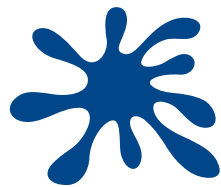


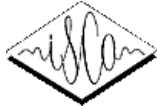
SLPAT 2013

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



Workshop Proceedings

21–22 August, 2013
Grenoble, France



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Introduction

We are pleased to bring you the Proceedings of the Fourth Workshop on Speech and Language Processing for Assistive Technologies (SLPAT), held in Grenoble, France on the 21st and 22nd of August, 2013. We received 23 paper submissions, of which 12 were chosen for oral presentation and another 5 for poster presentation. In addition, two demo proposals were accepted. All 19 papers are included in this volume.

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 three previous such workshops (co-located with NAACL HLT 2010, EMNLP in 2011, and NAACL HLT 2012) and includes a special topic, “Speech Interaction Technology for Ambient Assisted Living in the Home”, which is a follow-up of two events (ILADI 2012 co-located with JEP-TALN-RECITAL 2012 and a special session in EUSIPCO 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 are very delighted to have Prof. Mark Hawley from the University of Sheffield as invited speaker. In addition we continue our tradition of a panel of AAC users, who will speak on their experiences and perspectives as users of AAC technology. Finally, this year we also have a tour of the DOMUS “smart home” of the Laboratoire d’Informatique de Grenoble. Because of the many submissions and program points, we have for the first time extended the workshop to two full days.

We would like to thank all the people and institutions who contributed to the success of the SLPAT 2013 workshop: the authors, the members of the program committee, the member of the organising committee and the invited speaker Mark Hawley. Finally, we would like to thank the Universities of Grenoble for sponsoring and hosting the workshop in the Laboratoire d’Informatique de Grenoble premises.

*Jan Alexandersson, Peter Ljunglöf, Kathleen F. McCoy, François Portet,
Brian Roark, Frank Rudzicz and Michel Vacher*

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Workshop Program

Wednesday, 21 August, 2013

- 09:00–09:45 Registration
- 09:45–10:00 Opening ceremony
- 10:00–11:00 Invited talk by Mark Hawley
SLPAT in practice: lessons from translational research
- 11:00–11:30 Coffee break
- 11:30–12:30 Regular paper session
*Towards Personalised Synthesised Voices for Individuals with Vocal Disabilities
Voice Banking and Reconstruction*
*Improving Continuous Sign Language Recognition: Speech Recognition Tech-
niques and System Design*
- 12:30–14:00 Lunch break
- 14:00–15:00 Invited user panel
- 15:00–16:30 Poster and demo session, with coffee
The dramatic piece reader for the blind and visually impaired
*Individuality-Preserving Voice Conversion for Articulation Disorders Using Locality-
Constrained NMF*
*Sub-lexical Dialogue Act Classification in a Spoken Dialogue System Support
for the Elderly with Cognitive Disabilities*
Automatic Speech Recognition: A Shifted Role in Early Speech Intervention?
*homeService Voice-enabled assistive technology in the home using cloud-based
automatic speech recognition*
Making Speech-Based Assistive Technology Work for a Real User
Visual Subtitles for Internet Videos
- 16:30–17:30 Regular paper session
*Robust Feature Extraction to Utterance Fluctuation of Articulation Disorders
Based on Random Projection*
Comparing and combining classifiers for self-taught vocal interfaces
- 17:30–18:00 SIG-SLPAT business meeting

Thursday, 22 August, 2013

09:00–11:00 Special topic session: Ambient Assisted Living

Experimental Evaluation of Speech Recognition Technologies for Voice-based Home Automation Control in a Smart Home

Automatic Monitoring of Activities of Daily Living based on Real-life Acoustic Sensor Data a preliminary study

Probabilistic Dialogue Modeling for Speech-Enabled Assistive Technology

Analyzing the Performance of Automatic Speech Recognition for Ageing Voice Does it Correlate with Dependency Level?

11:00–11:30 Coffee break

11:30–12:30 Regular paper session

Automating Speech Reception Threshold Measurements using Automatic Speech Recognition

Automatic Speech Recognition in the Diagnosis of Primary Progressive Aphasia

12:30–14:00 Lunch break

14:00–15:00 Regular paper session

A Self Learning Vocal Interface for Speech-impaired Users

Word Recognition from Continuous Articulatory Movement Time-series Data using Symbolic Representations

15:00–15:30 Coffee break and closing ceremony

15:30–17:30 Smart home tour: “DOMUS” – The Smart Home of the Laboratoire d’Informatique de Grenoble

19:30–22:00 Joint gala dinner together with the co-located WASSS workshop at the restaurant “Le Téléférique”