Leimin Tian

Research Fellow

Computer Human Interaction and Creativity (CHIC)

Faculty of Information Technology

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Research Interests

Affective Computing, Human-Robot Interaction, Human-Centered Artificial Intelligence,//sMultimodal 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. Polarity and Intensity: the Two Aspects of Sentiment Analysis *2018 ACL Grand Challenge and Workshop on Human Multimodal Language (Challenge-HML)*. 2018.

4. 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.

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**).

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. 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 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)*

- *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