

CALL FOR PAPERS
IEEE Journal of Selected Topics in Signal Processing (JSTSP)
Special Issue on
'Modelling and processing language and speech in neurodegenerative disorders'

The main aim of this special issue is to offer a forum that facilitates professional exchange of knowledge related to signal processing and machine learning methods for the processing, assessment and modelling of the language and the speech in neurodegenerative diseases, and presentation of the recent research advances in the field. The scope of this special issue covers many aspects of voice, speech, and language modelling and analysis, ranging from fundamental research to all kinds of advanced technologies and biomedical applications.

The **scope** of acceptable topics includes but is not limited to:

- Automatic detection of articulation deficits employing the acoustic signal, palatograms, and other associated sequences
- Automatic Identification of Language Deficits in Neurodegenerative Diseases
- Automatic evaluation and differential evaluation of speech neurodegenerative disorders by using machine learning approaches
- New strategies for parameterisation and modelling the language, speech, or voice in patients with neurodegenerative diseases.
- Data augmentation techniques applied to speech in neurodegenerative diseases
- Computer-based systems for speech therapy in neurodegenerative diseases
- Technical aids and hands-free devices: vocal prostheses and aids for the disabled
- Assessment of language and articulation deficits for rehabilitation purposes
- Speech enhancement for dysarthric speech
- Multimodal analysis of language and speech in neurodegenerative diseases
- Explanatory machine learning and model interpretability in automatic detection/assessment of neurodegenerative disorders from speech
- Cross-cultural and multilingual evaluations of the language and speech of patients suffering from neurodegenerative disorders
- Interaction of speech in neurodegenerative disorders with hearing impairment
- Speech-based e-health and m-health applications applied to the monitoring of neurodegenerative disorders
- Responsible deployment of assistive technologies for automatic processing and evaluation of language and/or speech in neurodegenerative disorders

This special issue aims to offer an interdisciplinary platform for presenting new knowledge in the field. The emphases are on both basic and applied research related to the monitoring of voice, speech, and language production, as well as clinical evaluation of new developments.

In addition to topic-specific research results, we invite high-quality submissions of tutorial or overview nature. We also welcome creative papers outside of the areas listed above but related to the overall scope of the special issue. Prospective authors can contact the Guest Editors to ascertain interest on topics that are not listed above.

Prospective authors should follow the instructions given on the IEEE JSTSP webpages: <https://signalprocessingsociety.org/publications-resources/ieee-journal-selected-topics-signal-processing>, and submit their manuscript with the web submission system at: <https://mc.manuscriptcentral.com/sps-ieee>

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