SPEECH PROSODY
May 25-28, 2020; Tokyo
ISSN: 2333-2042
Proceedings of the 10th International Conference on Speech Prosody
May 25-28, 2000, Tokyo, Japan

Conference booklet
Edited by:
Nobuaki Minematsu

Front cover & 10th Speech Prosody conference logo
Designed by:
Aki van Galen-Kunikoshi
About Speech Prosody

Speech Prosody, the biennial meeting of the Speech Prosody Special Interest Group (SProSIG) of the International Speech Communication Association (ISCA), is the only recurring international conference covering all aspects of prosody in spoken language: social, psychological, linguistic, and technological and so on. Past conferences have been attended by 300-400 international experts representing a range of disciplines including linguistics, acoustics, speech synthesis and recognition, cognitive psychology, neuroscience, speech therapy, language teaching, computer science, electrical engineering, speech and hearing science and psychology.

Speech Prosody 2020 is the 10th anniversary of this academic meeting and was originally scheduled on May 25-28, Tokyo, Japan. Due to COVID-19, however, this conference is realized as video conference. The main theme is "Communicative and Interactive Prosody", and two special sessions are scheduled on this topic.

The past conferences were held at the following places:

2002 at Aix-en-Provence, France
2004 at Nara, Japan
2006 at Dresden, Germany
2008 at Campinas, Brazil
2010 at Chicago, USA
2012 at Shanghai, China
2014 at Dublin, Ireland
2016 at Boston, USA
2018 at Poznan, Poland
Conference Statistics

We received 288 submissions and each paper was reviewed by 2 to 6 expert researchers (average is 3.73) selected from a total of 372 reviewers. Based on the evaluation of the scientific committee, 208 papers were accepted. The acceptance rate is 72.2%.

The number of authors by country

<table>
<thead>
<tr>
<th>Country</th>
<th>Number</th>
<th>Country</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>17</td>
<td>Israel</td>
<td>11</td>
</tr>
<tr>
<td>Austria</td>
<td>6</td>
<td>Italy</td>
<td>7</td>
</tr>
<tr>
<td>Belgium</td>
<td>3</td>
<td>Japan</td>
<td>74</td>
</tr>
<tr>
<td>Brazil</td>
<td>4</td>
<td>New Zealand</td>
<td>3</td>
</tr>
<tr>
<td>Canada</td>
<td>8</td>
<td>Portugal</td>
<td>4</td>
</tr>
<tr>
<td>China</td>
<td>55</td>
<td>Russia</td>
<td>13</td>
</tr>
<tr>
<td>Cyprus</td>
<td>1</td>
<td>South Korea</td>
<td>1</td>
</tr>
<tr>
<td>Czechia</td>
<td>2</td>
<td>Spain</td>
<td>6</td>
</tr>
<tr>
<td>Denmark</td>
<td>2</td>
<td>Sweden</td>
<td>6</td>
</tr>
<tr>
<td>Estonia</td>
<td>9</td>
<td>Switzerland</td>
<td>9</td>
</tr>
<tr>
<td>Finland</td>
<td>6</td>
<td>Malta</td>
<td>1</td>
</tr>
<tr>
<td>France</td>
<td>49</td>
<td>Morocco</td>
<td>5</td>
</tr>
<tr>
<td>Germany</td>
<td>60</td>
<td>Netherlands</td>
<td>4</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>23</td>
<td>Taiwan</td>
<td>19</td>
</tr>
<tr>
<td>Hungary</td>
<td>3</td>
<td>Thailand</td>
<td>1</td>
</tr>
<tr>
<td>India</td>
<td>15</td>
<td>Uganda</td>
<td>1</td>
</tr>
<tr>
<td>Indonesia</td>
<td>1</td>
<td>United Kingdom</td>
<td>33</td>
</tr>
<tr>
<td>Ireland</td>
<td>8</td>
<td>United States</td>
<td>83</td>
</tr>
</tbody>
</table>

The total number of authors is 553
Sessions

A total of 208 presentations are scheduled and they are assigned to the following 21 sessions. The numbers in brackets indicate the number of papers in each session.

Temporal Articulation as It Relates to Communicative Prosody (5)
Acquisition of Interactive Emotional / Social Affective Prosody (6)
Length Contrast in Segments (7)
Heritage Speaker (4)
Prosodic Structure (24)
Focus (11)
Multi-modal (8)
L1 Acquisition (4)
Syntax / Semantics / Pragmatics (21)
Perception / Word Recognition / Lexicon (7)
Tone (10)
Speech Rhythm and Timing (13)
Prosody in Language and Music (6)
Regional Dialect (8)
Speaking Style and Paralinguistics (10)
Socio-phonetics (9)
Conversation / Dialog / Disfluency (10)
Prosody in Audiology and Phoniatrics (6)
L2 / Bilingual (16)
Speech Synthesis / Prosody and Speech Technology (14)
Automatic Processing and Analysis (9)
Intonational phonology can shed light on the nature of prosody in Japanese children with ASD: Dissociating linguistic and para-linguistic aspects of intonation

Dr. Reiko Mazuka (RIKEN Center for Brain Science, Japan, Department of Psychology & Neuroscience, Duke University)

Speech of people with autism spectrum disorders (ASD) has long been associated with atypical prosodic features. Yet, how their prosody differs from that of typically developing persons has not been well-understood. This paper will report data from Japanese high-functioning ASD children and show that an intonational phonological framework can offer a tool to dissociate linguistic aspects of prosody, which are determined by syntactic/lexical factors, from para-linguistic aspects, which are determined by para-linguistic factors such as pragmatic, social/communicative and emotional factors. ASD children’s production was mostly intact with regard to the linguistic aspects of prosody, yet they had considerable problems with para-linguistic aspects.

Twelve Japanese children (10 males, ages 7-17) diagnosed as high-functioning ASD, and 14 typically developing children (8 males, ages 7-16) were tested in an elicited production task. The same children’s naturalistic conversations with an experimenter were also analyzed. The results revealed that both groups of children were able to produce syntactic and lexical aspects of prosody appropriately. Nevertheless, ASD children’s natural conversation contained significantly more instances that were judged “atypical” by trained phoneticians. These “atypical” sections occurred predominantly in the pragmatic and communicative aspects of prosody, e.g., too much emphasis, sudden speech rate changes, and inappropriate pitch contour. These results revealed that ASD participants are able to produce fundamental prosodic structures, while they may have difficulty in using prosody appropriately in interactive communication. It indicates that so-called “atypical prosody” in ASD speech may be better characterized as a secondary effect of the core symptoms of ASD in social communicative interaction difficulty, rather than a linguistic difficulty.
Keynote Talk

Modeling the influence of voice quality setting on segmental structure

Asst. Prof. Scott Reid Moisik (School of Humanities, Nanyang Technological University)

Voice quality – understood in the broad, Laverian (1980) sense of a quasi-permanent auditory coloring of the voice formed by holistic posturing of the vocal tract (both laryngeal and supralaryngeal components) – remains one of the more elusive aspects of prosody, particularly in how it interacts with segmental structure. This talk explores this issue of interaction between segmental structure and voice quality by means of computational modeling of speech. However, we will approach the topic in a somewhat oblique direction, by considering some computational modeling studies that look at the impact of anatomico-morphological variation on speech segment production. Anatomico-morphological variation is, after all, the basis for one’s organic or biologically-determined voice quality. We then consider a parallel between anatomico-morphological variation, which is by and large a permanent “setting” for producing articulation, and voice quality setting, which is an impermanent and dynamic but semi-stable basis of articulation. The talk finishes with the consideration of preliminary computational modeling of the interaction between voice quality setting and segmental structure as a window into this less well-understood aspect of prosody.

Tutorials

Streamlining the processing of F0 data using the R package ‘intonation’

Dr. Aaron Albin (Kobe University, Japan)

Prosodic Analysis of Speech Corpora Using Praaline and R

Dr. George Christodoulides (Metrology and Language Sciences Unit, Université de Mons, Belgium)
Special Sessions

Temporal Articulation as it relates to Communicative Prosody

Donna Erickson (ericksondonna2000@gmail.com)
Michinau Matsui (michinao.matsui@ohsu.ac.jp)
Caroline Menezes (caroline.Menezes@utoledo.edu)

Topics include a broad range covering articulation of prosody, syllables & prominence, time map & functional phonology, articulatory phonetics & phonology, temporal articulatory models, including the C/D model, among others. The study of temporal organization of speech has been for the most part based on acoustical measurements, specifically, fft-based analyses of source and filter characteristics of speech. To a certain extent, the focus on acoustically-based temporal organization of speech is a result of the development of signal processing techniques of the acoustic signal; however, now that more access to articulatory analysis tools is possible, it is appropriate to examine temporal organization of speech from the framework of articulation. This special session is proposed to address this lacuna in the study of temporal organization of speech.

Acquisition of Interactive Emotional/Social Affective Prosody

Ryoko Hayashi (rhayashi@kobe-u.ac.jp)
Motoko Ueyama (motoko@sslmit.unibo.it)
Donna Erickson (ericksondonna2000@gmail.com)

Topics include a broad range covering acquisition of articulation, acoustic, perception of emotional prosody, including social affective expressions in various languages and cultures. Recently, much work is being done on emotional prosody, including social affective expressions; however, not that much has been done on acquisition of emotional and social affective prosody. Learning a second language successfully includes learning not just vocabulary and syntax, but also how to use the language in various types of social interactions.
# Organizing Committee Members of Speech Prosody 2020

## General chair and co-chairs
- Nobuaki Minematsu (UTokyo)
- Mariko Kondo (Waseda Univ.)
- Takayuki Arai (Sophia Univ.)
- Ryoko Hayashi (Kobe Univ.)

## Other members of the organizing committee
- Kiyoko Yoneyama (Daito Bunka Univ.)
- Hideaki Kikuchi (Waseda Univ.)
- Ayako Shirose (Tokyo Gakugei Univ.)
- Shigeto Kawahara (Keio Univ.)
- Kanae Amino (NRIPS)
- Miki Ikoma (Waseda Univ.)
- Nigel Ward (Univ. of Texas)
- Takehiko Makino (Chuo Univ.)
- Mariko Sugahara (Doshisha Univ.)
- Donna Erickson (Haskins Lab.)
- Carlos Toshinori Ishi (ATR)
- Noboru Takahashi (UTokyo)

## Secretary
- Daisuke Saito (UTokyo)

## Program chair and co-chair
- Mariko Sugahara (Doshisha Univ.)
- Takayuki Arai (Sophia Univ.)
- Donna Erickson (Haskins Lab.)
- Mafuyu Kitahara (Sophia Univ.)

## Program chair and co-chair
- Mariko Sugahara (Doshisha Univ.)
- Takayuki Arai (Sophia Univ.)
- Donna Erickson (Haskins Lab.)
- Mafuyu Kitahara (Sophia Univ.)

## Publication
- Hiroki Mori (Utsunomiya Univ.)

## Registration
- Takayuki Kagomiya (NINJAL)

## Student staff
- Yusuke Inoue (UTokyo)
- Yang Shen (UTokyo)
- Anan Kikuchi (UTokyo)
- Ruiyan Chen (UTokyo)
- Zhenchao Lin (UTokyo)
- Chuanbo Zhu (UTokyo)
- Fanbin Mao (UTokyo)

## Local arrangement for satellite events
- Daisuke Saito (UTokyo)
- Shinnosuke Takamichi (UTokyo)

## Local arrangement for satellite events
- Daisuke Saito (UTokyo)
- Shinnosuke Takamichi (UTokyo)

## Advisory members
- Daniel Hirst (Aix-Marseille University)
- Keikichi Hirose (professor emeritus of UTokyo)
Scientific Committee Members of Speech Prosody 2020


Conference booklet of Speech Prosody 2020, May 25-28, 2000, Tokyo, Japan
Academic Supporters

Speech Prosody Special Interest Group (SProSIG)

International Speech Communication Association (ISCA)

International Phonetic Association (IPA)

Phonetic Society of Japan (PSJ)

Acoustic Society of Japan (ASJ)

The Japan Society of Logopedics and Phoniatrics (JSLP)
Financial Supporters

Talkative

Arcadia

Ferydevices

EduLab.

SINEWAVE

Google

Yahoo! JAPAN

Yahoo! JAPAN
Special Thanks

All the authors
All the reviewers
All the keynote presenters
All the tutorial presenters
All the special session organizers
All the workshop organizers, although all of them were postponed or cancelled
All the presenters for Speech Prosody 2022
All the committee members including student staff
All the financial and academic supporters

and

All the medical staff in the world who took care and are still taking care of COVID-19 patients
All the viewers in the world who visited our video conference website