

Masood Delfarah, Ph.D. Candidate

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RESEARCH INTERESTS

Monaural Speech Enhancement
Speech Dereverberation
Microphone Array Speech Processing

Automatic Speech Recognition
Deep Learning
Statistical Machine Learning

EDUCATION

Department of Computer Science and Eng., The Ohio State University
Ph.D. in Computer Eng. Fall 2013 – Present
Supervisor: Prof. DeLiang Wang

School of Electrical and Computer Engineering, The University of Tehran
B.Sc. in Computer Eng. Fall 2008 – Spring 2013
GPA: 16.57/20.00 (top 10%).

PUBLICATIONS AND PRESEN- TATIONS

Journal papers:

- Eric W. Healy, **Masood Delfarah**, Jordan L. Vasko, Brittney L. Carter, and DeLiang Wang, “An algorithm to increase intelligibility for hearing-impaired listeners in the presence of a competing talker.” *The Journal of the Acoustical Society of America*, vol. 141, pp. 4230–4239, 2017.
- **Masood Delfarah** and DeLiang Wang, “Features for masking-based monaural speech separation in reverberant conditions.” *IEEE/ACM Transactions on Audio, Speech, and Language Processing*, vol. 25, pp. 1085–1094, 2017.
- Maryam S. Mirian, **Masood Delfarah**, and Behzad Moshiri, “Proposing a Unified Knowledge and Experience-based System using Information Fusion Approach to Facilitate the Disaster Management Process” *Disaster Management Knowledge Quarterly* (in Persian), vol. 2, pp. 215–227, 2012.

Conference papers:

- **Masood Delfarah** and DeLiang Wang, “A feature study for masking-based reverberant speech separation.” *Proceedings of INTERSPEECH*, pp. 555–559, 2016.

Selected poster presentations:

- Eric W. Healy, **Masood Delfarah**, Jordan L. Vasko, and Brittney L. Carter, and DeLiang Wang, “Can a trained deep neural network be implemented into hearing technology?” *Acoustics '17 Boston*, 2017.
- Eric W. Healy, **Masood Delfarah**, Jordan L. Vasko, Brittney L. Carter, and DeLiang Wang, “An algorithm to increase intelligibility for hearing-impaired listeners in the presence of a competing talker” *Acoustics '17 Boston*, 2017.

RESEARCH EXPERIENCE

Graduate Research:

- Collaborated in a team to duplicate speaker independent speech separation methods such as deep clustering deep attractor network and permutation invariant training
- Did augmented object detection and question answering
- Used Matlab to do cochannel speaker identification in reverberant conditions

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- Implemented deep neural network to do speech separation in reverberant and anechoic conditions using matlab
 - did feature study and SFFS and group lasso
 - did anechoic training and set up experiments
 - did reverberant two-stage Drev and denoise using tensorflow
- did DNN-based cochannel speaker identification

Undergraduate research:

- **(BsC thesis)** Designing and implementing a learning style classifier for toddlers, based on cognitive traits of children and Information Processing Theories on the ELCK-12 dataset.
- Proposing a knowledge-base for disaster management Supervisor
- Analyzed Persian Blogosphere to Obtain Social Network of Iranian Politicians and visualizing and graph clustering using *Gephi*.

PROFESSIONAL EXPERIENCE

- Reviewer:*
- IEEE/ACM Transactions on Audio, Speech, and Language Processing
 - Speech Communication

Graduate Teaching Assistant, The Ohio State University:

- Modeling and Problem Solving with Spreadsheets and Databases Spring 2017
- Modeling and Problem Solving with Spreadsheets and Databases Spring 2014
- Foundations I: Discrete Structures Fall 2013

Undergraduate Teaching Assistant, The University of Tehran:

- Design and Analysis of Algorithms Spring 2012
- Discrete Mathematics Course Spring 2012
- Artificial intelligence Fall 2011

COMPUTER SKILLS

Proficient in C/C++

Experienced in MATLAB, Python, and Java

Familiar with C#, PHP, JavaScript, HTML, and SQL

Other skills: Bash, git, and L^AT_EX

Machine Learning toolboxes: Tensorflow, Caffe, htk, theano, MXNet