

# Yahui Fu

Researcher at Speech and Audio Processing Lab, Kyoto University, Kyoto, Japan

Email: fu.yahui.64p@st.kyoto-u.ac.jp/ fu.yahuiii@gmail.com

Website: <https://fuyahuii.github.io>

## RESEARCH INTERESTS

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- Spoken Dialogue System (empathetic/personalized response generation; knowledge reasoning; human-robot interaction)
- Multimodal Emotion Recognition

## EDUCATION

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### Kyoto University

Ph.D. in Intelligence Science and Technology, Graduate School of Informatics

Kyoto, Japan

Oct. 2021 –Sept. 2024

– Supervisor: *Prof. Tatsuya Kawahara*

### Japan Advanced Institute of Science and Technology

M.E. in Information Science, School of Advanced Science and Technology

Nomi, Japan

Apr. 2020 –June 2021

– Supervisor: *Prof. Shogo Okada*

### Tianjin University

M.E. in Computer Technology, Department of Intelligence and Computing

Tianjin, China

Sept. 2018 –June 2021

– Supervisor: *Prof. Longbiao Wang*

## EXPERIENCE

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### rinna Co., Ltd.

Research Intern

Tokyo, Japan

July 2023 - Sept. 2023

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

### Japan Advanced Institute of Science and Technology

Researcher

Nomi, Japan

July 2021 - Sept. 2021

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

## SKILLS

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

## PUBLICATIONS

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### 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**, Jiaying Liu, and Shifei Ding, “Emotion recognition with multimodal transformer fusion framework based on acoustic and lexical information”, *IEEE Multi-Media*, 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] **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*, 2024, pp. 172–185.
- [2] **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.
- [3] 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.
- [4] **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.
- [5] **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.

## WORKSHOP PROCEEDINGS

- [1] 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.
- [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**, “Causality reasoning for empathy-enriched and personality-conditioned spoken dialogue system”, in *Proceedings of the 19th Annual Meeting of the Young Researchers’ Roundtable on Spoken Dialogue Systems (YRRSDS)*, Prague, Czechia: Association for Computational Linguistics, Sep. 2023, pp. 62–63.
- [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.

## PATENTS

- Longbiao Wang, Yahui Fu, Jianwu Dang, and Lili Guo, “A Method for Textual Emotion Recognition based on Sentiment Similarity-oriented Attention”, Chinese patent: CN111966824A, November 20, 2020.

## SCHOLARSHIPS AND AWARDS

- The establishment of university fellowships towards the creation of science and technology innovation, awarded by Japan Science and Technology Agency (JST). Oct. 2021–Sept. 2024
- Tianjin University-JAIST Collaborative Educational Program Scholarship, awarded by Japan Advanced Institute of Science and Technology (JAIST). Apr. 2020–Mar. 2021