

Zhao Shuyang

Phd Candidate

Tietoraiti 6 A21
33720 Tampere
Finland

+358449300117
✉ shuyang.zhao@tut.fi
🌐 zhaoshuyang.com



Education

- 2016–current **Phd**, *Tampere University of Technology*, Tampere.
supervised by *Tuomas Virtanen*
- 2010–2014 **Msc**, *Tampere University of Technology*, Tampere, 4.03/5.
Major in signal processing
- 2005–2009 **Bsc**, *Huazhong University of Science and Technology*, Wuhan, 76/100.
Major in Biomedical engineering

Experience

- 2013–current **Research**, *Tampere University of Technology*, Tampere.

Working under audio research group as reasearch assistant, project researcher and phd candidate, from begining to current. The group is one of the world-wide leading groups in computational analysis of sound scene/event, organizing the challenge of detection and classification of acoutic scene and events (DCASE).

Projects:

- AKU (2013-2014): A collaborative project with Technical Research Centre of Finland (VTT). The goal of the project is to introduce sound source classification into environmental noise measurement. In this project, a concept is developed that a sensor transmits not only the noise level but also assign the main noise source to the measurements. The measurement results gathered from a sensor network provides both temporal and spatial representation of an environment for further analysis. The details are published in Applied Acoustics as is listed in publications.
- InteractiveAudio (2015): A collaborative project with Nokia. The goal of this project is to analyze continuous recordings and recommend audio segments to end-users for annotation, allowing end-users to train sound event classifiers in a target environment using homogeneous data with minimal effort. Medoid-based active learning (MAL) is proposed that saves 50% to 60% labeling effort to achieve the same accuracy, with respect to all the reference methods. The details of MAL is published in ICASSP 2017 as is listed in publications.
- VoiceActive (2016): Another collaborative project. Training vocal mode (speech, singing, whispering, laughter) classifiers for general purpose. There exists many public datasets containing one or two of the classes. Multiple datasets have been collected as training material. The mismatch in channel effects makes the obtained classifiers working poorly on heterogeneous data. The proposed feature normalization technique largely improves the classification performance (70%→96%) in heterogeneous recognition scenario. The details are published in WASPAA 2017 as is listed in publications.
- INCA (2017): A collaborative project with DSP Group. The content of the project is confident at the moment.

2009–2010 **Webmaster**, *China Wall Covering Association*, Beijing.

Build and maintain websites and mail service. Gaining computer networking knowledge and familiarizing with Linux as server, using tools such as Nginx and Postfix.

Publications

- “Active learning for sound event classification by clustering unlabeled data”, Zhao S.Y., T. Heittola, T. Virtanen, In proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), p. 751–755, 2017.
Best student paper award finalist
- “Learning vocal mode classifiers from heterogeneous data sources”, Zhao S.Y., T. Heittola, T. Virtanen, In proc. IEEE Workshop on Applications of Signal Processing to Audio and Acoustics (WASPAA), 2017, to appear.
- “Environmental Noise Monitoring Using Source Classification in Sensors”, P. Majjala, Zhao S.Y., T. Heittola, T. Virtanen, *Applied Acoustics*, Volume 129, Pages 258–267, 2018.
- “A personalized hybrid music recommender based on empirical estimation of user-timbre preference”, Zhao S.Y. Master Thesis, Tampere University of Technology, 2014.