

Call for Papers for a Special Issue on Processing Morphologically Rich Languages IEEE Transactions on Audio, Speech and Language Processing

This is a call for papers for a special issue on Processing Morphologically Rich Languages, to be published in early 2009 in the IEEE Transactions on Audio, Speech and Language Processing.

Morphologically-rich languages like Arabic, Turkish, Finnish, Korean, etc., present significant challenges for speech processing, natural language processing (NLP), as well as speech and text translation. These languages are characterized by highly productive morphological processes (inflection, agglutination, compounding) that may produce a very large number of word forms for a given root form. Modeling each form as a separate word leads to a number of problems for speech and NLP applications, including: 1) large vocabulary growth, 2) poor language model (LM) probability estimation, 3) higher out-of-vocabulary (OOV) rate, 4) inflection gap for machine translation: multiple different forms of the same underlying baseform are often treated as unrelated items, with negative effects on word alignment and translation accuracy.

Large-scale speech and language processing systems require advanced modeling techniques to address these problems. Morphology also plays an important role in addressing specific issues of "under-studied" languages such as data sparsity, coverage and robust modeling. We invite papers describing previously unpublished work in the following broad areas: Using morphology for speech recognition and understanding, speech and text translation, speech synthesis, information extraction and retrieval, as well as summarization. Specific topics of interest include:

- methods addressing data sparseness issue for morphologically rich languages with application to speech recognition, text and speech translation, information extraction and retrieval, speech synthesis, and summarization
- automatic decomposition of complex word forms into smaller units
- methods for optimizing the selection of units at different levels of processing
- pronunciation modeling for morphologically-rich languages
- language modeling for morphologically-rich languages
- morphologically-rich languages in speech synthesis
- novel probability estimation techniques that avoid data sparseness problems
- creating data resources and annotation tools for morphologically-rich languages

Submission procedure: Prospective authors should prepare manuscripts according to the information available at <http://www.signalprocessingsociety.org/periodicals/journals/taslp-author-information/>. Note that all rules will apply with regard to submission lengths, mandatory overlength page charges, and color charges. Manuscripts should be submitted electronically through the online IEEE manuscript submission system at <http://sps-ieee.manuscriptcentral.com/>. When selecting a manuscript type, authors **must** click on "Special Issue of TASLP on Processing Morphologically Rich Languages".

Important Dates:

Submission deadline: August 1, 2008

Notification of acceptance: December 31, 2008

Final manuscript due: January 15, 2009

Tentative publication date: March 2009

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