

# Dr Leimin Tian

Senior Scientist & Team Leader  
Human-Robot Interaction Team, [Robotics Group](#)  
Data61, CSIRO

Adjunct Senior Lecturer  
[Robotics](#), ECSE, Engineering  
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## *Research Interests*

Human-Robot Interaction and collaboration, Human-Robot Teaming, Affective Computing, Social Robotics, Human-Centred AI, Multimodal Behavioural Analytics, Digital Health, Dialogue Systems

## *Education*

- Ph.D. in Informatics. The University of Edinburgh. 2013–2018.
  - *Thesis*: “Recognizing Emotions in Spoken Dialogue with Acoustic and Lexical Cues”
  - *Supervisors*: Prof Johanna D. Moore and Dr Catherine Lai
- M.Sc. in Artificial Intelligence (*with Distinction*). The University of Edinburgh. 2012–2013.
  - *Dissertation*: “Emotion Recognition using Feature-Level Fused Audio-Visual Data”
  - *Supervisors*: Prof Johanna D. Moore and Dr Catherine Lai
- B.Eng. in Artificial Intelligence. Beijing University of Posts and Telecommunications. 2008–2012.
  - *Dissertation*: “An Application of Audio-Visual Emotion Recognition on the NAO robot”
  - *Supervisors*: Prof Xiaojie Wang and Dr Yongbin Liu

## *Work Experiences*

- *Senior Scientist*. CSIRO. 25th Mar. 2024–Present.
  - Leader of the Human-Robot Interaction team, Robotics group, Data61.
- *Post-doctoral Research Fellow*. Monash University. 23rd July 2018–22nd Mar. 2024.
  - Research Fellow at the Human-Robot Interaction group, Monash Robotics, Faculty of Engineering. Mar. 2020–Present.
  - Research Fellow at the Human-Centred AI group, Faculty of IT. July 2018–Mar. 2020.
- *Research Fellow*. University of Edinburgh. 1st Apr. 2018–30th Jun 2018.
  - *Toyota Conversational Agent Project*: Integrated the multimodal emotion recognition model developed in my PhD to a dialog system aimed at encouraging social interaction and physical activities of elderly users.

### Grants and Awards

- Monash University and Osaka University Research Exchange Grant. Jun. 2022–Jun. 2023. JPY 1M.
  - *Project*: “RoboWell Coach: Investigating the influence of robot appearance and cultural context in instructing mindfulness meditations”
  - *Investigators*: Dr Leimin Tian, Dr Nicole Robinson, Dr Takahisa Uchida, Dr Hidenobu Sumiok, Prof Dana Kulić, Prof Hiroshi Ishiguro
- Monash University Data Future Institute Seed Grant. Aug. 2021–Aug.2022. AUD 50K.
  - *Project*: “Transforming measurement of how unsafe someone feels when bike riding”
  - *Investigators*: Dr Ben Beck, Prof Dana Kulić, Dr Akansel Cosgun, Dr Leimin Tian, Dr Joanne Caldwell Odgers
- Monash University Data Future Institute Seed Grant. Jan. 2020–Dec.2021. AUD 50K.
  - *Project*: “[Understanding Robots in Public Spaces](#): Interdisciplinary Insights for Public Policy”
  - *Investigators*: A/Prof Shanti Sumartojo, Prof Dana Kulić, Dr Leimin Tian, Prof Michael Mintrom
- Monash University Faculty of IT Early Career Researcher Grant. July 2019–Aug.2020. AUD 13K.
  - *Project*: “Developing a Robot Teleoperation Framework for Simulation Studies”
  - *Investigator*: Dr Leimin Tian
- Best Reviewer Awards (top 5% of reviewers) at ICMI 2021
- Multiple “AAAC researcher of the day” during 2018-19, when the Association for the Advancement of Affective Computing (AAAC) held this selection for highlighting its members on the website.
- Fiorella De Rosis Award for the best Doctoral Consortium paper at the sixth International Conference on Affective Computing and Intelligent Interaction (ACII 2015).
- Full PhD scholarship funded by the University of Edinburgh.

### Student Supervision

- Co-supervision of PhD projects:
  - Sanjeev Nahulanthran: “Generating human-centered explanation for a social robot capable of multimodal emotion recognition”. Monash University. Aug 2022–Present.
  - Shujie Zhou: “Achieving context-aware and adaptive intelligent agents by learning from interaction”. Monash University. Jan 2022–Present.
  - Subra Muthusamy: “Multimodal Analysis of Patients with Epileptic Seizure and Psychogenic Non-Epileptic Seizure”. Monash Health. Feb 2020–Feb 2024.
  - Chathurika Palliya Guruge: “Designing Multimodal Interfaces for Early Diagnosis of Dementia”. Monash University. Feb 2019–Feb 2020.
- *Supervisor* of Master thesis (6 completed), Honor’s thesis (1 completed), summer research internships (2 completed), and final year projects (12 completed): Monash University. 2019–Present.
- *Supervisor* of MSc dissertations (3 completed): The University of Edinburgh. 2016–2017.

### Technical Skills

- *Programming languages:* Python (primary)
- *Robotic platforms:* Pepper, NAO, Cozmo, Fetch
- *Machine learning and deep learning:* Keras, PyTorch, TensorFlow, Scikit-Learn, R, WEKA, SPSS
- *Cloud platforms:* Amazon Web Services, Google Cloud
- *Signal processing and annotation:* OpenFace, OpenPose, OpenSMILE, MediaPipe, ELAN, MTurk
- *Other:* ROS, L<sup>A</sup>T<sub>E</sub>X

### Services

- *Regular reviewer:* ACII, HRI, CHI, ICMI, ICSR, IROS, and RO-MAN conferences; IEEE Transactions on Affective Computing, ACM Transactions on Human-Robot Interaction.
- *Associate editor* at RO-MAN, ICRA.
- *Co-editor of journal special issues:*
  - [Perceiving, Generating, and Interpreting Affect in Human-Robot Interaction](#), Frontiers in Robotics and AI
  - [Errors and Mistakes in Human-Robot Interactions](#), Frontiers in Robotics and AI
  - [Present and Future of Socially Assistive Robotics](#), MDPI Machines
  - [Social Interaction with More than One Robot](#), Taylor & Francis Advanced Robotics
- *Organizing committee member:* ACII 2019/2021/2022, ICMI 2020/2024, FG 2024.
- *Workshop organizer:*
  - [Affective Human-Robot Interaction](#), ACII 2022/2023
  - [Multimodal Affect and Aesthetic Experience](#), ICMI 2020/2021/2022/2023
  - [Artificial Intelligence in Affective Computing](#), IJCAI 2020
  - [Social Robotics Workshop](#). 12th Aug. 2019.
- *Committee Member:*
  - [Association for the Advancement of Affective Computing](#). Feb. 2018–Present.
  - Monash University Faculty of IT Early Career Academic committee. Feb. 2019–Feb. 2020.
  - British Science Association (Edinburgh Branch). Sep. 2012–Jun. 2018.

### Public Engagement and Media Presence

- [TechXpo and STEAM Festival](#). 1st Aug. 2023, interactive robot demonstration and prototyping event at Springvale Library and Community Hub.
- [Meet a Humanoid Robot](#). 1st May. 2021, interactive exhibition at Melbourne Knowledge Week.
- [Robotics Logics of Public Space in the COVID Pandemic](#). 13th Aug. 2020, Mediapolis.

### Publication List

Please see [Google Scholar](#) for my up-to-date full publication list. Selected publications:

1. **Leimin Tian**, Tina LY Wu, Nicole L Robinson, Pamela Carreno-Medrano, Wesley P Chan, Maram Sakr, Elahe Abdi, Elizabeth A Croft, and Dana Kulić. *Experimental Methodology for Human-Robot Interaction: Guidelines and Case Studies for Human-Centred and Ethical Robotics Research*. CRC Press, Taylor & Francis Group, 2025 (in production)
2. **Leimin Tian**, Sharon Oviatt, Michal Muszynski, Brent Chamberlain, Jennifer Healey, and Akane Sano. *Applied Affective Computing*. ACM Books, Morgan & Claypool, 2022
3. **Leimin Tian** and Sharon Oviatt. A taxonomy of social errors in human-robot interaction. *ACM Transactions on Human-Robot Interaction*, 10(2):1–32, 2021
4. **Leimin Tian**, Kerry He, Shiyu Xu, Akansel Cosgun, and Dana Kulić. Crafting with a robot assistant: Use social cues to inform adaptive handovers in human-robot collaboration. In *Proceedings of the 2023 ACM/IEEE International Conference on Human-Robot Interaction, HRI '23*, pages 252–260. ACM, 2023
5. **Leimin Tian**, Pamela Carreno-Medrano, Aimee Allen, Shanti Sumartojo, Michael Mintrom, Enrique Coronado Zuniga, Gentiane Venture, Elizabeth Croft, and Dana Kulić. Redesigning human-robot interaction in response to robot failures: A participatory design methodology. In *Extended Abstracts of the 2021 CHI Conference on Human Factors in Computing Systems*, pages 1–8, 2021

### References

Available upon request.