Workshop « Dyslexia and Speech Processing »

25th and 26th October 2023

MSHS Sud-Est, 25 avenue François Mitterrand, Nice, France

Room 009

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Abstract

Developmental dyslexia is a learning disability characterized primarily by an impaired ability to learn to read, although difficulties are not limited to reading and also affect speech perception. Dyslexia is associated with phonological processing deficits (Blomert, 2011; Del Tufo & Earle, 2020; Ramus et al., 2003; Ramus, 2014; Szenkovits & Ramus, 2005a) that do not only affect the early stages of development. Indeed, research has shown that adults with dyslexia perform poorly on tasks that focus on phonological processing. Nevertheless, these difficulties cannot be accounted for by low IQ level, poor education, or sensory or neurological deficits. As mentioned by Goswami et al. (2002), the phonological deficits in dyslexia may go beyond phonological awareness and phonological representation of words, and underly processes of extraction of suprasegmental information. Moreover, it has been clearly showed that dyslexics perform poorly when speech signal is presented in adverse conditions such as in noise. To explore these issues, the development and exploitation of new methods are fundamental.

During this workshop we will discuss new methods of speech synthesis and adaptation of experimental paradigms, evaluating the possibility of testing the processing of different acoustic cues. In particular, we will elaborate on the reverse correlation approach and its relevance for identifying the processing of specific acoustic cues. This *revcorr* approach consists in introducing random fluctuations into a stimulus and measuring how specific patterns of fluctuations affect recognition. This method allows the investigation of several acoustic dimensions at the same time and the use of test stimuli that are preprocessed (as experimental stimuli) with minimal assumptions.

Call & Inscription

We welcome submissions for poster presentations (max. one page text and one page supporting material such as graphs, examples, references), to be sent to fanny.meunier@univ-cotedazur.fr.
No fees are charged to participants but registration is required to ensure proper organization.
Please send an email to fanny.meunier@univ-cotedazur.fr to register.

Invited speakers with talks on October 25th afternoon :

1. **Deniz Başkent –** University of Groningen, dB SPL Lab, Groningen, NL, https://www.dbspl.nl/
2. **Maria Del Mar Cordero Rull** – Laboratoire Bases, Corpus, Langage, Nice, https://bcl.cnrs.fr/rubrique440
3. **Etienne Gaudrain** - CNRS, Centre de Recherche en Neurosciences de Lyon https://www.crnl.fr/fr/user/187
4. **Julien Meyer** - CNRS, Gipsa Lab, Grenoble, https://www.gipsa-lab.grenoble-inp.fr/page_pro.php?vid=2481
5. **Léo Varnet** - CNRS, Laboratoire des Systèmes Perceptifs, Paris, https://dbao.leo-varnet.fr/

Schedule - Wednesday 25th October 2023

14:00 - Opening

14:15 - *Unveiling Word Boundary Cues through Reverse Correlation - 5*

15:00 - *Speech resynthesis - 3*

15:45 - *Speech segmentation and dyslexia - 2*

16:30 - *Traditional modified speech practices as a tool to study speech processing - 4*

17:15 - *Voice perception in children - 1*

Thursday 26th October 2023

9:30 – Short talks & Posters

11:00 – Table Ronde & Discussion

12:00 – 14:00: Pause déjeuner

14:00 – 17:00 Réunion de travail / Projets KerAmi