EDITORIAL



David Grayden

Welcome to the August 2004 issue of the ASSTA Newsletter.

This issue contains two more conference reports from recipients of ASSTA Conference Travel awards, Marija Tabain and Kimiko Tsukada. They attended the 75th Anniversary meeting of the Acoustical Society of America and the 9th Conference on Laboratory Phonology, respectively. We also have another PhD Thesis abstract from Dr Roland Goecke entitled "A Stereo Vision Lip Tracking Algorithm and Subsequent Statistical Analyses of the Audio-Video Correlation in Australian English".

Peter Blamey has provided a Lab Report for Dynamic Hearing, a new hearing aid company for which he is the Chief Technology Officer. I would welcome any other Lab Reports - this is a way to demonstrate the research and development taking place in your labs to the ASSTA community.

This newsletter has been designed for publication on the web. Please see the ASSTA homepage for the electronic version. All underlined words are hyperlinks to other pages, email addresses and web pages.

David Grayden

ASSTA NEWSLETTER

CONTENTS

President's Report	3
Conference Report (1)	4
ASSTA Grants Program	5
Conference Log	6
PhD Abstract	8
Conference Report (2)	9
Lab Report	10
SST2004 Sydney	12



ASSTA INFORMATION

Australian Speech Science and Technology Association Inc. GPO Box 143, Canberra City ACT 2601

ASSTA Executive

President: Denis Burnham d.burnham@uws.edu.au
Fax: (02) 9772 6736

Secretary: Johanna Barry johanna.barry@psy.ox.ac.uk

Treasurer: Shunichi Ishihara Shunichi.Ishihara@anu.edu.au

Member: David Grayden dgrayden@bionicear.org

Member: Steve Cassidy steve.cassidy@mq.edu.au

Contributions

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

Send notices on conferences to Lisa Stephenson, and thesis abstracts and book reviews to Johanna Barry.

Contributors: Peter Blamey, Denis Burnham, Steve Cassidy, Roland Goecke, Lisa Stephenson, Marija Tabain, Kimiko Tsukada.

ASSTA recognises the support of <u>The Bionic Ear Institute</u> in the production and printing of this newsletter.

ASSTA Newsletter Team

Editor: David Grayden dgrayden@bionicear.org Fax: (03) 9667 7518

Sub-ed. (conferences):
Lisa Stephenson
lisa@maccs.mq.edu.au

Sub-ed. (reviews/abstracts):
Johanna Barry
johanna.barry@psy.ox.ac.uk

ASSTA Corporate Members

Appen Pty Ltd (www.appen.com.au)

Cochlear Ltd (www.cochlear.com.au)

<u>CRC for Cochlear Implant and Hearing Aid</u> <u>Innovation (www.bionicear.org/crc)</u>

> <u>Spectral Dynamics Pty Ltd</u> (home.iprimus.com.au/elvoice/)

Visit ASSTA on the Web:

http://www.assta.org

PRESIDENT'S REPORT



Denis Burnham

Two Conferences and a Network *Music*

Recently, August 3 to 7, I attended the 8th International Conference on Music Perception and Cognition (ICMPC8) at Northwestern University in the US. I have now attended the last three of these biennial conferences (previously at Keele University, UK, in 2000, and University of Western Sydney, Australia in 2002). Based on interactions with people at ICMPC8, and the consistently high quality of the papers, it was clear to me that the discipline of music perception and cognition has come of age. This sense was reinforced by a keynote address, 'Looking Ahead: Some speculations on the future of research in music cognition', in which Dr Mari Reiss Jones spoke about the basis of the discipline in the dynamism evoked and required when studying how humans perceive and process musical melody and rhythm over time.

I had noticed at previous ICMPCs that emotion, the way in which it is expressed by performers and perceived by listeners in music, was a particularly hot topic. This was also the case at ICMPC8, but there was a new even hotter topic – the auditory-visual aspects of music processing. This ranged from Functional Data Analyses of the difference in perceived emotion when perceivers were presented with a clarinettist in auditory only, visual only, or auditory-visual modes, to a more McGurk effect/auditory-visual illusion-like study in which

the perceived duration of a note on a marimba was affected by visual information for note duration, even when the acoustic duration did not vary. Emotion and auditory-visual processing are also areas that have been, and continue to be, strong areas in speech science both in human and machine speech. There are parallels in music and speech which are well worth exploring, and I haven't even gotten onto my hobby horse of lexical tone perception in speech and the perception of pitch in music...

Speech and Language

ASSTA's Australian International Conference on Speech Science and Technology this year will be hosted by the Centre for Language Technology, and the Speech Hearing and Language Research Centre at Macquarie University. Associated with SST2004, the Australian Language Technology Association (ALTA) will host a four day summer school program prior to the traditional three day SST conference. In this there will be a combination of speech and language technology courses of interest to postgraduate students and researchers in both fields. ALTA will also hold their annual one-day workshop parallel to the first day of SST2004. So there is some considerable interaction happening between ASSTA and ALTA.

Speech, Language, and Music

In other just breaking news, the Australian Research Council (ARC) has announced funding for 24 ARC Research Networks. Among these is the network with which ASSTA is formally associated, Enabling Human Communication: Tough problems in human communication with bold but informed solutions drawing on sound, speech, and language research capabilities, awarded \$2M, \$400K for each of the next 5 years. Further details on this will be given in the next ASSTA newsletter, but a few points are worth noting now.

In addition to ARC funding, there are major financial contributions from the University of

Continued on page 5

CONFERENCE REPORT (1)

75th Anniversary meeting of the Acoustical Society of America 24-28 May 2004, New York, USA Marija Tabain, MARCS Auditory Laboratories, University of Western Sydney

m.tabain@uws.edu.au

The Acoustical Society of America (ASA) meetings are somewhat like the Australian SST meetings, except that (a) they take place every 6 months rather than every 2 years, and (b) they cover all aspects of acoustics, not just speech. ASA meetings are local meetings, and as a result the vast majority of participants are from North America. I believe I was the only Australian attending in the Speech Communication stream, together with a small handful of attendees from the UK and the Netherlands.

The quality of the papers presented is of a very high standard, and in this respect attending an ASA meeting is like attending a major international conference such as ICPhS or ICSLP. One major difference, however, is that the vast majority of papers in the Speech Communication stream at ASA meetings are presented as posters. Participants enjoy the interactive aspect of poster presenting, and discussion of work in progress is encouraged. Poster sessions are 4 hours long (there may be two poster sessions in the one day), with the first two hours supposedly dedicated to odd-numbered papers, and the second two hours supposedly dedicated to even-numbered papers. Although this division is designed to allow presenters in the session the opportunity to view other posters, it doesn't always work in practice, with many presenters standing by their posters for 4 hours or more.

There were five poster sessions in Speech Communication during the week-long meeting, and three oral sessions. Some of these sessions were joint sessions with the Perception and Psychophysics (P&P) stream. The oral sessions were on VOT, bilingualism and

multilingualism, and (jointly with P&P) the perception of complex sounds. These oral sessions were special sessions, mostly with invited papers, and perhaps as a result, with very little audience interaction. I have to say that it seems a shame that an entire meeting can pass with almost no public interaction between a speaker and his/her audience, and for this reason I believe that normal oral sessions should still have an important place in speech meetings.

On the third day of the meeting there was a special celebration of the Acoustical Society's 75th anniversary at the New York City Center, followed by an afternoon of sight-seeing. The morning celebration included 9 talks from young researchers in different areas of acoustics research, with Dani Byrd giving the Speech Communication talk. The speakers were invited to give an overview of the current state of research in their specializations, and to speculate on what the future may hold (all of the talks were limited to 9 minutes each!). For me, this was the highlight of the conference, since I got an overview of some very exciting work on medical ultrasound, marine biology and architectural acoustics, to name but a few. I had also attended a special tutorial on concert hall acoustics on the first evening of the meeting, so my knowledge of building acoustics increased greatly while in New York:) The opportunity to learn more about other applications of acoustic research is perhaps the main reason I attend ASA meetings (this was my third), and I heartily recommend them to fellow ASSTA members for this very reason.

One disadvantage of the ASA meetings is their frequency (indeed, one of the young presenters in the celebration session alluded to this). Since this is a twice-yearly local meeting for North Americans, they tend to come and go as their schedules allow. My poster with Pascal Perrier and Christophe Savariaux from ICP Grenoble (on the effects of prosodic structure on pre-boundary /u/ in French) was scheduled for the very last poster session. Unfortunately,

Continued on page 5



ASSTA GRANTS PROGRAM

ASSTA manages a number of grants that aim to provide support to members in their research in Speech Science and Technology. Some of the grants are:

PhD Study Awards for student members a year into their PhD.

ASSTA PhD of the Year Award for the best PhD completed each year.

Research Event Awards for research events organised by ASSTA members.

ASSTA Travel Awards for travel to conferences.

The **National Lecture Tour Programme** to enable prominent experts to lecture in provincial areas.

Applications for PhD Study Awards, PhD of the Year and Research Event Awards are due on 26 November 2004. Travel awards may be applied for at any time of the year before the conference date. Don't miss these opportunities!

www.assta.org/initiatives/

Continued from page 4

two or three people whose feedback I would greatly have appreciated had left mid-week. Moreover, since it was the final session, poster-boards were taken down at 5 pm on the dot, so that presenters in my session did not have the luxury of staying on longer with interested interlocutors. A word of advice for those attending future ASA meetings: make sure you're not scheduled on the last day!

Two more words of advice for those attending this conference in future:

- (1) Don't bother forking out a small fortune for the conference dinner - ASA dinners are not renowned for their culinary excellence, nor for their high standard of entertainment.
- (2) Although the registration costs are somewhat steep (around \$350-400 US), very little food is provided. In New York, we only had morning tea (no bikkies even, let alone afternoon tea!), and a supper on the Thursday evening. I have memories of more meals being available when I was a student attendee in Seattle in 1998, but certainly not to the standard that I have seen at other conferences. And remember, any conference is a great opportunity to chinwag with your overseas mates, so make sure to do plenty of this at ASA!

Continued from page 3

Western Sydney and Macquarie University, and contributions from 13 other institutions (including ASSTA). Robert Dale, leader of the Language Technology Lab at Macquarie, and executive member of the Australian Language Technology Association (ALTA) will be Network Convener, and Chair Finance & Publicity. The University of Western Sydney (UWS) is the administering institution for the grant; Denis Burnham, Director of MARCS Auditory Labs at UWS and President of ASSTA, will Chair the Steering Committee, and Conferences & Liaison; and Kate Stevens, Deputy Director of MARCS Auditory Labs at UWS and President of the Australian Music and Psychology Society (AMPS) will Chair Training and Development.

ASSTA has a key role in the network, as does ALTA and AMPS. This network will be a great boon for speech science and technology, and a great opportunity for researchers in divergent areas of human and machine speech, language, sound, and music to address issues of convergent and significant concern (e.g., emotion, auditory-visual information).



CONFERENCE LOG

Please inform Lisa Stephenson (<u>lisa@maccs.mq.edu.au</u>) about conferences of interest for inclusion in this section.

2004

7 – 10 September 2004
EUSIPCO 2004. 12th European Signal
Processing Conference,
Vienna, Austria

http://www.nt.tuwien.ac.at/eusipco2004/ w.mecklenbraeuker@tuwien.ac.at

8 - 11 September, 2004
Seventh International Conference on TEXT, SPEECH and DIALOGUE (TSD 2004),
Brno, Czech Republic http://nlp.fi.muni.cz/tsd2004/

9 - 11 September 2004
International Conference on Tone and
Intonation,
Santorini, Greece
http://www.let.kun.nl/tie
http://www.santorini-Image.gr/

16 – 17 September 2004 CLEF 2004 Workshop, Bath, UK

16 - 18 September 2004
Developmental Paths in Phonological Acquisition,
University of Leiden, Netherlands
http://www.ulcl.leidenuniv.nl/
index.php3?m=3&c=39

17 - 19 September 2004
Laboratory Approaches to Spanish
Phonetics and Phonology,
Indiana University, USA
http://www.indiana.edu/~spanport/conference/home.html

20 - 22 September 2004
9th International Conference SPEECH and COMPUTER (SPECOM'2004),
St. Petersburg, Russia
http://www.spiiras.nw.ru/speech_specom@mail.iias.spb.su

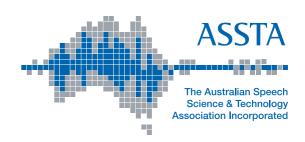
29 September – 1 October 2004 2004 IEEE International Workshop on Multimedia Signal Processing (MMSP 04), Sienna, Italy http://mmsp.unisi.it

30 September – 1 October 2004
International Workshop on Spoken
Language Translation: Evaluation
Campaign on Spoken Language
Translation
(A satellite event of ICSLP2004),
Kyoto, Japan.
http://www.slt.atr.jp/IWSLT2004/

2 – 3 October 2004 2004 ISCA Tutorial and Research Workshop on Statistical and Perceptual Audio Processing, Jeju Island, Korea http://www.sapa2004.org

4 - 8 October 2004 ICSLP2004 - Interspeech 8th Biennial Conference of ICSLP, Jeju Island, Korea http://www.icslp2004.org/

7 - 9 October 2004
Variation and Change in Phonology and
Phonetics,
Potsdam, Germany
vijver@rz.uni-potsdam.de



10 – 15 October 2004 ACM Multimedia 2004, New York, NY USA http://www.mm2004.org

8 - 10 December SST2004 (incorporating ALTW) ALTA Summer School (4-7 December) Macquarie University, Sydney http://www.assta.org/sst/2004/

14 - 17 December
ISSNIP 2004 Workshop on Biologically
Inspired Models
Melbourne, Australia
http://www.issnip.org/
wkshbioinsmodels.htm

16 - 18 December 2004
4th International Symposium on Chinese
Spoken Language Processing (ISCSLP'04),
Hong Kong, China
http://www.iscslp2004.com/

2005

19 - 22 April 2005 NOLISP'05: Non-Linear Speech Processing, Barcelona, Spain http://www.nolisp2005.org/faundez@eupmt.es

16 - 18 June 2005
Between Stress and Tone (BeST),
Leiden, The Netherlands
http://www.iias.nl/iias/agenda/best/

31 August - 3 September 2005
The Sixth Pan-European Voice Conference
(PEVoC-6): Mirroring the Voice,
The Royal Academy of Music, London, UK

www.pevoc6.com
info@ pevoc6.com

4 – 8 September 2005 Interspeech (Eurospeech)-2005, Lisbon, Portugal http://interspeech2005.org/

2006

11 - 14 May 2006
International Conference on Conversation
Analysis (ICCA),
University of Helsinki, Finland
eveliina.korpela@helsinki.fi

LAB PROFILES

What do you do? Where do you work? Who do you work with?

If you would like to profile your lab or research group for the members of ASSTA, please write to me, the Newsletter Editor: dgrayden@bionicear.org

Continued from page 8

neme-specific. The results show that with the given parameter sets, between one fifth and one third of the variance in either modality can be recovered from the other modality. For visible speech information purely based on the lips, this agrees with studies on human speech perception found in current literature. Further investigations are required to test the stability of the found relationships and their suitability for a rule-based AV ASR system.



PHD ABSTRACT

A Stereo Vision Lip Tracking Algorithm and Subsequent Statistical Analyses of the Audio-Video Correlation in Australian English Roland Goecke, Australian National University roland.goecke@ieee.org

Human perception of the world is inherently multi-sensory because the information provided is multimodal. The perception of spoken language is no exception. Beside the auditory information, there is visual speech information as well, provided by the facial movements as a result of moving the articulators during speech production. Visual speech information contributes to speech perception in all kinds of audio conditions, but its effect is perhaps most readily noticed in noisy audio conditions. Various research groups around the world have studied the effects of incorporating visual speech information in automatic speech recognition (ASR) systems in recent years. They have found that audio-video (AV) ASR systems result in an improved recognition rate compared to audio-only systems, in particular in noisy audio conditions. Exactly how to incorporate the additional visual speech information best is still not known.

This study aims to extend our knowledge of relationships between audio and video speech parameters. It investigates ways of describing such relationships using statistical analyses and their application to the example of Australian English (AuE). The work described in this thesis is multidisciplinary. Apart from the statistical analyses, it also required algorithms to extract speech parameters and a corpus of AV speech sequences, which were not readily available.

A novel non-intrusive automatic lip tracking algorithm is presented, which uses a stereo camera system to enable accurate 3D measurements of facial feature points without the need for artificial markers on the face. Due to the lack of an AV speech corpus for AuE, a new modular framework for AV speech corpora was developed and followed in a newly created corpus for AuE called AVOZES.

Equipped in such ways, it was possible to test the hypothesis that combinations of audio and video speech parameters are related, rather than single parameters, and that these combinations are phoneme-specific. Based on articulatory theory, it is clear that the audio and video domain are related in some way and to some extent because the visible speech articulators form a part of the whole set of articulators. However, it also means that not all of the information contained in the audio modality has equivalent information in the video modality. The set of audio speech parameters was formed by voice source excitation frequency F0, formant frequencies F1, F2, F3, and RMS energy. Mouth width, mouth height, protrusion of upper and lower lip, and the novel teeth visibility measure relative teeth count formed the video speech parameter set.

Extensive univariate and multivariate statistical analyses, such as pairwise linear correlation analysis, principal component analysis, statistical shape analysis, canonical correlation analysis, and coinertia analysis, were performed to explore the AV relationships in AuE. The AV relationships found by this study support the hypothesis that linear combinations of parameters correlate well across the two modalities (r = 0.5-0.8) and that their composition is pho-



CONFERENCE REPORT (2)

 9th Conference on Laboratory Phonology (LabPhon)
 24-26 June 2004, Illinois, USA
 Kimiko Tsukada, MARCS Auditory Laboratories, University of Western Sydney

k.tsukada@uws.edu.au

I recently attended the 9th Conference on Laboratory Phonology (LabPhon) hosted by the Department of Linguistics at University of Illinois at Urbana-Champaign (UIUC) and Beckman Institute for Advanced Science and Technology from June 24 to 26, 2004 (http://www.linguistics.uiuc.edu/labphon9/). My conference attendance was financially supported by ASSTA (Travel Award) and MARCS Auditory Laboratories, University of Western Sydney.

LabPhon is traditionally a tightly focused meeting which includes about 120 presentations (invited speakers, oral and poster presentations) covering topics in phonology, speech production, speech perception, spoken language acquisition, computer speech processing and other disciplines concerned with human speech. The conference was opened with a welcome address by Pierre Wiltzius, Director of Beckman Institute followed by introductions by Jennifer Cole and José Hualde of University of Illinois at Urbana-Champaign. The conference schedule was structured with eight oral sessions with different themes and two poster sessions. Each oral session began with a presentation by invited speakers and ended with discussants' comments. Oral and poster sessions were held at non-competing

times and this maximized the viewing opportunities. There were several participants from Australia and New Zealand (see abstracts at the conference website above).

I felt our poster entitled "The effect of tone on vowel duration in Thai: A developmental study" (authors: Tsuakda, Burnham, Luksaneeyanawin, Krachaikiat & Rungrojsuwan) was particularly suitable for the theme of the meeting, "Change in Phonology", because, obviously, children's phonology is constantly changing. There were several posters on tone languages in Asia (e.g., Cantonese and Mandarin) and in Austronesia (e.g., Matbat). However, as far as I could see, ours was the only one dealing with Thai. This study presents a phonetic analysis of a subset of the data from a larger project which examines the acquisition of lexical tones by Thai children.

Two people I used to work with were among invited speakers. One of them is my thesis supervisor, Professor Jonathan Harrington (University of Kiel, Germany) and the other is Professor Jim Flege (University of Alabama at Birmingham, USA) who I worked for as an NIH postdoctoral scholar. Jonathan talked about sound change in Queen's English and Jim talked about the L1-L2 interaction of bilinguals, both of which I enjoyed very much.

Last, but not least, the UIUC linguistics postgraduate students were very helpful and I'm sure many of the participants appreciated their willingness to help. The next meeting will be held in Paris in 2006.



LAB REPORT

Dynamic Hearing Pty Ltd 2 Chapel St, Richmond 3121, Australia Peter Blamey, Chief Technology Officer pblamey@dynamichearing.com.au

Dynamic Hearing Pty Ltd is a new company based in Richmond, Victoria. Our business is the development and licensing of digital signal processing technologies for personal communication devices such as hearing aids. headsets and telephones. The patented technology is in the form of DSP embedded software and supporting applications software. The software developed by Dynamic Hearing provides a fast path to market for manufacturers, and they can also license the technology and incorporate it into their products by developing their own embedded software.

The founders of the company were able to spin the company out of the Cooperative Research Centre for Cochlear Implant and Hearing Aid Innovation as a result of the research team's winning entry in the Melbourne Business School Entrepreneur's Challenge in 2000. The winning business plan attracted investment from two venture capital investors, GBS Ventures and Nanyang Ventures. Professor Peter Blamey, now the Chief Technology Officer, and three members of his research team were joined by Dr. Elaine Saunders to become the founding members of Dynamic Hearing. The team has now grown to 18 employees, including an international business team, 4 DSP engineers, a small support staff.

The opportunity for the business arose as hearing aids and other personal communication devices have moved from analog to digital technology and from Application Specific Integrated Circuits (ASIC) to open-platform digital signal processing. Open-platform devices can be

programmed with embedded software to implement a wide variety of solutions on the same hardware. Dynamic Hearing's core technology is the ADRO® amplification strategy which is an alternative to compression amplification that is used in the majority of hearing aids, and the biggest step forward in hearing aid technology for This technology takes many years. advantage of the capacity of DSP to implement stochastic rules ensuring improved audibility, comfort and speech intelligibility for listeners. A clinical trial, conducted by the CRC under contract to Dynamic Hearing, demonstrated that the sound quality of ADRO® processing was preferred in 74% of situations in comparison with alternative commercial compression hearing aids.

Dynamic Hearing has set up a sound processing laboratory and an audiology clinic in order to continue the development of new products. Three new patent applications have been lodged for oscillation detection, oscillation suppression, and adaptive directional microphone technologies. These technologies have already been licensed to hearing aid manufacturers and will appear in ADRO® products in 2004. The R&D is partly supported by Start Grant funding from AusIndustry which has helped Dynamic Hearing to develop processing for headsets and telephones to be used by people with normal or impaired hearing.

The company is Dynamic by name and 4 audiologists, two Delphi programmers, and dynamic by nature. We expect to build the size of our technology development team, to incorporate new and existing DSP software into a range of products in 2004/5, and to grow the company to be a thriving international export business showcasing the quality of Australian information communication technology.

http://www.dynamichearing.com.au



ADVERTISEMENTS

Career Opportunity with Dynamic Hearing

Dynamic Hearing is seeking to employ an experienced and creative DSP Engineer. Dynamic Hearing is an innovative, growing company providing sound processing solutions in the form of IP licensing, DSP code and Application Software to manufacturers of hearing aids, headsets and other personal communication devices. The company, initially backed by venture capital and federal government start grant funding, is licensing technology to international customers. The current team consists of 17 people with technical expertise in DSP engineering, audiology, applications

programming and international technology transfer.

The role will encompass research and development of new DSP solutions for audio applications; implementing, testing and documenting software for a range of DSP platforms; and technology transfer and customer support. A high level of experience with software engineering principles for embedded real-time DSP, C and Assembly programming, and modeling in MATLAB/ Simulink is required.

If you are interested in knowing more then please contact Anthony Shilton on +61 3 8420 8545.

THE 5TH COLUMN

The 5th Column is about your views on ASSTA. It is a vehicle for voicing independent views within our association. It is a way to let both the executive and the general membership know your feelings about the issues. It is particularly important in light of ASSTA's positive financial position. It was created to promote a transparent exchange

of ideas; reponses to 5th Column articles will also be published in this column.

Please send your views to the editor and they will be published in this column. The editor will, of course, always exercise editorial discretion. Please also send a brief biography of the author.

SST CONFERENCE PROCEEDINGS

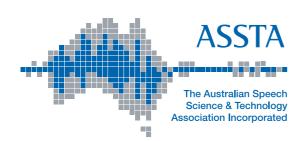
Past SST and ICSLP'98 conference proceedings are available for purchase.

SST-86 to SST-2000 proceedings: \$5.50 ICSLP'98 proceedings (on CD): \$27.50 SST-2002 proceedings (on CD): \$33.00

Non-members add \$11, institutions add \$55 to prices for SST proceedings.

Postage and packaging is extra. All prices include GST.

Contact the Publications Manager: dgrayden@bionicear.org



SST2004 SYDNEY - 8-10 DECEMBER 2004

Tenth Australian International Conference on Speech Science & Technology, Macquarie University, Sydney, http://www.assta.org/sst/2004

The program for SST2004 is now firming up and we are pleased to be able to add to the core conference a few special sessions and events. Three distinguished researchers have agreed to present keynote sessions at the conference. Jonathan Harrington will return to Australia from his position as Chair of Phonetics and Digital Speech Processing at the University of Kiel, Germany. Paul Watters from Victoria University in Wellington, New Zealand, a noted expert on New Zealand English will provide a keynote for the PANZE workshop (see below). Finally, we are very fortunate to have Cathi Best who will be well known to many members for her experimental work on infant and adult speech perception. Cathi has recently been appointed to a Chair at the MARCS laboratories at UWS.

The joint ALTA-ASSTA summer School will run from Saturday 4th until Tuesday 7th December prior to the main conference. It will feature both introductory ad advanced courses on both speech and computational linguistics related topics. The school is aimed at postgrad students but anyone is free to attend. The courses are:

INTRODUCTORY COURSES

Speech Processing (David Grayden, The Bionic Ear Institute)

Speech Annotation with Emu (Steve Cassidy, Macquarie University)

VoiceXML (Rolf Schwitter, Macquarie University - TBC)

Grammar Formalisms (Ash Asudeh, University of Canterbury)

ADVANCED COURSES

Prosody (Janet Fletcher, University of Melbourne - 3 hours)

Text Classification (Jon Patrick, University of Sydney)

Information Retrieval (Justin Zobel, RMIT Uni. & Alistair Moffat, Uni. of Melbourne)

Multiword Expressions (Timothy Baldwin, University of Melbourne)

Following the summer school, ALTA will hold their one day workshop in parallel with the first day of SST. The registration fee for SST will cover attendance at the ALTA session. We hope this will encourage some cross-fertilisation between our closely related fields.

The first day of the conference will also include the PANZE workshop, a special session of the regular SST conference devoted to the Phonetics and Phonology of Australian and New Zealand Englishes. The session is organised by Sallyanne Palethorpe, Felicity Cox and Catherine Watson and initial signs are that it will attract a range of interesting papers from both countries and perhaps attract some new faces to the SST conference.

The venue for the conference will be the MGSM Executive Hotel and Conference Centre on the Macquarie University Campus. Accommodation has been reserved in student halls (from \$58/night), the on-campus Travelodge (\$129/night) and nearby Stamford Hotel (\$170/night). The fee for the conference, which includes lunch each day, is \$330 for members and \$198 for student members if you register before the 11th October.

By now the closing date for paper and abstract submissions will have passed and we will begin the reviewing process. We will endeavour to inform authors of the results of review by early October and final papers are due by the 29th October.

Steve Cassidy, Conference Chair, steve.cassidy@mq.edu.au