



## EDITORIAL

**W**elcome to the second ASSTA Newsletter for 2011. This is a bumper issue with 19 pages of speech science goodness. As mentioned in the last newsletter, it certainly was conference season and we have five conference reports from ASSTA Travel Awardees. We also have an announcement of a new ASSTA Event award as well as reports from several ASSTA supported research activities. As a result of this, our President has raised the issue of ASSTA funding in his report, both in terms of its success and its future.

By the way, Daniel Taft has finished up a ASSTA Newsletter editor and I have taken over. The Committee wishes to thank Daniel for his efforts over the past two issues of the newsletter. For those interested, my name is Trent Lewis and I am a research fellow at Flinders University with interests in audio-visual speech processing by machines (both recognition and synthesis) and I also dabble in the signal processing and visualisation of human EEG.

Don't forget, when you have news and information to publicise, this is the place to do it. So keep sending information and updates about your work and upcoming events.

**Trent Lewis**

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## ASSTA INFORMATION

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### Contributions

Contributions should be sent to the newsletter team via email as plain text or as an attachment in Rich Text Format (RTF) or Microsoft Word (DOC).

### ASSTA Corporate Members

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# PRESIDENT'S REPORT

## Should we Add Another Category to the ASSTA Grants Scheme?



Dear ASSTALites,

Of late ASSTA has contributed financially to a number of grants won by ASSTA members from third party funding bodies. We believe that such contributions by ASSTA, the peak body for Speech Science and Technology in Australasia, significantly enhances the chances of success.

The projects that have been assisted in this way are:

- *The ARC Research Network in Human Communication Science (HCSNet):* RN0460284, 2005-2010; Total grant – \$2M, ASSTA contribution - \$5K pa for 5 years, a total of \$25K
- *The Big Australian Speech Corpus (The Big ASC): An Audio-Visual Speech Corpus of Australian English:* ARC LIEF, LE100100211, 2010-2011; Total grant – \$1.085M, ASSTA contribution - \$11K
- *Making demonstrably reliable forensic voice*

*comparison a practical everyday reality in Australia:* ARC Linkage Project, LP100200142, 2010-2013; Total grant – \$278K, ASSTA contribution - \$10K

In addition, another grant application is pending:

*Virtual Laboratory for Human Communication Science (HCS VLab):* Application to NeCTAR (National eResearch Collaboration, Tools and Resources) for funding in 2012-2013; Total applied for \$1.7M, ASSTA pledged contribution - \$5K

What do these grants do for ASSTA and its members?

**HCSNet:** Most of you, students and academics alike, will have benefitted from HCSNet by giving papers at, or at least attending, one of the > 60 HCSNet workshops; or by giving papers or attending Summer/Winter School tutorials at one of the 6 Summerfest/Winterfest conferences.

**The Big ASC:** There is a report in this Newsletter from Dr Dominique Estival on the progress of the rollout of Black Boxes across Australia and data collection in the Big ASC project.

**Reliable Forensic Voice Comparison:** There is a report in this Newsletter from Dr Geoffrey Morrison on the progress of the Forensic linkage grant and the associated data collection.

**HCSVLab:** The HCSVLab is designed to house, in the cloud and for open access (i) the Big ASC AV speech corpus, the forensic speech corpus and a number of other corpora



# PRESIDENT'S REPORT

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## Should we Add Another Category to the ASSTA Grants Scheme?

along with (ii) tools with which to analyse data from these corpora and (iii) a set of workflow tools to facilitate analysis by researchers with varying skills levels in easy-to-use GUI up to commend line interfaces.

Currently ASSTA has three types of grants:

- ASSTA Travel Awards for higher degree research students and early career researchers to give papers at international conferences;
- The New Researcher Award Scheme for the most promising projects presented to the current SST conference ;
- Research Event Awards for research events organised by ASSTA members;

With respect to the first two, of interest, a record number of Travel Awards have been awarded this year (see reports in this Newsletter), and the SST2012 committee is busily preparing for the next SST at Macquarie in December 2012 (see flyer in this Newsletter.)

With respect to the third, contributions by ASSTA to HCSNet, The Big ASC, Reliable Forensic Voice Comparison, and the HCSVLab have all been solicited by application to ASSTA usually under the Research Events banner. We now wonder whether there should be a special category of ASSTA award to cover these awards and we ask you to express your opinion by discussion with fellow ASSTAlites and/or by writing to the ASSTA Secretary, Dr Catherine Watson, [c.watson@auckland.ac.nz](mailto:c.watson@auckland.ac.nz) by no later than February 15, 2012 in time for the next meeting of the ASSTA

Executive.

In thinking about this you might like to consider:

- the efficacy of ASSTA awards in general,
- the relative merit of each of the three schemes and the additional grant application contributions,
- ways in which ASSTA awards do or do not contribute to speech science and technology in Australia and New Zealand,
- the extent to which ASSTA awards support its members,
- the extent to which ASSTA awards enable conference attendance, research etc., that would not have happened otherwise,
- the extent to which an additional category of award in which ASSTA acts as an Industry Partner is desirable.

Do remember that ASSTA funds are not limitless; we have funds to provide for these awards mainly due to the profit made from the 1998 ICSLP conference in Sydney. We had hoped to augment this via the 2008 Interspeech conference but exchange rate fluctuations at just the wrong times militated against this. We cannot rely upon having funds for ASSTA awards for ever nor upon adding to our fund base by future conferences, so the sustainability and long range effect or how we use these funds is of paramount importance.

Denis Burnham for the ASSTA Executive

## ASSTA Research Event Award

ASSTA is delighted to announce that Professor **Peter Blamey** has been awarded \$5000 for sponsorship of the 2011 Medical Bionics Conference to be held 20-23 November at Phillip Island in

Victoria, Australia (see <http://www.iceaustralia.com/medicalbionics2011>).

## ASSTA Research Events

### Workshop on speech production/perception training research

Kimiko Tsukada  
*Macquarie University*

With the ASSTA Research Event Award, a 1.5-day workshop on speech production/perception training research focusing on the acquisition of length contrasts in Japanese (and other languages) was held at Macquarie University on June 16 and 17.

Professor Martina Möllering, Head of Department of International Studies opened the workshop and welcomed the participants. There were three lectures by two guest speakers from overseas (Dr. Hiroaki Kato (Japan), Professor Yukari Hirata (US)) and Professor Katherine Demuth from Department of Linguistics, Macquarie University. The lectures were entitled: “Learning to perceive Japanese length contrasts: What the training research informs us” (Professor Hirata), “Native and non-native perceptual cues of length contrasts in Japanese” (Dr. Kato) and “Native and non-native perceptual cues of length contrasts in Japanese” (Prof. Demuth).

In addition to the lectures, the first day included three presentations as follows by researchers



working on Japanese as a L2/foreign language at three different universities in Australia:

- A comparative study on perception of foreign-accented Japanese by L1 and L2 Japanese listeners, and the implications for Japanese language education: Focusing on pitch and timing errors (Dr. Shunichi Ishihara, ANU)
- The production of Japanese vowel and moraic nasal sounds: Comparison of native and non-native speakers (Dr. Kimiko Tsukada, Macquarie University)
- How good is good enough? Towards the measurement of intelligible speech (Dr. Chiharu Tsurutani, Griffith University)

The second day included demonstrations of the pronunciation training/assessment programs used



by the presenters. This hands-on session, which was unexpectedly conducted in Japanese, received positive feedback from the participants.

The participants came from various institutions including the Japan Foundation, ANU, UNSW, UWS, Macquarie University. It was unfortunate that more students could not attend due to the final exams. Some participants were in the middle of their marking period. Competing demands on our time is simply the reality of modern life.

I would like to thank the presenters and participants who made the workshop possible. Judging from the many positive comments I received after the workshop (please see below), I hope it was an enjoyable event which has provided or will provide opportunities for new research collaborations. Hopefully, we will all gain further insights into “the long and the short” of speech sounds in various languages.

Finally, I would like to thank the ASSTA and Japan Foundation for their kind financial support.

### **Feedback from participants**

*“Thank you very much for organizing the ASSTA research event program. Although I could only attend today’s demonstration, it was very*

*inspiring for me. It’s always exciting for me to meet other people who have a passion in their research, which I need to learn from those senior researchers.*

*Many thanks. :)”*

*“Congratulations for the great success for the research seminar/event. Although I am not a specialist in phonology and phonetics, I gained a lot from this event. The whole event was organised in a way to make us understand and think further, and above all, it was enjoyable. I really thank all the presenters for their great presentations, and the second day was practical and meaningful. From the photos, we can recall how wonderful experiences we have had. I was right in the middle of marking hell at that time, but it was really worth attending the event over two days. Thanks again for organising this, and I really thank all the presenters for sharing their great thoughts.”*

*“Firstly thank you again for organising a very interesting workshop.”*

*“Thank you very much for the photos. It was a very inspiring and beneficial opportunity to attend the conference. I’m looking forward to seeing you again next time.”*

## ASSTA Research Events (cont)

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*“Thank you for this. I enjoyed the session more than expected. It was really good to be exposed to scholarly occasion.”*

*“Thank you again for organizing the workshop. It was an interesting event and a great opportunity to talk to other people about the research.”*

**Progress report on Linkage  
Project LP100200142  
“Making demonstrably valid  
and reliable forensic voice  
comparison a practical  
everyday reality in Australia”  
Geoffrey Stewart Morrison  
UNSW**

### **Linkage Projects:**

Linkage Projects (LP) are funded by the Australian Research Council (ARC) and involve partnerships between an Australian University (or other eligible research organisation) and other Partner Organisations. The partner organisations must contribute financial and in-kind resources and the ARC provides financial resources equalling the sum of the financial and in-kind contributions of the partner organisations.

### **Short Project Description:**

To make forensic voice comparison a practical everyday reality in Australia, for use in police investigations and for presentation of evidence in court, forensic scientists must have a practical and demonstrably valid and reliable forensic-voice-comparison system including a large representative database of Australian English voices. In collaboration with Australian police

forensic laboratories and other partners we will develop and test such a system, improving on existing systems by combining the strengths of acoustic-phonetic and automatic approaches. The system will comply with the strictest international standards for the admissibility of scientific evidence in court, using the same evaluative framework as is applied to DNA.

The full project description from the original application is available at <http://forensic.unsw.edu.au/research.html>

### **Principal Investigator:**

Geoffrey Stewart Morrison, School of Electrical Engineering and Telecommunications (EE&T), University of New South Wales (UNSW)

### **Other Investigators:**

- Julien Epps, EE&T UNSW
- Eliathamby Ambikairajah, EE&T UNSW
- Gary Edmond, School of Law, UNSW
- Joaquín González-Rodríguez, Biometric Recognition Group (ATVS), Escuela Politécnica Superior (EPS), Universidad Autónoma de Madrid (UAM)
- Daniel Ramos, ATVS EPS UAM
- Cuiling Zhang, Department of Forensic Science & Technology, China Criminal Police University, and EE&T UNSW

### **Partner Organisations:**

- Australian Federal Police (AFP), Forensic and Technical Operations
- National Institute of Forensic Science Australia (NIFS)
- Australasian Speech Science and Technology Association (ASSTA)
- New South Wales Police (NSW Police),



Forensic Services Group

- Queensland Police Service (QPol), Forensic Services Branch
- ATVS EPS UAM
- Guardia Civil, Department of Acoustics and Images

**PhD Students:**

- Felipe Ochoa, EE&T UNSW
- Ewald Enzinger, EE&T UNSW

**Consultants:**

- Philip Rose, School of Language Studies, Australian National University (retired)
- Claude Roux, Centre for Forensic Science, University of Technology Sydney

**Commencement:**

Two of the Partner Organisations included in the original application (Victoria Police and Western Australia Police) withdrew and we had to find replacement contributions before the project could officially commence. The AFP (one of the original Partner Organisations) agreed to replace the lost financial contribution, and NSW Police and QPol (new Partner Organisations) agreed to replace the in-kind contributions. All the necessary agreements with the partner organisations were eventually signed and the project officially commenced in August 2011.

Ethics approval for the project was obtained in August 2011.

**Data collection:**

Data collection consists of making recordings of speakers completing three different speaking tasks designed to obtain speaking styles reflective of some of those found in casework. The aim is to record each of 1000 Australian English speakers on three separate occasions. The database-collection protocol was described at a presentation given at the 2010 SST conference and in a paper to be published in the

Australian Journal of Forensic Sciences (Morrison, Rose, & Zhang, 2010), see also <http://databases.forensic-voice-comparison.net/>

Data collection at the NSW Police, AFP, and UNSW sites began in October 2011. Data collection at the QPol site is scheduled to begin early in 2012.

**Research output:**

Publications and presentations since the official start of the project supported in whole or in part by project resources:

Morrison, G. S., Rose, P., & Zhang, C. (in press 2012). Protocol for the collection of databases of recordings for forensic-voice-comparison research and practice. *Australian Journal of Forensic Sciences*.

Morrison, G. S. (in press 2012). The likelihood-ratio framework and forensic evidence in court: A response to R v T. *International Journal of Evidence and Proof*, 16(1).

Ochoa, F., & Morrison, G. S. (2011, November). *Defining the default defense hypothesis in likelihood-ratio forensic voice comparison*. Paper presented at the 162nd Meeting of the Acoustical Society of America (ASA), San Diego, California, USA. [Abstract published: *Journal of the Acoustical Society of America*, 130, 2547]

Enzinger, E., Zhang, C. (2011, November). *Nasal spectra for forensic voice comparison*. Paper presented at the 162nd Meeting of the Acoustical Society of America (ASA), San Diego, California, USA. [Abstract published: *Journal of the Acoustical Society of America*, 130, 2519]

Zhang, C., Ochoa, F., Enzinger, E., & Morrison, G. S. (2011, November). *Comparison of human-supervised and fully-automatic formant-trajectory measurement for forensic voice comparison*. Paper presented at the 162nd Meeting of the Acoustical Society of America (ASA), San Diego, California, USA. [Abstract published: *Journal of the Acoustical Society of America*, 130, 2519]

## ASSTA Research Events (cont)

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Morrison, G. S. (2011, November). *The response to R v T. Can forensic acoustics play a leading rôle in a new wave of adoption of the likelihood-ratio framework?*. Paper presented at the 162nd Meeting of the Acoustical Society of America (ASA), San Diego, California, USA. [Abstract published: *Journal of the Acoustical Society of America*, 130, 2518]

Zhang, C., Morrison, G. S., & Thiruvaran, T. (2011). Forensic voice comparison using Chinese /iau/. In W.-S. Lee & E. Zee (Eds.), *Proceedings of the 17th International Congress of Phonetic Sciences, Hong Kong, China* (pp. 2280–2283). Hong Kong: Organizers of ICPhS XVII at the Department of Chinese, Translation and Linguistics, City University of Hong Kong.

Lindh, J., & Morrison, G. S. (2011). Forensic voice comparison by humans and machine: Forensic voice comparison on a small database of Swedish voice recordings. In W.-S. Lee & E. Zee (Eds.), *Proceedings of the 17th International Congress of Phonetic Sciences, Hong Kong, China* (pp. 1254–1257). Hong Kong: Organizers of ICPhS XVII at the Department of Chinese, Translation and Linguistics, City University of Hong Kong.

## ASSTA Sponsored Activity Report

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### **Update on The Big ASC project**

Dominique Estival

*MARCS Auditory Laboratories,  
University of Western Sydney*

Collection of the AusTalk data has finally started! In the last newsletter, we reported on the progress of the Big ASC project, with the 12 Black Boxes being built and Recording Assistants being recruited. Since then, all the RAs and some of their local technical support came to UWS for a very successful two-day training last June (see group photo), where we covered setting up and using the equipment, conducting the recording sessions according to the Collection Protocol, managing the participant recruitment and handling the data. The first pioneering site was CSU at Bathurst, where a number of recordings were made in July and August, thus allowing us to fine-tune the process.

We reached the next milestone when all the Black Boxes were finally shipped to all the project partners by the end of August. Despite some delays in getting the software stabilised, recordings then started in earnest in Canberra and Hobart and more recently in Sydney. Meanwhile, Denis Burnham presented the project at Interspeech 2011 and received some very positive feedback from the research community. There has been very strong interest in the project in the general Australian community: more than 1600 people have already signed up to “give their voice to Australia” and many people contact us with requests to participate or access the data.

The next stage of the project is the Annotation of the audio-visual speech data, which will be done at Macquarie University.



## ASSTA Travel Award Reports

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### **Speech Motor Control 2011**

Heather Kember

*University of Sydney*

From the 8th – 11th of June, I attended the 6th International conference on Speech Motor Control in Groningen, The Netherlands. This conference is held once every five years, and its aim is always to highlight new trends and state-of-the-art approaches in theoretical and applied research in the area of normal and disordered speech motor control. The conference brought together Psychologists, Linguists, Geneticists, and Speech Pathologists. There were a number of different themes this year including the link between perception and production processes in speech, computational modeling, new applications in technology, neural networks involved in communication, new developments in genetic research, and the origin and development of speech functions. Talks and poster sessions were grouped according to these themes.

Groningen is typical of European cities with beautiful old buildings and cobbled streets. The location for the first day of the conference was a perfect example – the hall in the Academiegebouw had high ceilings and was covered in murals. We started on Wednesday evening with keynote talks by Carol Fowler, who spoke about how the speech motor system is involved in speech perception, and Phillip Lieberman, who spoke about an evolutionary perspective on the neural bases of speech motor control. This was followed by a welcome reception.

On Thursday the venue changed to the Remonstrantse Kerk, an old church that had been converted to a functions hall. The talks in the first session of the day discussed the relationship between perception and production processes in speech. This was followed by the first poster session. After lunch, all the talks were focused on speech disorders.

The theme for Friday morning was modeling, with 3 out of the 4 talks looking at the various muscles involved in the speech production process. The final talk of the session was by my supervisor, Karen Croot, who presented experiments manipulating prosody in tongue twisters. My poster was in the next poster session, held during the morning tea break. My experiments look at tonal and segmental speech errors in Mandarin Chinese tongue twisters. The session went for two hours, and was non-stop. Lots of people came by and I received lots of questions and helpful feedback. The talks in the afternoon were looking at speech development (both acquisition in children, and healthy ageing), and there were more talks about speech disorders. Saturday was the final day of the conference, with some talks about technologies available to study speech and another session on speech disorders.

The highlights of the conference for me included the keynote speech by Frank Guenther. He talked about the work he and his colleagues have done implementing his DIVA model to help a paralysed patient learn to speak using a computer. I also really enjoyed Simon Fisher's talk about the different genes that are involved in speech production. It is not an area I had learnt much about before that.



## ASSTA Travel Award Reports (cont)

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It was a great experience to attend this conference, both to meet academics whose research I've read and admired, and to gain other opinions on my work. I would like to thank ASSTA and the University of Sydney School of Psychology for contributing funds towards my travel expenses.

### **International Congress of Phonetic Sciences (ICPhS)**

#### **XVII**

Laura Thompson  
*University of Auckland*

From 17-21 August this year, I was lucky enough to attend a once-every-four-years event: the International Congress of Phonetic Sciences (ICPhS). It was held in Hong Kong – the first time in Asia. Hong Kong in August is very hot and humid – a balmy 33°C, on average – but this was offset by excellent air-conditioning and, in the conference pack, our very own ICPhS fans!

Things started with a bang on the Wednesday morning, with a Chinese lion dance at the opening ceremony that was a hit with the crowd, and the atmosphere of energy and enthusiasm remained across the whole week. There were, we were told, more than 700 attendees from over 40 countries, and nearly 600 papers, including 18 from Australia and New Zealand.

The plenaries had a common thread of promoting multilingual, multidisciplinary and open-minded approaches to experimental design and theoretical development. The message was not quite 'out with the old', but there was a

definite element of 'integrate the new', giving the sense of a field changing in the way it operates, and all for the better.

In the oral sessions, there was literally something for everyone, from tone & intonation to consonants & vowels; from prosody, prominence & perception to clinical phonetics & child speech. The mood of the talks was great, and they were often filled beyond seating capacity. With five or more sessions running in parallel, getting to everything required some strategy, but the sessions were so well-managed (through extensive use of both a cuckoo and Big Ben) that the timing was like... clockwork.

Of the special sessions, there were two particular highlights: Phonetic Fieldwork and History of Phonetics. The first was very useful, for both seasoned and new researchers in different ways. It highlighted both core points and some of the complications that can arise when working in the field; for example, on languages with very few remaining speakers. The latter session was fascinating and incredibly popular. I hadn't had much of a chance to learn about pre-computer phonetic technology before, and it seemed many others were equally interested. There was even talk of creating a group related to the area – it will be exciting to see what comes of this. The most popular part of this session that I attended (packed several people deep at the back!) was on some silent footage recovered from a 1920s phonetics lab demonstrating use of the kymograph and flame. (It's on YouTube if you're interested: <http://bit.ly/UCLphon1928>)

The poster sessions were vast, with the rows of boards very close together. At times it was difficult to get past, let alone stop to read or chat. Despite this, the topics on display were

## ASSTA Travel Award Reports (cont)

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interesting, varied, and there was an enormous amount of debate and discussion. My session, on Day 4, was quieter. I got several visitors, great feedback, and as a student, the general experience of presenting at a conference like ICPHS was very exciting.

Finally, to the backbone of any conference experience: the food and social program. The pastries and biscuits provided at teatime were very tasty, and the banquet, held on the last evening, was a multi-course epic of Chinese delicacies. (The standout for me was the bird's nest soup.) A conference with more than 700 attendees can be a very lonely place, but I was lucky enough to meet many lovely people, especially on the popular Friday afternoon 'local tour'. We all piled into buses with guides, and took a whirlwind look at the Peak, Stanley, and Repulse Bay, ending up on a harbour cruise to enjoy a truly international dinner. Hong Kong at night from the water is quite something, and never gets old.

I thoroughly enjoyed the whole conference, coming away both inspired and wishing there weren't four years until the next one (Glasgow, 10-14 August 2015). My sincere thanks and appreciation go to ASSTA for the support of the travel grant that goes toward my experience here.

### **International Congress of Phonetic Sciences (ICPhS) XVII**

**Patrick Chun Kau Chu**  
*University of New South Wales*

Between 17th and 21st August, 2011, I attended the 17th International Congress of Phonetic Sciences in Hong Kong. It is the biggest and the most prestigious international conference in Phonetics with researchers meeting every four years to discuss their latest research output. This is also the first time the conference has been held in Asia. My paper was accepted for this conference as an oral presentation.

The conference organisers welcomed all the participants with a traditional Chinese lion dance show during the opening ceremony. A video clip of all the great phoneticians who had passed away during the past four years was also shown in memorial of their contributions to the field. There were also poster boards displaying their bio-bibliography throughout the conference.

On each day of the conference there was a plenary speech given by different distinguished scholars, such as Prof. Ian Maddieson and Prof. Sarah Hawkins. There were also oral and poster sessions on different areas such as acoustic and forensic phonetics, speech production and perception in L1 and L2 as well as some specialised sections on fricatives, liquids and tones. Each poster session was given a separate one and a half hour timeslot so as to allow



## ASSTA Travel Award Reports (cont)

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sufficient time for the interactions between the presenters and the audiences.

On the second day of the conference I gave my oral presentation entitled “The influence of the L1 lexical system on the processing of tones in L2”. Based on the L2 Mandarin word production and recognition model that I have proposed, I explained how Cantonese speakers’ phonological knowledge of Mandarin tones is influenced by the corresponding relationships between Cantonese and Mandarin at the lexical level. The topic was very suitable for this conference as many of the conference attendees were speakers of tonal languages, and I received a lot of interesting and useful comments from the audience.

The conference concluded with a traditional Chinese-style banquet which was held at the Grand Hall of the Hong Kong Convention and Exhibition Centre, the venue where the transfer of sovereignty from UK back to China took place in 1997. We had a wonderful time watching the Sichuan opera-style “changing face” performance as well as enjoying the fantastic night view of Victoria Harbour during the dinner.

The main conference was followed by a satellite conference of the ICPHS, entitled the “Psycholinguistic Representation of Tone”. This was held at the Chinese University of Hong Kong on 22nd and 23rd August. Here, researchers specifically doing tone research in linguistics, phonetics, speech science, psychology, engineering, and speech pathology gathered together to discuss their research and develop further collaborations.

I gave an oral presentation entitled “Are there six or nine tones in Cantonese?”. Using the Second Language Mandarin word production model that I proposed again, I examined whether Cantonese is represented as a six- or nine-tone system through native Cantonese speakers’ L2 tone knowledge of Mandarin words. Most of the previous research has examined how L2 sound categorisations are influenced by the L1 sound system. The novelty of my research was using the speakers’ L2 knowledge as a tool to infer how the L1 sounds are categorised and represented in the mind.

To conclude, these two conferences were of invaluable experience for me. I met many world renowned scholars and received valuable feedback from them about my research. Last but not least, I would like to thank ASSTA for their generous support.

### **InterSpeech 2011**

Ingrid Jafari

*University of Western Australia*

Interspeech 2011 was held in Florence, Italy from the 28 August to the 31 August. It was a most enjoyable and rewarding experience! Interspeech is the world’s largest and most comprehensive technical conference focussed on speech and language processing and its applications. This year’s conference attracted over 1 300 participants from all over the world, and from many disciplines ranging from psychology, linguistics, physiology to education, engineering, and the sciences. The conference duration was four full days, with an additional day beforehand for tutorials. I attended the tutorial on “Blind Speech Separation with

## ASSTA Travel Award Reports (cont)

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Independent Component Analysis and Sparse Component Analysis” hosted by Shoji Makino and Hiroshi Sawada; both of whom are current leaders in a highly relevant research field to my own (reverberant blind source separation using time-frequency masking).

The conference had several keynote speakers, including Prof. Julia Hirschberg from Columbia University, who gave a presentation on “Entrainment in Conversational Speech”; Prof. Tom Mitchell from Carnegie Mellon University who presented on “Neural Representations of Word Meanings”; and Prof. Alex Pentland from the Massachusetts Institute of Technology who talked of “Honest Signals”. There were also numerous Special Sessions and Show and Tell Demo events which allowed interaction between researchers and attendees.

The layout of the conference was such that there were five oral presentations running simultaneously in parallel with four poster presentations (in addition to the Special Sessions/Show and Tell events). This ensured that there was always something interesting to attend across all the broad range of disciplines. I also had the opportunity to present my own work at the conference, which allowed me to meet and talk with fellow researchers about my studies. I received a lot of helpful feedback and suggestions for future research directions. During my presentation I met people who had a range of understanding in my subject area; the opportunity to explain my work to such differences in knowledge further enhanced my own comprehension of my work.

Interspeech also held a “Students Meet

Seniors” lunch, where students attending the conference pre-registered to meet and talk with some industry/research experts over a casual lunch. Specifically, I met with Prof. Abeer Alwan from the Speech Processing and Auditory Perception Laboratory at UCLA, as well as a research scientist, Dr. Maurizio Omologo, from the Speech-Acoustic Scene Analysis and Interpretation Group at Fondazione Bruno Kessler in Italy. This was a great chance to informally talk about our research and future career paths.

Upon recommendation from numerous researchers in my field that I had the opportunity to talk with, I also signed up for a satellite workshop called CHiME: this workshop was focused upon Machine Learning in Multisource Environments. This workshop considered the challenge of developing machine listening applications for real-world applications in multisource environments; i.e. where acoustic clutter is inevitably present. CHiME was an opportunity for researchers from the fields of computation hearing, blind source separation, speech recognition and machine learning to come together with a common goal. Due to the fact that the majority of the work presented was in correspondence with my own research, it proved to be a most valuable experience.

Interspeech also organised a comprehensive social programme for conference attendees. The Welcome Reception, Students’ Reception, and Banquet Gala dinner were all ample opportunities to mingle and socialise with fellow researchers in an informal environment.



## ASSTA Travel Award Reports (cont)

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The benefits of attending the Interspeech conference extend beyond just the time spent at the conference. It has given me a greater sense of direction for my research, as well as provided the opportunity to network with important people in my discipline. This will ultimately play a contributory role towards the completion of my PhD, and in the decision for which path my career will take. I would like to thank ASSTA for assisting me to attend Interspeech: it is greatly appreciated and has had a positive influence on my research experience.

### **InterSpeech 2011**

Erin Cvejic

*MARCS Auditory Laboratories  
University of Western Sydney*

From the 28<sup>th</sup> to 31<sup>st</sup> of August 2011, I attended Interspeech, the annual meeting of the International Speech Communication Association (ISCA), held in Florence, Italy. Interspeech is the world's largest and most comprehensive conference on issues surrounding the science and technology of spoken language processing in both humans and machines, with a unique multidisciplinary approach drawing in a multitude of researchers from computer science and engineering, along with the occasional linguist and psychologist. The theme of the 12<sup>th</sup> Interspeech (which, as of the year 2000, has combined the International Conference on Speech and Language Processing, ICSLP, with EUROSPEECH) was "Speech Science and Technology for Real Life". A total of 1435 papers were submitted, with 846 appearing in the conference program (an acceptance rate of 58.03%).

The conference began with a day of tutorials covering a wide range of topics, from prosodic analysis to spoken query understanding in automated language systems. I was fortunate enough to attend a tutorial presented by Michele Gubian on "Functional Data Analysis for Speech Research", where I was introduced to the "R" software and the suite of freeware code available for applying b-splines to pitch contours. Myself and the other attendees found these sessions worthwhile, and would highly recommend attending them.

The conference was opened with welcome speeches by Dr. Piero Cossi and Prof. Renato De Mori, accompanied by an entertaining (and philosophically entwined) magic show by Dr. Kim Silverman. Following the opening ceremony, Prof. Julia Hirschberg, the ISCA medallist for 2011, gave the first of three keynotes (and a round table discussion) on her work to date on conversational entrainment (i.e., the adaption of speaking style dependant on the conversational partner). The keynote was well received, and generated much discussion in the days to come. Other keynotes were delivered by Prof. Tim Mitchell, who discussed the way that word meanings are represented neutrally and the current state-of-the-art on the application of machine learning algorithms to fMRI and MEG data. Prof. Sandy Pentland also delivered a keynote on "honest signals", while Prof. Gabriele Miceli, Prof. Bjorn Granstrom, and Prof. Hiroshi Ishiguro hosted a round-table on the future applications of speech and language technologies.

Interspeech runs 5 parallel oral sessions alongside 4 poster sessions at any one time, in addition to exhibitor stalls from the likes of



## ASSTA Travel Award Reports (cont)

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Northern Digital Inc. (manufacturers of the Optotrak and WAVE systems), Google Research, Microsoft Research, Carstens and Nuance. After a full first day, a welcome reception was held in the gardens of the Firenze Fiera Congress and Exhibition Centre (the conference venue) providing nibbles and drinks into the early evening.

On the second day of the conference, a range of ISCA fellows and distinguished experts in their respective fields (such as Gerard Bailly, Aber Alwan, Bjorn Granström, Alan Black, Mark Hasegawa-Johnson and Hiroya Fujisaki) were invited as special guests to lead round-table discussions (and lunch), giving students an opportunity to meet their seniors and discuss their work in an informal setting. After an afternoon of talks on a diverse range of topics, the social program was once again in full swing, with a student-only banquet at a swanky bar overlooking Florence, allowing for interaction in an informal and relaxed environment. There was also some awkward dance moves being displayed.

The third day of the conference program was filled with more keynotes, posters and oral sessions covering diverse topics such as ASR, Human Speech and Sound Perception, Speech and Audio Processing for Human-Robot Interaction, and Dialect and Accent Identification. The day was followed by the highlight of the social program: a gala dinner at Villa Castelletti. While the venue was magnificent, the only way to describe the transport and food arrangements was “chaos”. Academics became barbaric, shoving and pushing to load up on busses, and once arriving at the Villa, the battle for the limited amount of (high quality Italian) food was intense (driven in

part by the fact that the food ran out before the 30<sup>th</sup> of 50 busses had arrived). Sadly, after the nights festivities were complete, a large majority of the clientele of the local McDonalds were sporting their Interspeech Attendee lanyards...

On the final day, I had the opportunity to present my work in an oral session entitled “Prosody I”. While the majority of other talks in the session dealt with semi-automatic analysis of pitch in speech corpora, my presentation outlined the analysis of the temporal relationship between auditory and visual prosodic markers. The feedback received was positive, with interest from other academics, with some helpful suggestions made for my future work (some of which have made their way into my thesis).

Overall, with the exception of the humidity, the conference was of great benefit to attend, and provided me with the opportunity to see what other researchers both in my field and from diverse other areas are getting up to, in addition to making some new colleagues and acquaintances. Next year, the 13<sup>th</sup> Interspeech is being held in Portland, Oregon, USA from September 9-13. I would like to thank ASSTA for their generous contribution to assist with the costs of attending Interspeech this year.



# CONFERENCE LISTING

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## **2nd International Conference on Medical Bionics**

20 November 2011 - 23 November 2011  
Submission deadline: closed  
Location: Phillip Island, VIC, Australia  
<http://www.iceaustralia.com/medicalbionics2011/>

## **Canberra Language Fest 2011**

27 November 2011—9 December 2011  
Location: Canberra Australia  
[http://law.anu.edu.au/coast/events/langfest/joint\\_day.htm](http://law.anu.edu.au/coast/events/langfest/joint_day.htm)  
<http://law.anu.edu.au/coast/events/langfest/conference.htm>  
<http://law.anu.edu.au/coast/events/langfest/als.htm>  
[http://law.anu.edu.au/coast/events/langfest/alaa\\_alanz.htm](http://law.anu.edu.au/coast/events/langfest/alaa_alanz.htm)

## **IEEE ASRU 2001: Automatic Speech Recognition and Understanding**

11 December 2011—15 December 2011  
Submission deadline: closed  
Location: Hawaii, USA  
<http://www.asru2011.org/>

## **IEEE ICASSP2012: The 37th International Conference on Acoustics, Speech, and Signal Processing**

25 March 2012— 30 March 2012  
Submission deadline: closed  
Location: Kyoto, Japan  
<http://www.icassp2012.com/>

## **LabPhon 13: The 13th Conference on Laboratory Phonology**

July 27-29, 2012  
Submission deadline: 15 January 2012  
Location: Stuttgart, Germany  
<http://www.labphon13.labphon.org/>

## **Speech Prosody, 6th International Conference**

May 22-25, 2012  
Submission Deadline: 30 November 2011  
Location: Shanghai, China  
<http://www.speechprosody2012.org/>

## **INTERSPEECH 2012:1 3th Annual Conference of the International Speech Communication Association**

September 9-13, 2012  
Submission Deadline: April 1, 2012  
Location: Portland, Oregon  
<http://interspeech2012.org>

## **SST 2012: 14th Australasian International Conference on Speech Science and Technology**

Dec 3, 2012 - Dec 6, 2012  
Submission Deadline: May 1, 2012  
Location: Sydney, Australia

SEE CFP ON FOLLOWING PAGE

## **ACL 2012: The 50th Annual Meeting of the Association for Computational Linguistics**

Jul 8, 2012 - Jul 14, 2012  
Submission Deadline: Jan 9, 2012  
Location: Jeju, Korea  
<http://www.acl2012.org/>

## 14<sup>th</sup> Australasian International Conference on Speech Science and Technology (SST) 2012



Sydney Harbour

**December 3-6, 2012**  
Macquarie University  
Sydney AUSTRALIA

### *Invited speakers*

Anne Cutler (MPI Nijmegen, MARCS UWS)  
Janet Fletcher (University of Melbourne)  
Jim Patrick (Cochlear)  
James Scobbie (Queen Margaret University, Edinburgh)  
Stefanie Shattuck-Hufnagel (MIT)

***4-page paper submission deadline***  
***01 May 2012***

For more information contact Ivan Yuen  
ivan.yuen@mq.edu.au

### Welcome to sunny Sydney!

We are pleased to announce that Macquarie University will host SST 2012. In the spirit of interdisciplinary tradition, we invite you to take part in this exciting event to foster collaboration among speech scientists, engineers, psycholinguists, audiologists, linguists, speech/language pathologists and industrial partners. The conference will also host workshops on speech perception and production.

### Topics include

Acoustic phonetics, Audiology, Clinical phonetics, Emotional speech and voice, Forensic phonetics, L1/L2 acquisition (production/ perception), Pedagogical technologies for speech and singing, Phonetics and phonology of Australasian languages, Sociophonetics, Speech engineering/ modelling, Speech production/ perception, Speech prosody, Speech science and technology applications, Speech synthesis/ recognition.

**Organising Committee:** Co-chairs: Felicity Cox, Katherine Demuth

Joanne Arciuli, Denis Burnham, Karen Croot, Susan Lin, Robert Mannell, Catherine McMahon, Sallyanne Palethorpe, Jason Shaw,

Kimiko Tsukada, Ivan Yuen