



Signal Processing and Systems (SP&S) Seminar

You are invited to attend a lecture by

הנכם מוזמנים להרצאה של

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בנושא :

Statistical Methods for Speech Processing In Low Resource Environments

Modern speech processing systems often require large scale resources in terms of training set size and computational effort, which presents an engineering challenge when implemented in low resource environments. In this work we address two major speech processing tasks: a voice conversion task, in which a sentence said by a source speaker is converted to sound as if said by a target speaker, and a keyword spotting task of detecting whether a given keyword was said in a speech utterance.

Existing voice conversion systems require several dozen of recorded sentences and often produce muffled synthesized signals due to over-smoothing of the converted spectral envelope. We present a method for voice conversion for low resource applications, where the conversion process is expressed as a sequential estimation problem of tracking the target spectrum based on the observed source spectrum. To improve the quality of the converted synthesized signals, we also present methods for enhancing the global variability of the converted signal.

Standard keyword spotting methods are based on statistical modeling and therefore require large scale and often segmented datasets. We present a novel, discriminative and unsupervised method for keyword spotting, adequate for mobile applications. Extensive experiments show that our method outperforms the standard approach in several challenging conditions such as: extremely small training set sizes, highly variable speech signals (such as children's speech) and noise.

* PhD thesis under the supervision of Prof. David Malah and Prof. Koby Crammer

The lecture will take place on Thursday, 22/10/2015
at 11:30 in room 1061
Electrical Eng. Building
Technion City

ההרצאה תתקיים **ביום חמישי**, 22/10/2015
בשעה 11:30 בחדר 1061
בבניין הפקולטה להנדסת חשמל
קריית הטכניון

כיבוד קל יוגש לפני תחילת ההרצאה

על מנת להיכנס עם רכב לטכניון יש לציין כי אתם מגיעים להרצאה של:
"סמינר עיבוד אותות ומערכות"

