishan Zhang, and Donghong Ji. On the Robustness of Aspect-based Sentiment Analysis: Rethinking Model, Data and Training. ACM **TOIS**. (*Under Review*)
7. **Hao Fei**, Yafeng Ren, Yue Zhang and Donghong Ji. Non-Autoregressive Encoder-Decoder Neural Framework for End-to-End Aspect-Based Sentiment Triplet Extraction. IEEE **TNNLS**. (*Under Review*)
8. **Hao Fei**, Yafeng Ren, Donghong Ji. Transition-based End-to-end Emotion-Cause Pair Extraction with Implicit Discourse Knowledge. IEEE Transactions on Affective Computing (**TAFFC**). (*Under Review*)

►*Information Extraction*

1. **Hao Fei**, Fei Li, Bobo Li, Yijiang Liu, Yafeng Ren, Donghong Ji. Rethinking Boundaries: End-To-End Recognition of Discontinuous Mentions with Pointer Networks. Proceedings of **AAAI**. 2021.
2. **Hao Fei**, Yue Zhang, Yafeng Ren, Donghong Ji. Optimizing Attention for Sequence Modeling via Reinforcement Learning. IEEE **TNNLS**. 2021.

3. **Hao Fei**, Yafeng Ren, Yue Zhang, Donghong Ji, Xiaohui Liang. Enriching Contextualized Language Model from Knowledge Graph for Biomedical Information Extraction. Briefngs in Bioinformatics. 2020.
4. **Hao Fei**, Yafeng Ren, Donghong Ji. Boundaries and edges rethinking: an end-to-end neural model for overlapping entity relation extraction. Information Processing & Management. 2020.
5. **Hao Fei**, Yafeng Ren, Donghong Ji. A tree-based neural network model for biomedical event trigger detection. Information Sciences. 2019.

Professional Service

Conference PC	ACL, ICLR, NeurIPS, AAAI, EMNLP, COLING, CCL, NLPCC, etc.
Journal Reviewer	IEEE TNNLS, IEEE TASLP, IEEE TAFFC, ACM TALLIP, Information Processing & Management, Neurocomputing, Information Sciences, Knowledge-based System etc.
Organization	ACL member, AAAI member, ACM member, China Computer Federation (CCF) member, Chinese Information Processing Society of China (CHIP) member, Youth Working Committee in CHIP.
Teaching Assistant	*C programming and algorithm* (Autumn 2019), *Natural language understanding* (Autumn 2020), *Deep learning* (Spring 2021) in Wuhan University.

Honor and Award

2021	Influential figure award of Wuhan University.
	1st prize of Luoge scholarship for Ph.D. Fellowship.
	1st prize of Extraordinary scholarship of academy.
	1st prize of Excellent scholarship of academy for Ph.D. Fellowship.
2020	National scholarship for graduate students.
	Pacesetter of outstanding graduate student award.
	Nomination award of academic stars of Wuhan University.
	1st prize of academic scholarship of Wuhan University.
2019	1st prize of Jing-Dong Dialogue Challenge (JDDC).
2018	1st prize of Text matching CHIP Challenge.
2016-19	2st prize of academic scholarship of Wuhan University.
2017	2nd prize of National Mathematical Modeling Competition for Postgraduates.

Skills

Languages	English (Freely expressing), Mandarin Chinese, Cantonese.
Coding	Python, Java, C/C++, JS, PHP, HTML/CSS, STM32, Shell, LaTeX, Markdown …
Deep-Learning	Pytorch, TensorFlow, Keras, Theano, Dynet, Tensor2tensor, Mxnet, OpenAI, FastAI, AllenNLP, Paddle paddle, Chainer …

Open Sources

- 606 ★ | A highly modular framework for sequential labeling tasks.
- 250 ★ | A summarization of MUST-READ deep learning papers for beginners.
- 71 ★ | A Hierarchical BiLSTM-CNN for sentiment analysis.
- 61 ★ | Hands-on tutorials on various popular Deep Learning frameworks.

Patent

- 2021 A Recursive Conditional Random Field Method for Event Recognition. Donghong Ji, **Hao Fei**, Shengqiong Wu. (Chinese Patent, CN202110101327)
- A Deep Joint Neural Model for Element Extraction. Donghong Ji, Kang Xu, **Hao Fei**. (Chinese Patent, CN202110101370)
- 2019 A Reinforcement Learning Based Scheduling Algorithm for Public Opinion Devices. **Hao Fei**, Kaizhi Wu. (Chinese Patent, CN201910204236.X)