



XVII AISV Conference

## **Speaker Individuality in Phonetics and Speech Sciences: Speech Technology and Forensic Applications**

*Zurich, 4-5 February 2021*

Phonetics Laboratory, Department of Computational Linguistics  
Centre for Forensic Phonetics and Acoustics

Research in language sciences typically focuses on the analysis of linguistic systems and on aspects of language variation determined by sociolinguistic parameters such as the geographical and social origin of the speaker or the situational context. Research in speech sciences, on the other hand, is mainly concerned with the dynamics of speech production and perception, so that interspeaker acoustic variability – far from being a disturbance factor or ‘noise’ – may itself constitute an object of inquiry. Moreover, the speaker-specific dimensions of variation are of great relevance in several domains of applied sciences such as speech technologies (e.g., automatic speech and speaker recognition) or forensic phonetics.

This conference provides a forum for discussing and sharing research experiences related to different aspects of speaker individuality which are investigated from a multi-disciplinary perspective. Among the possible research topics we suggest the following:

- Speaker-specific acoustic properties of vowel and consonants (e.g., formants, spectral moments or VOT)
- Speaker-specific acoustic properties of intonational patterns (e.g., the range and median of F0 or particular contours)
- Temporal aspects which contribute to speaker individuality (e.g., articulation and speech rate, rhythm metrics)
- Individual aspects of voice quality (such as creaky or breathy voice) and their acoustic measurements (e.g., harmonics to noise ratio)
- Aspects related to the geographical origin of individual speakers (phonetic features of dialects or regional varieties of standard languages)
- Socio-phonetic aspects of speech variation including gender, age, class or ‘community of practice’
- Effects of voice disguise on speaker individuality and recognition
- Building and using corpora and databases for forensic purposes
- Qualitative and quantitative requirements for acoustic stimuli used as forensic evidence
- Audio enhancement techniques for improving speaker recognition in noisy signals
- Statistical models and tools for the analysis of speaker individuality and speaker recognition

Following the tradition of AISV conferences, the programme will also include open sessions on any aspect of speech science research.

### **Invited speakers**

KIRSTY MCDUGALL, University of Cambridge (UK)

<https://www.mml.cam.ac.uk/dr-kirsty-mcdougall>

HELEN FRASER, University of New England (New South Wales – Australia)

<https://helenfraser.com.au>

### **Satellite workshop**

The conference will be preceded by a half-day satellite workshop on automatic and semi-automatic procedures of speaker recognition, held by MICHAEL JESSEN (Bundeskriminalamt, Wiesbaden – Germany).

### **Round table**

At the end of the conference a round table on *Current trends and issues in forensic phonetics research* will be moderated by PETER FRENCH (University of York, UK). Round table participants are: VOLKER DELLWO (University of Zurich, CH), HELEN FRASER (University of New England, Australia), MICHAEL JESSEN (BKA Wiesbaden, D), KIRSTY MCDUGALL (University of Cambridge, UK) and LUCIANO ROMITO (Università della Calabria, I).

### **Abstract submission**

Authors are invited to submit abstracts by 20 September 2020. Abstracts can be written in Italian or in English and should be limited to 1000–1500 words (references excluded). The whole abstract, including references and figures should not exceed two A4 pages.

Abstracts should be anonymous and submitted in PDF format only through *EasyChair* following the procedure indicated on the conference website (available from 15 July 2020).

Both oral and poster presentations are possible: Authors may express their preference (the final decision will be taken, however, by the organising committee).

Full papers must be submitted by 16 May 2021. Please note that the acceptance of the abstract does not necessarily entail the publication of the paper in the *Studi AISV* series. Further information will follow soon.

### **Presentations**

Oral presentations will be limited to 15–20 minutes, followed by a short discussion. Slides should be prepared in \*.ppt or \*.pdf format. Poster presentations will be introduced by a *poster slam* session during which authors will present their research in one minute. Posters should be printed in A0 format (841mm × 1189mm) and in portrait orientation.

The languages of the conference are Italian and English. We invite authors to write their posters and presentation slides in English in order to facilitate the discussion among all participants.

### **Important dates**

Abstract submission: 20 September 2020

Notification of acceptance: 30 October 2020

Conference dates: 4-5 February 2021

Full paper submissions: 16 May 2021

### **Conference fees (including one year AISV membership)**

- full rate (including post-docs and PhD students with scholarship): 125 €
- reduced rate (graduate and undergraduate students, PhD students with no scholarship): 75 €

Online registration will be available from 1 December 2020 until 15 January 2021. After that, registration will be possible on site with an additional charge of 30 €.

### **Franco Ferrero Award**

This Award is offered to young researchers for scientific papers in two categories:

- Linguistics, Phonetics, Phonology
- Speech technology

We strongly encourage young researchers with a non-permanent position who are the unique or first author of the work to consider the possibility to apply when submitting the paper. For further information:

<https://www.aisv.it/it/premio-ferrero.html>

### **Organising Committee**

Camilla Bernardasci  
Volker Dellwo  
Dalila Dipino  
Davide Garassino  
Michele Loporcaro  
Stefano Negrinelli  
Elisa Pellegrino  
Stephan Schmid  
Dieter Studer-Joho

### **Contact and information**

If you have any questions, please use the following email address to contact the Organising Committee: [aisv2021@gmail.com](mailto:aisv2021@gmail.com)

For further information:

<https://www.cl.uzh.ch/en/aboutus/events/AISV2021.html>