

**Dissertation press release**

**25.05.2020**

## **Text-to-Speech Synthesis using Deep Learning**

<b>Title of the dissertation</b>	Improving the quality of text-to-speech (TTS) using deep learning -- Emphasis on vocoders and speaking style adaptation
<b>Contents of the dissertation</b>	Speech is the hallmark of human communication. It is difficult to imagine communication between people without speech and the communication is a chain that includes both the production and perception of speech. For effective communication, humans adapt their speaking style depending, for example, on the person to whom they speak and on the environment in which they speak. In efforts to make machines communicate as effectively as humans, one should make machines speak and listen like humans. In the past several decades, researchers in the fields of speech recognition and speech synthesis have been tirelessly working to reach this holistic goal. This dissertation focuses on speech synthesis by studying techniques that aim to make machines speak like humans from a given text input. Machines that take text as an input and produce a corresponding speech waveform are called text-to-speech (TTS) systems. The main goal of this dissertation is to improve the overall quality of synthetic speech. Specifically this dissertation studied the vocoders, an important component that decides the overall performance of a TTS system, and speaking style adaptation techniques, which are able to synthesize various speaking styles with a little amount of data. The overall results of this dissertation convinced that it is indeed possible to generate speech that resembles human speech.
<b>Field of the dissertation</b>	Speech and Language Technology
<b>Doctoral candidate</b>	Bajibabu Bollepalli, Licentiate Degree Born in Guntur, 1989
<b>Time of the defence</b>	12.06.2020 at 12:15
<b>Place of the defence</b>	The public defense will be organized via Zoom: <a href="https://aalto.zoom.us/j/68945695146">https://aalto.zoom.us/j/68945695146</a>
<b>Opponent</b>	Dr. Daniel Erro, Spain
<b>Custos</b>	Professor Paavo Alku, Aalto University School of Electrical Engineering, Department of Signal Processing and Acoustics
<b>Supervisor</b>	Professor Paavo Alku, Aalto University School of Electrical Engineering, Department of Signal Processing and Acoustics
<b>Electronic dissertation</b>	<a href="http://urn.fi/URN:ISBN:978-952-60-3890-2">http://urn.fi/URN:ISBN:978-952-60-3890-2</a>
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