



“Building new text-to-speech systems for lower-resource languages”

(不十分な言語資源によるテキスト音声合成システムの構築)

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対象: 一般、大学生、教員

Abstract:

Building text-to-speech systems for `new' languages or domains is labour intensive, highly skilled, and reliant on expensive labelled data, or the capability to produce such data. This is because the front-end of a text-to-speech system comprises a number of Natural Language Processing submodules that tokenise the text, expand and normalise Non-Standard Words, predict pronunciations, and so on. Creating these sub-modules requires expert knowledge of the language, and/or data labelled by expert native speakers of that language.

This talk describes some of the opportunities for applying machine learning in the front-end, substituting traditional components with learned-from-data alternatives. For example, instead of a Part-Of-Speech tagger, we can use distributional statistics of words, or embeddings into a vector space. Rather conveniently, the use of such continuous representations instead of linguistic symbols also lets us apply a wider array of machine learning approaches elsewhere in the text-to-speech system, such as for acoustic modelling and waveform generation.

But, a remaining challenge is how to continue exploiting valuable knowledge sources - such as pronunciation dictionaries, or hand-labelled data - where they exist, whilst taking advantage of the latest, powerful machine learning methods.

<http://simple4all.org>

About Speaker:

Simon King holds M.A. and M.Phil. degrees from Cambridge and a Ph.D. from the University of Edinburgh. He has been with the Centre for Speech Technology Research at the University of Edinburgh since 1993, where he is now Professor of Speech Processing and the director of the center. His interests include speech synthesis, recognition and signal processing and he has around 170 publications in these areas. He has served on the ISCA SynSIG board and co-organizes the Blizzard Challenge.

He previously served on the IEEE SLTC and as an associate editor of the IEEE Transactions on Audio, Speech and Language Processing, and is a current associate editor of Computer Speech and Language.

See also <http://frontier.web.nitech.ac.jp/en/archives/faculty/simon-king-ph-d>

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。

- ・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