

## **Neural Audio Coding – Challenges and Opportunities**

### **Abstract:**

Audio coding aims at transforming audio waveforms for efficient storage and transmission and, hence, became a core technology for communication, virtual reality, and multimedia applications. The ever-increasing number of users sharing limited resources and the increasing amount of data asks for audio codecs providing good perceptual quality at low data rates. Recently, neural codecs relying on deep generative modeling provide promising results that challenge classical coding approaches. This triggered tremendous research efforts from both academia and industry.

In this talk, the basic working principles of state-of-the-art neural audio codecs will be explained, where the focus will be on the end-to-end coding of speech signals. We motivate the need for deep generative modeling for neural speech coding at low bitrates and give an outlook to trends and promising directions in this research field.