

# Yahui Fu

Postdoctoral Researcher at Kyoto University, Kyoto, Japan  
Email: fu.yahui.6v@kyoto-u.ac.jp/ fu.yahuiiii@gmail.com  
Homepage: <https://fuyahuii.github.io>

## RESEARCH INTERESTS

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### Dialogue Systems

Empathetic & personality-aware dialogue generation    User modeling & personalization    Human-robot/agent interaction  
Emotion recognition    Personality recognition

### Explainable & Controllable LLMs

Causal reasoning for interpretability    Reinforcement learning for user adaptation

## EDUCATION

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### Kyoto University

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

Kyoto, Japan

Oct. 2021 –Sep. 2024

- Thesis: *Dialogue Comprehension and Personalization for Empathetic Response Generation*
- 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 –Jun. 2021

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

### Tianjin University

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

Tianjin, China

Sep. 2018 –Jun. 2021

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

## EXPERIENCE

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### Kyoto University

Postdoctoral Researcher

Kyoto, Japan

Oct. 2024 - current

- Enhancing user satisfaction in conversational LLMs through preference-adaptive reinforcement learning.

### rinna Co., Ltd.

Research Intern

Tokyo, Japan

Jul. 2023 - Sep. 2023

- Personality recognition for real-world applications.

### Japan Advanced Institute of Science and Technology

Researcher

Nomi, Japan

Jul. 2021 - Sep. 2021

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

## SCHOLARSHIPS AND AWARDS

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- 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

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- **Language:** Chinese (native); English (fluent); Japanese (JLPT N2)
- **Programming:** Python, Matlab, C, 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] **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.
- [3] 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.

### CONFERENCE PROCEEDINGS

- [1] **Yahui Fu**, Zihaur Pang, and Tatsuya Kawahara, “Minority-aware satisfaction estimation in dialogue systems via preference-adaptive reinforcement learning”, *IJCNLP-AACL, main conference (accepted)*, 2025.
- [2] Koji Inoue, Mikey Elmers, **Yahui Fu**, Zi Haur Pang, Divesh Lala, Keiko Ochi, and Tatsuya Kawahara, “Prompt-guided turn-taking prediction”, in *Proceedings of the 26th Annual Meeting of the Special Interest Group on Discourse and Dialogue (SIGDIAL)*, 2025.
- [3] Zi Haur Pang, **Yahui Fu**, Divesh Lala, Mikey Elmers, Koji Inoue, and Tatsuya Kawahara, “Does the appearance of autonomous conversational robots affect user spoken behaviors in real-world conference interactions?”, in *Proceedings of the Extended Abstracts of the CHI Conference on Human Factors in Computing Systems*, 2025, pp. 1–8.
- [4] 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.
- [5] **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.
- [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, 645–656 (oral).
- [7] **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, 1–6 (oral).
- [8] **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.
- [9] 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.

## WORKSHOPS

- [1] **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 (oral).
- [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 (oral).
- [3] **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.

## PREPRINTS

- [1] Yuan Gao, Hao Shi, **Yahui Fu**, Chenhui Chu, and Tatsuya Kawahara, “Bridging speech emotion recognition and personality: Dataset and temporal interaction condition network”, *arXiv preprint arXiv:2505.13978*, 2025.

## PATENTS

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

## COMMUNITY SERVICES

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- **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, IEEE TASLP, SIGDIAL