



“Source-Filter Separation in the Phase Domain”

(位相領域における
ソースフィルタ分離)

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NITech Frontier Research Institute for Information Science

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場所: 4号館2階会議室3

対象: 一般、大学生、教員



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Abstract:

The source filter model of speech signals is fundamental to many speech signal processing methods. Separation of the energy source and filter operations is commonly performed in time, frequency or cepstral domains, by focusing on the magnitude part of the spectrum. In this talk we illustrate that phase based processing can lead to better outcomes, particularly when processing noisy speech. A phase based separation method is introduced and used in experiments for speech recognition and pitch tracking tasks.

About Speaker:

Thomas Hain is Professor for Speech and Audio Technology at the University of Sheffield, UK, and a member of the Speech and Hearing and Machine Learning research groups. He holds a 'Dipl.-Ing' in Electrical and Communication Engineering from the University of Technology, Vienna, and a PhD in Information Engineering from Cambridge University. He joined Philips Speech Processing in 1994, where he left as Senior Technologist. He moved to the Cambridge University Engineering Department in 1997 and was then appointed to Lecturer(2001). Follow-on stages were a move to Sheffield University (2004), Lead of Machine Intelligence for Natural Interfaces group (2009), Professor (2013), Head of Speech and Hearing Research group (2016) and Head of the Voicebase Centre for Speech and Language Technology (2018). Prof. Hain is active in several editorial and chairmanship roles, including Technical Chair of Interspeech 2019, and has lead more than 20 research projects. His research interests are machine learning methods that can operate with real world data, with emphasis on recognition processes.

本講演は博士前期・博士後期「特別演習」認定講義となりますので、出席の上、必要な条件を満たした場合は、以下の科目の認定要件に加算されます。【学生証持参】

- ・材料・エネルギー特別演習1, 材料・エネルギー特別演習2
- ・情報・社会特別演習1, 情報・社会特別演習2
- ・材料・エネルギー先進特別演習1, 材料・エネルギー先進特別演習2
- ・情報・社会先進特別演習1, 情報・社会先進特別演習2