

Chao-Hong Tan

PERSONAL

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EDUCATION

University of Science and Technology of China

Ph.D. of Signal and Information Processing

Anhui, China
Sep 2019 onwards

University of Science and Technology of China

Bachelor of Electronic Engineering & Information Science (EEIS)

Anhui, China
Sep 2015 - Jun 2019

EXPERIENCE

Alibaba DAMO Academy

Research intern

Hangzhou, China
May 2021 - Oct 2021

RESEARCH INTERESTS

- **Natural Language Generation:** Text Generation with Unstructured Knowledge, Empathetic Dialogue Response Generation, Multi-party Conversation Response Generation, Text Diffusion
- **Natural Language Understanding:** Spoken Language Intent Recognition, Efficient Modelling of Long Sequences
- **Large Language Models (Ongoing):** Exploration of Understanding and Reasoning Abilities, Hallucinations/Factuality Errors, Long Sequence, Parameter-Efficient Fine-Tuning

PUBLICATIONS & SUBMISSIONS

- **Chao-Hong Tan**, Qian Chen, Wen Wang, Qinglin Zhang, Siqi Zheng, Zhen-Hua Ling. PoNet: Pooling Network for Efficient Token Mixing in Long Sequences. The 10th International Conference on Learning Representations (ICLR), 2022.
- **Chao-Hong Tan**, Jia-Chen Gu, Chongyang Tao, Zhen-Hua Ling, Can Xu, Huang Hu, Xiubo Geng, Daxin Jiang. TegTok: Augmenting Text Generation via Task-specific and Open-world Knowledge. Findings of the 60th Annual Meeting of the Association for Computational Linguistics (ACL), 2022.
- Jia-Chen Gu*, **Chao-Hong Tan***, Chongyang Tao, Zhen-Hua Ling, Huang Hu, Xiubo Geng, Daxin Jiang. HeterMPC: A Heterogeneous Graph Neural Network for Response Generation in Multi-Party Conversations. The 60th Annual Meeting of the Association for Computational Linguistics (ACL), 2022. [*Equal contribution]
- **Chao-Hong Tan***, Xiaoyu Yang*, Zi'ou Zheng*, Tianda Li*, Yufei Feng*, Jia-Chen Gu, Quan Liu, Dan Liu, Zhen-Hua Ling, Xiaodan Zhu. Learning to Retrieve Entity-Aware Knowledge and Generate Responses with Copy Mechanism for Task-Oriented Dialogue Systems. The Ninth Dialog System Technology Challenge (DSTC9) Workshop at AAAI Conference on Artificial Intelligence (AAAI), 2021.
- **Chaohong Tan**, Zhenhua Ling. Multi-Classification Model for Spoken Language Understanding. International Conference on Multimodal Interaction (ICMI), 2019.
- Lu Dong, Zhi-Qiang Guo, **Chao-Hong Tan**, Ya-Jun Hu, Yuan Jiang, Zhen-Hua Ling. Neural Grapheme-to-Phoneme Conversion with Pre-trained Grapheme Models. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2022.
- **Chao-Hong Tan**, Jia-Chen Gu, Zhen-Hua Ling, Quan Liu, Si Wei, Cong Liu. Construct and Constrain the Latent Style Space of Listeners for Empathetic Dialogue Generation. IEEE Transactions on Affective Computing, 2023. [UnderReview]
- **Chao-Hong Tan**, Jia-Chen Gu, Quan Liu, Dan Liu, Zhen-Hua Ling. Towards Multi-Granularity Knowledge Retrieval and Integration for Task-Oriented Dialogue Systems. Transactions on Audio, Speech and Language Processing, 2023. [UnderReview]
- **Chao-Hong Tan**, Jia-Chen Gu, Zhen-Hua Ling. DiffuSIA: Spiral Interaction Architecture for Encoder-Decoder Text Diffusion. Arxiv, 2023. [Preprint]
- Jia-Chen Gu*, **Chao-Hong Tan***, Caiyuan Chu, Zhenhua Ling, Quan Liu, Cong Liu and Guoping Hu. MADNet: Maximizing Addressee Deduction Expectation for Multi-Party Conversation Generation. Findings of the 61th Annual Meeting of the Association for Computational Linguistics (ACL), 2023. [*Equal contribution][Withdraw]

SERVICES

- Reviewer for Conferences: NeurIPS 2023, ACL 2023, EMNLP 2022-2023, IWSWS 2023

PROJECTS

The Ninth Dialog System Technology Challenge (DSTC9)

Track 1: "Beyond Domain APIs: Task-oriented Conversational Modeling with Unstructured Knowledge Access"

Jun 2020 - Sep 2020

Team Work: My work is focus on generation part.

The 1st Chinese Audio-Textual Spoken Language Understanding Challenge (CATSLU)

Get intent(act, slot, value) of utterances using text resource

Jun 2019 - Jul 2019

- **Multi-Classification:** Shared utterance encoder, act tags, slot type classifier, slot tags
- **Minimum edit distance (MED):** Reduce the text error taken by ASR system

ACHIEVEMENTS

- CETC The 14TH Research Institute Glarun Scholarship, 2022
- Ranks *second* under objective metrics and ranks *fourth* under human metrics at DSTC9 Track1, 2020
- Won *First Prize* award at National Undergraduate Electronic Design Contest, 2017