# 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
- LLMs for causal reasoning
- Knowledge Graph Modeling
- Human-robot interaction
- Personality adaptation

**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.

## Skills

- **Language:** Chinese (native); English (fluent); Japanese (intermediate)
- **Programming:** Python, Matlab, C/C++, LaTeX

## Selected 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] **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] **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.

[2] **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.

[3] **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.

[4] **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.

[5] **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*, Springer, 2021, pp. 278–289.

[6] **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.

## 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- Japan Advanced Institute of Science and Technology (JAIST) Collaborative Educational Program Scholarship, awarded by JAIST. Apr. 2020–Mar. 2021

## 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