Workshop on Speech Production in Automatic Speech Recognition

August 30, 2013
Lyon, France

Call for Papers and Participation

The use of speech production knowledge and data to enhance speech recognition is being actively pursued by a number of widely dispersed research groups using different approaches. The goal of this workshop is to bring together these research groups, as well as other researchers who are interested in learning about or contributing ideas to this area, to share ideas, results, and perspectives in an intimate and productive setting. The range of techniques currently being explored is rapidly growing, and is increasingly benefiting from new ideas in machine learning and availability of data, making this a particularly good time for such a workshop.

The workshop will feature a series of invited talks and general submissions. Submissions focusing on novel research, review papers, and position papers are solicited.

Topics

Topics of interest include speech production models in speech recognition, the collection and use of speech production data, acoustic-to-articulatory inversion, silent speech interfaces, and the use of speech production in related areas such as speech synthesis and voice conversion.

Paper/Abstract Submission

Prospective authors are invited to submit 2-page abstracts or 4-6 page papers written in English. Each paper/abstract will be reviewed by at least two reviewers. Each accepted paper/abstract must have at least one registered author. See the submissions link to the left for further guidelines.

Important Dates

June 17  Papers/abstracts due
July 10   Notification of acceptance
July 20   Deadline for early registration and camera-ready revisions
August 30 Workshop

Invited Speakers

Bruce Denby (U. Pierre et Marie Curie)
Carol Espy-Wilson (U. Maryland)
Shrikanth Narayanan (USC)
Korin Richmond (U. Edinburgh)
Frank Rudzicz (U. Toronto)

Organizing Committee

Scientific Co-Chairs

Karen Livescu  TTI-Chicago
Jeff Bilmes  University of Washington
Eric Fosler-Lussier  Ohio State University
Mark Hasegawa-Johnson University of Illinois at Urbana-Champaign

Local Organization

Emmanuel Ferragne Université Lyon
Workshop on Speech Production in Automatic Speech Recognition
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Venue

The workshop will be held at Institut des Sciences de l'Homme in Lyon, 14 Avenue Berthelot.

From the airport: take Airport shuttle to Part-Dieu - then Metro B to Jean Macé - then either walk to 14 Avenue Berthelot (5 min) or take Tram T2 towards Perrache and get off at Centre Berthelot (one station from Jean Macé).

From Gare Part-Dieu (which is where many participants to the main conference have their hotels): same as above, except for the Airport shuttle.

From the Interspeech venue to the Institut des Sciences de l'Homme: bus C1 to Part-Dieu, then, same as above.

At the Institut, please look for signs indicating where the workshop is.
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Local Organization

Emmanuel Ferragne  Université Lyon 2

Scientific Program Committee

Miguel Carreira-Perpiñán
Bruce Denby
Li Deng
Carol Espy-Wilson
Prasanta Kumar Ghosh
Louis Goldstein
Simon King
Florian Metze
Vikramjit Mitra
Shri Narayanan
Korin Richmond
Frank Rudzicz
Odette Scharenborg
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Program

09:00-09:45  Invited talk: Shri Narayanan
Measuring and Using Speech Production Information: Some New Opportunities

09:45-10:30  Invited talk: Carol Espy-Wilson
The Invariant Property of Gestures

10:30-10:45  Break

10:45-11:30  Invited talk: Frank Rudzicz
Completing the Noisy Circuit: Systems of Feedback in Models of Dysarthria

11:30-12:00  Spotlight talks: Schuppler, Ramanarayanan, Magimai-Doss, Juneja, Badino, Li

12:00-13:45  Lunch break

13:45-14:30  Invited talk: Korin Richmond
On Measuring and Estimating Speech Articulation

14:30-15:15  Invited talk: Bruce Denby
Down with Sound, the Story of Silent Speech

15:15-15:40  Spotlight talks: Kim, Freitas, Rasilo, Andrew, Fosler-Lussier

15:40-17:30  Poster session + Carstens info booth
B. Carstens and B. Carstens
Carstens Medizinelektronik GmbH information and demonstration booth

B. Schuppler, J. van Doremalen, O. Scharenborg, B. Cranen, and L. Boves
The challenge of manner classification in conversational speech

V. Ramanarayanan, M. Van Segbroeck, and S. Narayanan
On the nature of data-driven primitive representations of speech articulation

M. Magimai-Doss and R. Rasipuram
On using articulatory features in posterior-based ASR system: Representation, estimation, and integration

A. Juneja and M. Hasegawa-Johnson
Experiments on context awareness and phone error propagation in human and machine speech recognition

C. Canevari, L. Badino, L. Fadiga, and G. Metta
Cross-corpus and cross-linguistic evaluation of a speaker-dependent HMM-DNN ASR system

M. Li, A. Lammert, J. Kim, P. Kumar Ghosh, S. Narayanan
Automatic classification of palatal and pharyngeal wall shape categories from speech acoustics and inverted articulatory signals

Y.-C. Kim, J. Kim, M. Proctor, A. Toulios, K. Nayak, S. Lee, and S. Narayanan
Toward automatic vocal tract area function estimation from accelerated three-dimensional magnetic resonance imaging

J. Freitas, A. Teixeira, and M. Sales Dias
Multimodal silent speech interface based on visual, depth, surface electromyography, and ultrasonic Doppler

H. Rasilo, O. Rasanel, and B. de Boer
Virtual infant's online acquisition of vowel categories and their mapping between dissimilar bodies

G. Andrew, R. Arora, S. Bharadwaj, J. Bilmes, M. Hasegawa-Johnson, and K. Livescu
Using articulatory measurements to learn better acoustic features

Discriminative learning with latent articulatory variables