

## SRbS Seminar Program 2015-2016 (Semester 2)

Seminars take place in Gisbert Kapp N123 Wednesdays 14:00-15:00 unless otherwise indicated.

### Summer Term

Wk.	Date	Speaker(s)	Title
2	<b>Fri 6 May</b>	Roger K. Moore, Sheffield	On Speaker-Listener-Environment Coupling: Implications for Computational Models of Spoken Language <b>Room N521</b>
3	11 May	Kate Knill, Cambridge	Machine learning of level and progression in second/additional language spoken English
4	18 May	Dr. Alptekin Temizel, METU, Turkey	Multimodal First-Person Activity Recognition and Summarization

### Titles and Abstracts

- Prof. Roger K. Moore, Chair of Spoken Language Processing, Vocal Interactivity Lab (VILab), Sheffield Robotics, Speech & Hearing Research Group (SPandH), Department of Computer Science, University of Sheffield

#### **On Speaker-Listener-Environment Coupling: Implications for Computational Models of Spoken Language**

**Abstract:** The field of spoken language processing (SLP) typically treats speech as a stimulus-response process, hence there is strong interest in the SLP community in using the latest machine learning techniques to estimate the assumed static transforms. This is especially true at the present time as evidenced by the huge growth in research using deep neural nets. However, in reality, speech is not a static process - rather it is a sophisticated joint behaviour resulting from actively managed dynamic coupling between speakers, listeners and their respective environments. Multiple layers of feedback control play a crucial role in maintaining the necessary communicative stability, and this means that there are significant dependencies that are overlooked in contemporary SLP approaches. This talk will address these issues in the wider context of intentional behaviour, and will give an insight into the implications of such a perspective for the next generation of computational models for spoken language processing.

- Dr Kate Knill, Machine Intelligence Laboratory, Department of Engineering, Cambridge University

#### **Machine learning of level and progression in second/additional language spoken English**

**Abstract:** As more data becomes available, systems to automatically assess spoken English are increasing in their power and practicality. These systems can, for example, help reduce human assessment effort and allow learners to independently monitor their progress. This talk will discuss the development of automatic systems for different levels of learners and what we can learn about a learner's progression from their spoken data.

- Dr. Alptekin Temizel, Associate Professor - Graduate School of Informatics, Middle East Technical University (METU); Visiting Academic - Electronic, Electrical and Systems Engineering, University of Birmingham

#### **Multimodal First-Person Activity Recognition and Summarization**

**Abstract:** First-person (egocentric) videos are captured using a camera on a person and reflect the first person view perspective. In these videos, the observer itself is involved in the events and the camera undergoes large amounts of ego-motion. In typical third-person perspective videos, the camera is usually stationary and it is away from the actors involved in the events. These different characteristics of first-person videos make it difficult to use the existing approaches directly and necessitate different approaches to the problem. In addition to the video data, use of additional modalities has the potential to contribute positively by bringing complementary information. An important modality is audio as it is readily accessible and allows detecting different activities and interactions. On the other hand, fusion of different modalities also brings new challenges. In this talk, I will be talking about the current state-of-the-art and particular challenges regarding the analysis of multimodal first-person data.