Leimin Tian

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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

- Fully sponsored by the Institute of Language, Cognition and Computation (ILCC), School of Informatics, the University of Edinburgh for the duration of PhD.

- 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, 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. <u>Recognizing Emotions in Dialogues with Disfluencies and Non-Verbal Vocalisations</u>. *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. <u>Word-Level Emotion Recognition Using High-Level Features</u>. *CICLing 2014*, Part II, LNCS 8404, pp. 17-31. 2014.

Invited Presentations

- <u>Affective Computing: What We Do and Do Not Know</u>
  22nd Nov., 2017, Emotech Ltd & Cocoon Networks, London, UK.

- <u>Word-Level Emotion Recognition in Spontaneous Dialogues with High-Level Features</u>
  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, 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–Present.

    - Social network promotion and publicity
    - Promoting science to the general public by organizing lectures, debates, movie screenings, pub quiz, and street-lab events

- *Class Leader of Technology (for the Intelligent Science and Technology class):* Beijing University of Posts and Telecommunications. Sep. 2008–Sep. 2012 **Awarded the Best Class Leader**.

    - Provided regular supplementary materials on the state-of-the-art in AI
    - Organized several one-day and one-week class trips and class parties

References

- *Prof. Johanna D. Moore*, J.Moore@ed.ac.uk

- *Dr. Catherine Lai*, clai@inf.ed.ac.uk