

Hamid (Seyed Hamidreza) Mohammadi

E-mail: hamid@oben.com
Website: shamidreza.github.io

RESEARCH INTERESTS	Machine learning and it's applications to Speech Signal Processing, such as Voice Conversion (VC), Text-to-Speech (TTS) Synthesis
EDUCATION	<p>Ph.D., Computer Science and Engineering Oregon Health and Science University, Portland, OR, expected 2018</p> <p>M.Sc., Computer Engineering, Artificial Intelligence Sharif University of Technology, Tehran, IRAN, September 2011</p> <p>B.Sc., Computer Engineering, Software Engineering Isfahan University of Technology, Isfahan, IRAN, September 2009</p>
POSITIONS	<p>ObEN Inc., Pasadena, CA June 2015 - Present Research Scientist</p> <ul style="list-style-type: none">• Working with an R&D team to implement a text-to-speech adaptation system• Leading a Development team for reducing a TTS system latency (95% latency reduction)• Researching and inventing methods for improving VC and TTS systems• Developed techniques for DNN-based many-to-many voice conversion• Developed LSTM and Adversarial training for TTS and VC acoustic modeling• Developed cross-lingual VC and TTS adaptation techniques <p>Biospeech, Inc., Portland, OR Summer 2013 Speech Research Intern</p> <ul style="list-style-type: none">• Improving the naturalness of a Unit-Selection Speech Synthesizer system by improving the interpolation techniques. Reduced click distortions• Improving the naturalness of a Unit-Selection Speech Synthesizer system by doing energy normalization. Reduced energy mismatches between units <p>Center for Spoken Language Processing, OHSU, Portland, OR 2011 - Present Graduate Research Assistant</p> <ul style="list-style-type: none">• Developing and inventing various voice transformation methods, including frequency warping, deep neural networks, joint-autoencoders, siamese architectures, Gaussian mixture models, hidden Markov models.• Making conversational speech more clear with application to improving intelligibility in hearing-aid devices <p>Speech Processing Lab. and ASR Co., Tehran, IRAN Fall 2009 - Fall 2011 Researcher and Developer</p> <ul style="list-style-type: none">• Improving speaker diarization system performance (MATLAB)• Participated in developing a speaker diarization system over telephone (C++)
COMPUTER SKILLS	<p><i>Languages:</i> Python, C, C++, C#, ...</p> <p><i>ML Toolkits:</i> Theano, TensorFlow, Keras, PyTorch</p> <p><i>Speech Toolkits:</i> Merlin, HTS, Festival, HTK, SPTK</p>

- PUBLICATIONS** **S.H. Mohammadi**, T. Kim, Investigation of using disentangled and interpretable representations for one-shot cross-lingual voice conversion, *Interspeech*, 2018.
- S.H. Mohammadi**, A. Kain, Siamese Autoencoders for Speech Style Extraction and Switching Applied to Voice Identification and Conversion, *Interspeech*, 2017.
- S.H. Mohammadi**, A. Kain, An overview of voice conversion systems, *Speech Communication*, 2017.
- S.H. Mohammadi**, A. Kain, A Voice Conversion Mapping Function based on a Stacked Joint-Autoencoder, *Interspeech* 2016.
- S.H. Mohammadi**, A. Kain, Semi-supervised Training of a Voice Conversion Mapping Function using Joint-Autoencoder, *Interspeech* 2015.
- M.S. Elyasi Langarani, J. van Santen, **S.H. Mohammadi**, A. Kain, Data-driven Foot-based Intonation Generator for Text-to-Speech Synthesis, *Interspeech* 2015.
- S.H. Mohammadi**, A. Kain, Voice Conversion Using Deep Neural Networks With Speaker-Independent Pre-Training, *SLT* 2014.
- S.H. Mohammadi**, A. Kain, Transmutative Voice Conversion, *ICASSP* 2013.
- S.H. Mohammadi**, A. Kain, J. van Santen, Making Conversational Vowels More Clear, *Interspeech* 2012.
- S.H. Mohammadi**, H. Sameti, M.S. Elyasi Langarani, A. Tavanaei, KNNDIST: A Nonparametric distance measure for speaker segmentation, *Interspeech* 2012.
- E. Morley, E. Klabbers, J. van Santen, A. Kain, **S.H. Mohammadi**, Synthetic F0 Can Effectively Convey Speaker ID in Delexicalized Speech, *Interspeech* 2012.
- S. Bahaadini, H. Sameti, F. Jabbari, **S.H. Mohammadi**, Glottal Pulse Shape Optimization using Simulated Annealing, *AISP* 2012.
- S.H. Mohammadi**, H. Sameti, et al, Filter-bank Design Based on Dependencies Between Frequency Components and Phoneme Characteristics, *EUSIPCO* 2011.
- S. Bahaadini, H. Sameti, **S.H. Mohammadi**, Comparative study of different excitation signals on Mel-generalized cepstral synthesis filters, *AISP* 2011.
- TEACHING** **Guest Lecturer**, Deep Learning; A Hands-on Introduction, Advanced Topics in Speech Processing Course at UCLA Spring 2018, 2018-04-23.
- Guest Lecturer**, Introduction to Deep Learning, Advanced Topics in Speech Processing Course at UCLA Spring 2017, 2017-04-18.
- Guest Lecturer**, Capturing and Synthesizing Human Voice, Speech Processing Course at UCLA Spring 2016, 2016-04-13.
- Guest Lecturer**, Recent advances in Speech Generation using Deep Learning Techniques, Advanced Machine Learning Course at OHSU Fall 2015, 2015-09-28.
- Guest Lecturer**, Deep Learning, Machine Learning Course at OHSU Spring 2015, 2015-06-01.
- Teaching Assistant**, Speech Processing, Sharif University of Tech., Fall 2010.
- Teaching Assistant**, Speech Recognition, Sharif University of Tech., Winter 2010.
- Teaching Assistant**, Neural Networks, Sharif University of Tech., Spring 2011.
- ACTIVITIES** **Reviewer**, IEEE Transactions on Audio, Speech, and Language Processing, Speech Communication, Journal of AI Research, APSIPA Transactions on Signal and Information Processing, ICASSP, Interspeech, ICCCT.
- Organizing Committee**, Volunteer at Interspeech 2012 conference.
- Member**, CSLU Graduate Admission Committee
- Student Member**, ISCA, IEEE Signal Processing Society
- REFERENCES** Available upon request