# Leimin Tian

Research Fellow Computer Human Interaction and Creativity (CHIC) Faculty of Information Technology Monash University H7.44, Building H, Caulfield East VIC 3145, Australia Phone: (+61) 03 990 32939 Email: Leimin.Tian@monash.edu

#### Research Interests

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

#### 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

- 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. 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.
- 2. Catherine Lai, Beatrice Alex, Johanna Moore, Leimin Tian, Tatsuro Hori, and Gianpiero Francesca. Detecting Topic-Oriented Speaker Stance in Conversational Speech *InterSpeech*. 2019.
- 3. Leimin Tian, Johanna D. Moore, Catherine Lai. <u>Polarity and Intensity: the Two Aspects of Sentiment Analysis</u> 2018 ACL Grand Challenge and Workshop on Human Multimodal Language (Challenge-HML). 2018.
- 4. Jennifer Williams, Ramona Comanescu, Oana Radu, and Leimin Tian. <u>DNN Multimodal Fusion</u> Techniques for Predicting Video Sentiment 2018 ACL Grand Challenge and Workshop on Human Multimodal Language (Challenge-HML). 2018.
- 5. 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).

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6. 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.

- 7. 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.
- 8. 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).
- 9. 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.
- 10. Johanna D. Moore, Leimin Tian, Catherine Lai. <u>Word-Level Emotion Recognition Using High-Level Features</u>. *CICLing 2014*, Part II, LNCS 8404, pp. 17-31. 2014.

#### **Invited Presentations**

- Affective Computing: What We Do and Do Not Know 22nd Nov., 2017, Emotech Ltd & Cocoon Networks, London, UK.
- Word-Level Emotion Recognition in Spontaneous Dialogues with High-Level Features 13th Mar., 2014, University of Bath, Department of Computer Science, UK.

#### Teaching Experience

- 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. June 2017–Aug. 2017.
  - Chenyu Wang. Automatic Detection of Non-Verbal Vocalisations in Spoken Dialogues. June 2016– Aug. 2016.
  - Xinran Shi. Automatic Detection of Disfluencies in Spoken Dialogues. June 2016–Aug. 2016.

# Research and Work Experience

- Consultant. EmoTech Ltd. 19th Sep. 2016–19th Dec. 2016.
  - AI of Emotion Project: Designed and developed the emotion recognition, emotional interaction modelling, and emotion synthesis modules of Olly, a domestic robot serves as a personal assistant.
- Research Intern. Chinese Academy of Science, Institute of Psychology. Jul. 2011–Aug. 2011.
  - Facial Expression Recognition System
  - Affect Modelling with Galvanic Skin Responses (GSR)

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• Research Assistant. Beijing University of Posts and Telecommunications, Department of Computer Science. Jun. 2010–Nov. 2011.

 Intelligent Tutoring System for Pre-School Children: Proposed and designed a JavaScript based game GUI for pre-school children to learn language skills.

# Technical Skills

- Programming languages: Python (primary), Matlab, Perl
- Machine Learning: Keras, Scikit-Learn, R, PyBrain, WEKA, SPSS
- Signal processing and annotation: OpenSMILE, Praat, ELAN, Amazon Mechanical Turk
- Other: Linux, SSH, LATEX

## Service

- *Junior Executive Committee Member.* Association for the Advancement of Affective Computing (AAAC). Feb. 2018–Present.
  - Publicity and finance duties
- Committee Member. British Science Association (Edinburgh Branch). Sep. 2012–Jun. 2018.
  - Social network promotion and publicity
  - Promoting science to the general public by organizing lectures, debates, movie screenings, pub quiz, and street-lab events

# References

- Prof. Sharon Oviatt, sharon.oviatt@monash.edu
- Prof. Johanna D. Moore, J.Moore@ed.ac.uk
- Dr. Catherine Lai, clai@inf.ed.ac.uk