Yahui Fu

Program-Specific Researcher at Speech and Audio Processing Lab, Kyoto University, Kyoto, Japan
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Research Interests

Dialogue Systems

- Empathetic response generation
- Personality-aware dialogue generation
- Causal reasoning in LLMs
- Knowledge graph modeling
- Human-robot interaction

Multimodal Emotion Recognition

Education

Kyoto University — Kyoto, Japan
Ph.D. in Intelligence Science and Technology, Graduate School of Informatics — Oct. 2021 –Sep. 2024

- Thesis: *Dialogue Comprehension and Personalization for Empathetic Response Generation*
- Supervisor: *Prof. Tatsuya Kawahara*

Japan Advanced Institute of Science and Technology — Nomi, Japan
M.E. in Information Science, School of Advanced Science and Technology — Apr. 2020 –Jun. 2021

- Thesis: *Conversational Semantic- and Knowledge-guided Graph convolutional Network for Multimodal Emotion Recognition*
- Supervisor: *Prof. Shogo Okada*

Tianjin University — Tianjin, China
M.E. in Computer Technology, Department of Intelligence and Computing — Sep. 2018 –Jun. 2021

- Thesis: *A Study on Context-independent and Context-dependent Emotion Recognition*
- Supervisor: *Prof. Longbiao Wang*

Experience

Kyoto University — Kyoto, Japan
Program-Specific Researcher — Oct. 2024 - current

- Developing algorithms to automatically adapt the system's personality to users in speech dialogues.

rinna Co., Ltd. — Tokyo, Japan
Research Intern — Jul. 2023 - Sep. 2023

- Personality recognition in monologue and dialogue using the realpersonachat corpus.

Japan Advanced Institute of Science and Technology — Nomi, Japan
Researcher — Jul. 2021 - Sep. 2021

- Multimodal (speech, linguistics) and knowledge graph modeling for emotion recognition.

Scholarships and Awards

- Outstanding Research Award, awarded by Kyoto University ICT Collaboration Promotion Network. — Feb. 2024
- SPRING Fellowship, awarded by Japan Science and Technology Agency (JST). — Oct. 2021–Sep. 2024
- Tianjin University- JAIST Collaborative Educational Program Scholarship, awarded by JAIST. — Apr. 2020–Mar. 2021

Skills

- **Language:** Chinese (native); English (fluent); Japanese (JLPT N2)
- **Programming:** Python, Matlab, C, LaTeX

Community Services

- **Committee Member, YRRSDS 2024:** Contributed to the organization of the Young Researchers' Roundtable on Spoken Dialogue Systems (YRRSDS) 2024, facilitating engaging discussions at Roundtable sessions.
- **Reviewer:** Information processing and management, SIGDIAL

Publications

JOURNAL ARTICLES

[1] **Yahui Fu**, Koji Inoue, Divesh Lala, Kenta Yamamoto, Chenhui Chu, and Tatsuya Kawahara, "Dual variational generative model and auxiliary retrieval for empathetic response generation by conversational robot", *Advanced Robotics*, pp. 1–13, 2023.

[2] Lili Guo, Longbiao Wang, Jianwu Dang, **Yahui Fu**, Jiaxing Liu, and Shifei Ding, "Emotion recognition with multimodal transformer fusion framework based on acoustic and lexical information", *IEEE MultiMedia*, vol. 29, no. 2, pp. 94–103, 2022.

[3] **Yahui Fu**, Shogo Okada, Longbiao Wang, Lili Guo, Yaodong Song, Jiaxing Liu, and Jianwu Dang, "Context-and knowledge-aware graph convolutional network for multimodal emotion recognition", *IEEE MultiMedia*, vol. 29, no. 3, pp. 91–100, 2022.

CONFERENCE PROCEEDINGS

[1] Zi Haur Pang, **Yahui Fu**, Divesh Lala, Mikey Elmers, Koji Inoue, and Tatsuya Kawahara, "Human-like embodied ai interviewer: Employing android erica in real international conference", in *Proceedings of the 31st International Conference on Computational Linguistics (COLING): System Demonstrations*, 2025, pp. 136–150.

[2] Zi Haur Pang, **Yahui Fu**, Divesh Lala, Keiko Ochi, Koji Inoue, and Tatsuya Kawahara, "Acknowledgment of emotional states: Generating validating responses for empathetic dialogue.", in *Proc. Int'l Workshop Spoken Dialogue Systems (IWSDS)*, Sapporo, Japan, 2024.

[3] **Yahui Fu**, Chenhui Chu, and Tatsuya Kawahara, "Styemp: Stylizing empathetic response generation via multi-grained prefix encoder and personality reinforcement", in *Proceedings of the 25th Annual Meeting of the Special Interest Group on Discourse and Dialogue (SIGDIAL)*, 2024, pp. 172–185.

[4] **Yahui Fu**, Haiyue Song, Tianyu Zhao, and Tatsuya Kawahara, "Enhancing personality recognition in dialogue by data augmentation and heterogeneous conversational graph networks", in *Proc. Int'l Workshop Spoken Dialogue Systems (IWSDS)*, Sapporo, Japan, 2024.

[5] **Yahui Fu**, "Causality reasoning for empathy-enriched and personality-conditioned spoken dialogue system", in *Proceedings of the 19th Annual Meeting of the Young Reseachers' Roundtable on Spoken Dialogue Systems (YRRSDS)*, Prague, Czechia: Association for Computational Linguistics, Sep. 2023, pp. 62–63.

[6] **Yahui Fu**, Koji Inoue, Chenhui Chu, and Tatsuya Kawahara, "Reasoning before responding: Integrating commonsense-based causality explanation for empathetic response generation", in *Proceedings of the 24th Meeting of the Special Interest Group on Discourse and Dialogue (SIGDIAL)*, 2023, pp. 645–656.

[7] **Yahui Fu**, Koji Inoue, Divesh Lala, Kenta Yamamoto, Chenhui Chu, and Tatsuya Kawahara, "Improving empathetic response generation with retrieval based on emotion recognition", in *Proc. Int'l Workshop Spoken Dialogue Systems (IWSDS)*, Los Angeles, USA, 2023.

[8] Jiaxing Liu, Sen Chen, Longbiao Wang, Zhilei Liu, **Yahui Fu**, Lili Guo, and Jianwu Dang, "Multimodal emotion recognition with capsule graph convolutional based representation fusion", in *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, 2021, pp. 6339–6343.

[9] **Yahui Fu**, Lili Guo, Longbiao Wang, Zhilei Liu, Jiaxing Liu, and Jianwu Dang, "A sentiment similarity-oriented attention model with multi-task learning for text-based emotion recognition", in *MultiMedia Modeling (MMM): 27th International Conference, Prague, Czech Republic, June 22–24, Proceedings, Part I 27*, 2021, pp. 278–289.

[10] **Yahui Fu**, Shogo Okada, Longbiao Wang, Lili Guo, Yaodong Song, Jiaxing Liu, and Jianwu Dang, "Consk-gcn: Conversational semantic-and knowledge-oriented graph convolutional network for multimodal emotion recognition", in *IEEE International Conference on Multimedia and Expo (ICME)*, 2021, pp. 1–6.

Patents

- A Method for Textual Emotion Recognition based on Sentiment Similarity-oriented Attention. Chinese patent: CN111966824A, November 20, 2020.