SLPAT 2011

2nd Workshop on Speech and Language Processing for Assistive Technologies

Proceedings

July 30, 2011
Edinburgh, Scotland, UK

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Introduction

We are pleased to bring you these Proceedings of the Second Workshop on Speech and Language Processing for Assistive Technologies (SLPAT), held in Edinburgh, Scotland on 30 July, 2011. We received 19 paper submissions, of which 9 were chosen for oral presentation and another 6 for poster presentation – all 15 papers are included in this volume. In addition, five demo proposals were accepted, and short abstracts of these demos are also included here.

This workshop was intended to bring 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 the first such workshop (co-located with NAACL HLT 2010); it 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 are very excited to have four invited speakers. Sylvia Grant, Darryal Stark and Greg McMurchie will speak on their experiences and perspectives as users of AAC technology. Norman Alm will chair this expert panel and facilitate discussion between the panel and workshop participants. Norman has a wealth of research experience in applying NLP technologies to AAC and we look forward to a truly interactive and informative session. We would like to thank all four speakers for taking the time to participate and provide their collective insight to the workshop.

We would also like to thank the members of the Program Committee for completing their reviews promptly, and for providing useful feedback for deciding on the program and preparing the final versions of the papers. Thanks also to Marie Candito, Bonnie Webber and Miles Osborne for assistance with logistics and to Brian Roark for his guidance and support. Finally, thanks to the authors of the papers, for submitting such interesting and diverse work, and to the presenters of demos and commercial exhibitions.

Melanie Fried-Oken, Peter Ljunglöf, Kathy McCoy and Annalu Waller

Co-organizers of the workshop

Organizers:

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Peter Ljunglöf, University of Gothenburg & Chalmers University of Technology
Kathleen F. McCoy, University of Delaware
Annalu Waller, University of Dundee

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Jan-Oliver Wuelfing, Fraunhofer Centre Birlinghoven, Germany

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Workshop Program

Saturday, July 30

08:15–08:45 Registration

08:45–09:00 Opening remarks

Session: Speech impairment

09:00–09:30 *An on-line system for remote treatment of aphasia*
Anna Pompili, Alberto Abad, Isabel Trancoso, José Fonseca, Isabel Pavão Martins, Gabriela Leal and Luisa Farrajota

09:30–10:00 *Acoustic transformations to improve the intelligibility of dysarthric speech*
Frank Rudzicz

10:00–10:30 *Towards technology-assisted co-construction with communication partners*
Brian Roark, Andrew Fowler, Richard Sproat, Christopher Gibbons and Melanie Fried-Oken

10:30–11:00 Coffee break

Session: Access for physical impairment

11:00–11:30 *Trap Hunting: Finding Personal Data Management Issues in Next Generation AAC Devices*
Joseph Reddington and Lizzie Coles-Kemp

User panel, Posters and Demonstrations

11:30–12:40 Invited user panel, chaired by Norman Alm

12:40–14:00 Lunch, Posters and Demonstrations

Saturday, July 30 (continued)

Session: Visual impairment

14:00–14:30 *Asynchronous fixed-grid scanning with dynamic codes*
Russ Beckley and Brian Roark

14:30–15:00 *Improving the Accessibility of Line Graphs in Multimodal Documents*
Charles Greenbacker, Peng Wu, Sandra Carberry, Kathleen McCoy, Stephanie Elzer, David McDonald, Daniel Chester and Seniz Demir

15:00–15:30 *Indian Language Screen Readers and Syllable Based Festival Text-to-Speech Synthesis System*
Anila Susan Kurian, Badri Narayan, Nagarajan Madasamy, Ashwin Bellur, Raghava Krishnan, Kasthuri G, Vinodh M. Vishwanath, Kishore Prahallad and Hema A. Murthy

15:30–16:00 Coffee break, Posters and Demonstrations

Session: Language simplification / hearing impairments

16:00–16:30 *READ–IT: Assessing Readability of Italian Texts with a View to Text Simplification*
Felice Dell'Orletta, Simonetta Montemagni and Giulia Venturi

16:30–17:00 *Source Language Categorization for improving a Speech into Sign Language Translation System*
Verónica López-Ludeña, Rubén San-Segundo, Syaheerah Lufti, Juan Manuel Lucas-Cuesta, Julián David Echevarry and Beatriz Martínez-González

17:00–17:45 Review of workshop and discussion on future SLPAT activities

Poster papers

What does it mean to communicate (not) emotionally?
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Demonstrations

SLPAT Demo Session
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