2015 ASSTA Research Event Program

Saturday 18 April 2015

Griffith University, South Bank Campus, South Bank Campus S02_7.16/7.07
Brisbane, Australia

Prosody training
How to apply linguistic knowledge to foreign language teaching and learning

This is a one-day workshop sponsored by Australian Speech Science and Technology Association and Griffith University. This event is an excellent opportunity to hear about what speech scientists have been working on and discuss the importance of prosody training in language learning with research colleagues and language practitioners. During the morning session invited speakers will present their work, followed by a discussion forum for all participants. The afternoon session will focus on a demonstration and hands-on knowledge of Online Japanese Dictionary (OJAD) for classroom use, developed jointly by the University of Tokyo and the National institute for Japanese language and linguistics. The concepts used for the various online tools are applicable across all languages. All welcome!

To register please notify Akiko Katsumura (a.katsumura@griffith.edu.au) your attendance for catering purpose (lunch and morning/afternoon tea provided), and indicate if you are attending the afternoon session (Online Japanese Dictionary 13:30~).

Organizer: Dr Chiharu Tsurutani
(School of Languages and Linguistics, Griffith University)

Program
9:30-9:45  **Opening Address**  
(Professor Greer Johnson)  

**Introduction and Information**  
(Dr Chiharu Tsurutani)  

| 9:45 - 10:25 | Professor Hansjoerg Mixdorff  
“CALLMANDARIN - Results and conclusions from a project for developing a computer-assisted pronunciation training program”  

| 10:25-10:40 | Morning tea  

| 10:40-11:10 | Professor Yutaka Yamauchi and Professor Nobuaki Minematsu  
“Development of Automatic Evaluation Systems of Reading-aloud and Shadowing Performances”  

| 11:10-11:30 | Dr Manuel Delicado Cantero and Dr William Steed  
“Instructing rhythm and other suprasegmentals in the Spanish class in Australia”  

| 11:30-12:15 | “Prosody training – Present status and future perspective”  
Moderated Discussion (Chair: Dr Chiharu Tsurutani)  

| 12:15-13:00 | Lunch  

| 13:00-13:30 | Professor Nobuaki Minematsu  
“OJAD and its practical use for teaching/learning Japanese prosody”  
[http://www.gavo.t.u-tokyo.ac.jp/~mine/OJAD/lecture/BRISBANE/](http://www.gavo.t.u-tokyo.ac.jp/~mine/OJAD/lecture/BRISBANE/)  

| 13:30-15:00 | Demonstration and hands-on training of OJAD (Online Japanese Accent Dictionary)  
1. Accent and intonation of Japanese  
2. Sensitivity of native Japanese listeners to accent errors and intonation errors made by learners  

| 15:00-15:15 | Afternoon tea  

| 15:15-16:45 | 3. Let’s use the four functions of OJAD!!  
4. Use of OJAD for oral presentation practice  

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**Speaker abstracts**

9:45-10:25  
Professor Hansjoerg Mixdorff
Abstract

CallMandarin – Results and conclusions from a project for developing a computer-assisted pronunciation training program

This talk gives an overview of state-of-the-art computer-assisted pronunciation training (CAPT) systems and presents experiences from the development of a CAPT system for German learners of Mandarin at Beuth University, Berlin. Based on an error analysis we initially determined the most confusable syllable initials, finals and tones for German learners in production as well as perception of monosyllables, disyllables and short sentences. We examined, read and imitated utterances by German learners and their impact on native listeners. Their judgments were compared to those of a teacher expert and results from an automatic speech recognition system. Results were then incorporated in the computer-aided pronunciation system “CallMandarin”. This system provides a visual real-time feedback of pitch and intensity in a continuous training loop in which a native example is being imitated. When recording stops each syllable initial, final as well as tone is assessed automatically. Training results with students suggested that real-time visualization and correctness assessment were beneficial for pronunciation improvement, but also showed limitations with respect to false hits, for instance.

10:40-11:10

Professor Yutaka Yamauchi
Tokyo International University

Yutaka Yamauchi has a long-standing reputation for English Language Education in Japan and is an adviser to the Japanese government on policy for English Language Education. His recent project includes the application of a shadowing technique to improve listening skills for learners. He received a 2013-14 Japanese government grant for the project “Development of an Automatic Evaluation System of Reading-aloud and Conversation Performances by Japanese EFL Learners Aimed to improve their Fast Reaction Abilities Using the Latest Speech Information Technologies”. He is an advisory board member in the Ministry of Education, Culture, Sports, Science and Technology of Japan.

Abstract

Development of an Automatic Evaluation System of Reading-aloud and Shadowing performances

This presentation will explain how speech information processing technology can be applied to L2 learning and teaching through developing CALL systems. L2 learners can practice reading aloud and shadowing and receive automatic evaluation. In reading-aloud performances, pronunciation accuracy was assessed by goodness of pronunciation (GOP), and fluency was evaluated by rate of utterance (ROU). The results of analyzing correlation between overall proficiency scores obtained by Test of English for International Communication (TOEIC), GOP and ROU revealed that ROU could be a more effective indicator of automaticity in reading-aloud performances than GOP.

In shadowing performances GOP scores were found to have a significant higher correlation with overall proficiency scores. This consequence confirmed the validity of evaluating shadowing performances by GOP.
and suggested that proficiency levels of L2 learners could be predicted by shadowing scores. Furthermore, significant high correlation was observed between GOP and manual scores on prosodic features rated by veteran English instructors. This result implies to some extent that automatic scores by GOP can cover assessing prosodic features like rhythm and intonation.

11:10-11:30
Dr Manuel Delicado Cantero  
Australian National University

Manuel Delicado Cantero is a Spanish lecturer in the School of Language Studies at the Australian National University. He earned his PhD in Spanish (Hispanic Linguistics) at the Ohio State University. In 2014, he founded the Australian Foreign/Second language pronunciation pedagogy research group. His areas of research include Romance/Spanish historical syntax (with special attention to prepositional finite clauses), Spanish formal syntax and a strong interest in pronunciation pedagogy.

Abstract

Instructing rhythm and other suprasegmentals in the Spanish class in Australia

Although there has been much research on teaching the sounds of language and improving segmental accuracy, the same is not true for suprasegmentals (Gil 2012). This is especially true outside of English as a Second Language, where students are not fully aware of the importance of this area in effective communication and intelligibility.

Using Spanish as a second language in Australia, we present and discuss the major issues teachers and students must confront in dealing with Spanish prosodic instruction, including rhythm, realization of stress, intonation patterns, etc. Students benefit from explicit instruction and further practice of factors such as resyllabification (and its effect on fluency), awareness of differences in rhythm, that is, syllable-timed vs. stress-timed and differences in the realization of tonic syllables (duration). Intonation patterns, including discourse-negotiated intonation, are similar between English and Spanish, but are more difficult to realize fluently in a second language.

In our talk, we will discuss the use of combinations of technological (for example, Praat [Boersma and Weenink 2014]) and communicative methods to develop critical listening skills and awareness to improve students’ skills.

11:30-12:15
Dr Chiharu Tsurutani  
Griffith University

Chiharu Tsurutani is a senior lecturer in Japanese language and linguistics at Griffith University. Her research interests are second-language phonetics and phonology, their application to computer programs for pronunciation training and assessment. She has published extensively on second language prosody of Australian English speakers who study Japanese and Mandarin. Currently she is working on attitudinal prosody, her project theme for the 2015 International Research Fellowship to be carried out in the National Institute for Japanese Language and Linguistics in Tokyo.

Abstract

Prosody training – Present status and future perspective (moderated discussion)

From the stage of working out segmentation of phrases and sentences at beginners’ level to appropriate intonation at advanced level, prosody plays an important role throughout all stages of language acquisition. Nevertheless, in language classes, prosody is seldom fostered or explicitly taught. This also applies in general
to pronunciation teaching. To teach prosodic characteristic of the target language to L2 learners, several pedagogical issues must be considered, such as the timing to introduce knowledge, the amount of information and useful tools and methods to instruct prosodic effects.

In this session, Chiharu will discuss what has been done to teach prosody, what can be done, what speech engineers could provide and what language instructors and learners will need. She will provide a brief overview on prosodic typology and the issues in L2 prosody, followed by a discussion of the possible application of online tools and their pedagogical issues.

13:00-13:30
Professor Nobuaki Minematsu
Graduate School of Engineering, The University of Tokyo

Nobuaki Minematsu obtained a Doctor of Engineering from the Graduate School of Engineering, the University of Tokyo in 1995 and currently holds a position as professor. He has a very wide interest in speech communication in the fields of science and engineering. He has published more than 400 scientific and technical papers including conference papers on speech analysis, speech perception, speech recognition, speech synthesis and speech applications especially related to CALL. He has received awards for his works from RISP, JSAI, ICIST, and PSJ in 2005, 2007, 2011, and 2014. He gave a tutorial talk about CALL at INTERSPEECH2012 and now works as editorial chair of the ISS Society of IEICE.

Abstract
OJAD and its practical use for teaching/learning Japanese prosody

OJAD (Online Japanese Accent Dictionary) is a web-based system that can support teachers/learners to teach/learn Japanese prosody. This system was developed in collaboration with National Institute for Japanese Language and Linguistics. While many learners want to learn how to speak fluently and naturally, it is a fact that sufficient kinds of learning materials for that aim are not found in the market. Especially, textbooks on prosody training are very rare. This may be one of the reasons why not a few number of teachers, even native teachers, say "Intonation is difficult to teach", "I’m not confident of teaching Tokyo accent well", or "Japanese word accent is complicated because it is often changed due to word context". To solve these problems, the OJAD has been developed and released. In this talk, we first provide participants with fundamental knowledge of Japanese prosody, especially accent and intonation, and then, we show how to use the OJAD for teaching prosody in the computer lab session.