# Hamid (Seyed Hamidreza) Mohammadi

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| **RESEARCH INTERESTS** | Machine learning and it's applications to Speech Signal Processing, such as Voice Conversion (VC), Text-to-Speech (TTS) Synthesis |

**EDUCATION**

***Ph.D.***, Computer Science and Engineering
Oregon Health and Science University, Portland, OR, expected 2018

***M.Sc.***, Computer Engineering, Artificial Intelligence
Sharif University of Technology, Tehran, IRAN, September 2011

***B.Sc.***, Computer Engineering, Software Engineering
Isfahan University of Technology, Isfahan, IRAN, September 2009

**POSITIONS**

***Oben Inc.***, Pasadena, CA                                  June 2015 - Present
Research Scientist

- 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

***Biospeech, Inc.***, Portland, OR                                  Summer 2013
Speech Research Intern

- 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

***Center for Spoken Language Processing***, OHSU, Portland, OR  2011 - Present
Graduate Research Assistant

- 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

***Speech Processing Lab.*** and ***ASR Co.***, Tehran, IRAN       Fall 2009 - Fall 2011
Researcher and Developer

- Improving speaker diarization system performance (MATLAB)
- Participated in developing a speaker diarization system over telephone (C++)

**COMPUTER SKILLS**

*Languages:* Python, C, C++, C#, ...
*ML Toolkits:* Theano, TensorFlow, Keras, PyTorch
*Speech Toolkits:* Merlin, HTS, Festival, HTK, SPTK

**PUBLICATIONS**  **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.*
A. Tavanaei, H. Sameti, **S.H. Mohammadi**, *False alarm reduction by improved filler model and post-processing in speech keyword spotting, MLSP 2011.*
S. Bahaadini, H. Sameti, **S.H. Mohammadi**, *Comparative study of different excitation signals on Mel-generalized cepstral synthesis filters, AISP 2011.*
**S.H. Mohammadi**, S. Darabi, M. Mahdavi, *Moving from C to C++ (translation from English to Persian), IUT Press, Summer 2006.*
**S.H. Mohammadi**, *Reducing one-to-many problem in Voice Conversion by equalizing the formant locations using dynamic frequency warping, arXiv:1510.04205, 2015.*

**TEACHING**  **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, 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