

# Leimin Tian

Research Fellow  
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## *Research Interests*

Affective Computing, Human-Robot Interaction, Social Robotics, Human-Centered Artificial Intelligence, Multimodal Behavior Analytics, Dialogue Systems

## *Teaching Interests*

Affective Computing, Human-Robot Interaction, Social Robotics, Human-Centered Artificial Intelligence

## *Education*

- Ph.D. in Informatics. The University of Edinburgh. 2013–2018.
  - *Thesis*: “Recognizing Emotions in Dialogues with Acoustic and Lexical Features”
  - *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”
  - *Supervisors*: Prof. Xiaojie Wang and Dr. Yongbin Liu

## *Grants and Awards*

- Sep. 2019–Aug. 2020: Monash University FIT Early Career Researcher Seed Grant (AUD 13k).
- AAAC (Association for the Advancement of Affective Computing) researcher of the day: five times in 2019, four times in 2018.
- Student travel grant from ACII2015 and ACII2017 conference organizing committees.
- The Fiorella De Rosis Award for the best Doctoral Consortium paper at ACII2015 conference.

## *Publications*

1. **Leimin Tian**, Sharon Oviatt, Michal Muszynski, Brent Chamberlain, Jennifer Healey, and Akane Sano. Applied Affective Computing. ACM Books. 2020. *Book proposal accepted*.
2. **Leimin Tian** and Sharon Oviatt. A Taxonomy of Social Errors in Human-Robot Interaction. *ACM Transactions on Human-Robot Interaction*. 2020. *Accepted, under revision*.
3. Muszynski Michal, **Leimin Tian**, Catherine Lai, Johanna Moore, Theodoros Kostoulas, Patrizia Lombardo, Thierry Pun, and Guillaume Chanel. Recognizing Induced Emotions of Movie Audiences From Multimodal Information *IEEE Transactions on Affective Computing*. 2019.

4. Catherine Lai, Beatrice Alex, Johanna Moore, **Leimin Tian**, Tatsuro Hori, and Gianpiero Francesca. Detecting Topic-Oriented Speaker Stance in Conversational Speech *InterSpeech*. 2019.
5. **Leimin Tian**, Johanna D. Moore, Catherine Lai. Polarity and Intensity: the Two Aspects of Sentiment Analysis *2018 ACL Grand Challenge and Workshop on Human Multimodal Language (Challenge-HML)*. 2018.
6. Jennifer Williams, Ramona Comanescu, Oana Radu, and **Leimin Tian**. DNN Multimodal Fusion Techniques for Predicting Video Sentiment *2018 ACL Grand Challenge and Workshop on Human Multimodal Language (Challenge-HML)*. 2018.
7. **Leimin Tian**, Michal Muszynski, Catherine Lai, Johanna D. Moore, Theodoros Kostoulas, Patrizia Lombardo, Thierry Pun, Guillaume Chanel. Recognizing Induced Emotions of Movie Audiences: Are Induced and Perceived Emotions the Same? *2017 International Conference on Affective Computing and Intelligent Interaction (ACII)*. 2017 (**Best Paper Nominee**).
8. **Leimin Tian**, Johanna D. Moore, Catherine Lai. Recognizing Emotions in Spoken Dialogue with Hierarchically Fused Acoustic and Lexical Features. *Spoken Language Technology Workshop (SLT) 2016*. 13–16 Dec., 2016.
9. **Leimin Tian**, Johanna D. Moore, Catherine Lai. Emotion Recognition in Spontaneous and Acted Dialogues. *2015 International Conference on Affective Computing and Intelligent Interaction (ACII)*. pp. 698-704. 21–24 Sep., 2015.
10. **Leimin Tian**, Johanna D. Moore, Catherine Lai. Recognizing Emotions in Dialogues with Acoustic and Lexical Features. *2015 International Conference on Affective Computing and Intelligent Interaction (ACII)*. pp. 737-742. 21–24 Sep., 2015 (**Best Doctoral Consortium Paper**).
11. **Leimin Tian**, Johanna D. Moore, Catherine Lai. Recognizing Emotions in Dialogues with Disfluencies and Non-Verbal Vocalisations. *Proceedings of the 4th Interdisciplinary Workshop on Laughter and Other Non-verbal Vocalisations in Speech*, pp. 39-41. 14–15 Apr., 2015.
12. Johanna D. Moore, **Leimin Tian**, Catherine Lai. Word-Level Emotion Recognition Using High-Level Features. *CICLing 2014*, Part II, LNCS 8404, pp. 17-31. 2014.

### Teaching Experiences

- *Guest lecture at FIT3175 Usability*: “Usability: from HCI to HRI”, 6th May 2019.
- *Guest lecture at FIT6021 Advanced IT Research Method*: “HCI Research Methods: Crowdsourcing”, 1st Oct. 2018.
- *Co-supervisor of PhD candidate Chathurika Palliya Guruge*: Monash University. Feb. 2019–Present.
- *Primary supervisor of Master’s Minor thesis and Honor’s projects*: Monash University. Mar. 2019–Present.
  - Shujie Zhou. “Exploring the Role of Emotions in Human-Multi-Agent Collaboration”
  - Duc Huy Tran. “Modelling Human-Human Emotion Dynamics in Spoken Dialogue”
- *Co-supervisor of MSc dissertations*: The University of Edinburgh.
  - Stanley Wang. “Representation Learning for Emotion Recognition”. Jun. 2017–Aug. 2017.
  - Chenyu Wang. “Automatic Detection of Non-Verbal Vocalisations in Spoken Dialogues”. Jun. 2016–Aug. 2016.
  - Xinran Shi. “Automatic Detection of Disfluencies in Spoken Dialogues”. Jun. 2016–Aug. 2016.

### Research and Work Experiences

- *Post-doc.* Edinburgh University. Apr. 2017–Jun. 2017.
  - *Toyota Dialog Stance Project:* Implemented an emotion recognition model for conversational speech as part of a prototype speech-based interface.
- *Consultant.* EmoTech Ltd. 19th Sep. 2016–19th Dec. 2016.
  - *AI of Emotion Project:* Designed and developed the emotion recognition, interaction, and synthesis modules of Olly, a domestic personal assistant robot.

### Technical Skills

- *Programming languages:* Python (primary), Matlab, Perl
- *Machine Learning:* Keras, Scikit-Learn, R, WEKA
- *Signal processing and annotation:* OpenSMILE, Praat, ELAN, Amazon Mechanical Turk
- *Other:* Linux, SSH, L<sup>A</sup>T<sub>E</sub>X

### Service

- *Committee Member.* Monash University Early Career Academics Committee. Feb. 2019–Present.
- *Junior Executive Committee Member.* Association for the Advancement of Affective Computing (AAAC). Feb. 2018–Present.
- *Member.* Social Robotics Network. Feb. 2019–Present.
- *Committee Member.* British Science Association (Edinburgh Branch). Sep. 2012–Jun. 2018.
- *Regular Reviewer.* IEEE Transactions on Affective Computing; International Conference on Affective Computing and Intelligent Interaction. 2017–Present.
- *Publicity Chair.* 22nd ACM International Conference on Multimodal Interaction. 11th–15th Oct. 2020.
- *Social Media Chair.* 2019 International Conference on Affective Computing and Intelligent Interaction. 3rd–6th Sep. 2019.

### Media and Invited Presentations

- She's Building a Robot  
15th Jul., 2019, a book and interview series by Mick Liubinskas.
- Affective Computing: What We Do and Do Not Know  
22nd Nov., 2017, Emotech Ltd & Cocoon Networks, London, UK.
- Girls in Tech project  
8th Mar., 2017, an interview series by the School of Informatics at the University of Edinburgh.
- Word-Level Emotion Recognition in Spontaneous Dialogues with High-Level Features  
13th Mar., 2014, University of Bath, Department of Computer Science, UK.

### References

- *Prof. Sharon Oviatt*, [sharon.oviatt@monash.edu](mailto:sharon.oviatt@monash.edu)
- *Prof. Johanna D. Moore*, [JMoore@ed.ac.uk](mailto:JMoore@ed.ac.uk)
- *Dr. Catherine Lai*, [clai@inf.ed.ac.uk](mailto:clai@inf.ed.ac.uk)