

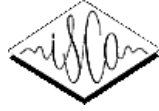
ACL 2014

**Fifth Workshop  
on  
Speech and Language Processing for Assistive Technologies  
(SLPAT)**



**Proceedings of the Workshop**

June 26, 2014  
Baltimore, Maryland, USA



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## Introduction

We are pleased to bring you the Proceedings of the Fifth Workshop on Speech and Language Processing for Assistive Technologies (SLPAT), held in Baltimore, US on 26 June 2014. We received 9 paper submissions, of which 7 were chosen for oral presentation. In addition, we have also accepted special talks *Technology Tools for Students With Autism: Innovations That Enhance Independence and Learning* by K.I. Boser, M. Goodwin, and S.C. Wayland, and *Dysarthria as a noisy channel in speech production* by Frank Rudzicz.

This workshop is intended for researchers from all areas of speech and language technology with a common interest in making everyday life more accessible for people with physical, cognitive, sensory, emotional, or developmental disabilities. This workshop builds on four previous such workshops (co-located with NAACL HLT 2010, EMNLP in 2011, NAACL HLT 2012, and Interspeech 2013), as well as the previously held SMIAE workshop (co-located with ACL 2012). The workshop provides an opportunity for individuals from research communities, and the individuals with whom they are working, to share research findings, and to discuss present and future challenges and the potential for collaboration and progress.

While augmentative and alternative communication (AAC) is a particularly apt application area for speech and natural language processing (NLP) technologies, we purposefully made the scope of the workshop broad enough to include assistive technologies (AT) as a whole, even those falling outside of AAC. While we encouraged work that validates methods with human experimental trials, we also accepted work on basic-level innovations and philosophy, inspired by AT/AAC related problems. Thus we have aimed at broad inclusivity, which is also manifest in the diversity of our Program Committee.

We would like to thank all the people and institutions who contributed to the success of the SLPAT 2014 workshop. Finally, we would like to thank the Association for Computational Linguistics (ACL) for support in preparing and run the workshop.

*Jan Alexandersson, Dimitra Anastasiou, Cui Jian, Ani Nenkova,  
Rupal Patel, Frank Rudzicz, Annalu Waller, Desislava Zhekova*

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# Conference Program

## Thursday, June 26, 2014

9:00–9:15 Welcome & Opening Remarks

### Session 1

09:14–09:45 *Standing on the shoulders of giants: attacking the meta-problems of technical AAC research*

Joseph Reddington

09:45–10:15 *Graphical Modification of Text. An Approach To Dyslexic Users.*

Tereza Pařilová

10:15–10:30 Break

### Session 2

10:30–11:00 Special Talk by K.I. Boser, M. Goodwin, and S.C. Wayland: *Technology Tools For Students With Autism: Innovations That Enhance Independence and Learning*

11:00–11:30 *Dialogue Strategy Learning in Healthcare: A Systematic Approach for Learning Dialogue Models from Data*

Hamidreza Chinaei and Brahim Chaib-draa

11:30–12:00 *Speech recognition in Alzheimer's disease with personal assistive robots*

Frank Rudzicz, Rosalie Wang, Momotaz Begum and Alex Mihailidis

12:00–14:00 Lunch

**Thursday, June 26, 2014 (continued)**

**Session 3**

- 14:00–14:30 *Individuality-preserving Voice Conversion for Articulation Disorders Using Dictionary Selective Non-negative Matrix Factorization*  
Ryo Aihara, Tetsuya Takiguchi and Yasuo Arika
- 14:30–15:00 *Preliminary Test of a Real-Time, Interactive Silent Speech Interface Based on Electromagnetic Articulograph*  
Jun Wang, Ashok Samal and Jordan Green
- 15:00–16:00 Invited Talk by Frank Rudzicz: *Dysarthria as a noisy channel in speech production*