

# Leimin Tian

Research Fellow

Computer Human Interaction and Creativity (CHIC)

Faculty of Information Technology

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## *Research Interests*

Multimodal Affective Computing, Human-Computer/Robot Interaction, 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*

- 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.
- 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.
- 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**).
- 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.
- 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.

- 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**).
- 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.
- 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.

### *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 MSc dissertations*: The University of Edinburgh. June 2017–Aug. 2017.
  - Stanley Wang. Representation Learning for Emotion Recognition. 2017
- *Co-supervisor of MSc dissertations*: The University of Edinburgh. June 2016–Aug. 2016.
  - Chenyu Wang. Automatic Detection of Non-Verbal Vocalisations in Spoken Dialogues. 2016
  - Xinran Shi. Automatic Detection of Disfluencies in Spoken Dialogues. 2016
- *Marker for Advanced Natural Language Processing*: The University of Edinburgh. Sep. 2013–Dec. 2013.

### *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.
  - *Projects*:
    - \* *Facial Expression Recognition System*:  
Wrote Matlab code for extracting Gabor features
    - \* *Affect Modelling with Galvanic Skin Responses (GSR)*:  
Collected GSR data for emotion recognition
  - *Supervisor*: Prof. Xiaolan Fu
- *Research Assistant*. Beijing University of Posts and Telecommunications, Department of Computer Science. Jun. 2010–Nov. 2011.
  - *Project*:
    - \* *Intelligent Tutoring System for Pre-School Children*: Proposed and designed a JavaScript based game GUI for pre-school children to learn language skills.
  - *Supervisor*: Prof. Xiaojie Wang

- *Personal projects for fun:*
  - An Chinese chatbot with emotional interaction function in Perl
  - A "What to eat tonight" Question-Answering program in Python

### *Programming Competitions*

- *Team leader (Group size: 5 people).* Chinese competition in Intelligent Design. Mar. 2011–Jul. 2011.
  - *Project:* ASURO Campus Guide Robot
    - \* Designed a robot that guides guests around a model campus map
    - \* Hardware maintenance and monitoring progress of team members
  - *Supervisor:* Prof. Xiaojie Wang
- *Vice team leader (Group size: 5 people).* BADA Application Competition of Samsung. Dec. 2010–Feb. 2011.
  - *Project:* Sweet Sleep (Third Prize)
    - \* Designed and tested a mobile application for insomnia therapy on the BADA platform
  - *Supervisor:* Prof. Xiaojie Wang

### *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, L<sup>A</sup>T<sub>E</sub>X

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