Everyday we use our voice to communicate, express emotions and feelings. Voice is also an important instrument for many professionals like teachers, singers, actors, lawyers, managers, salesmen etc. Modern style of life has increased the risk of experiencing some kind of voice alterations. It is believed that around the 19% of the population suffer or have suffered dysphonic voicing due to some kind of disease or dysfunction. So there exist a need for new and objective ways to evaluate the quality of voice, and its connection with vocal folds activity and the complex interaction between the larynx and the voluntary movements of the articulators (i.e. mouth, tongue, velum, jaw, etc).

Diagnosis of voice disorders, the screening of vocal and voice diseases (and particularly their early detection), the objective determination of vocal function alterations and the evaluation of surgical as well as pharmacological treatments and rehabilitation, are considered as major goals of the voice function assessment. Applications of Voice Function Assessment also include control of voice quality for voice professionals such as teachers, singers, speakers, as well as for the evaluation of the stress, vocal fatigue and loading, etc. Although the state of the art reports significant achievements in understanding the voice production mechanism and in assessing voice quality, there is a continuous need for improving the existing models of the normal and pathological voice source to analyse healthy and pathological voices. This special issue aims at offering an interdisciplinary platform for presenting new knowledge in the field of models and analysis of voice signals in conjunction with videendoscopic images with applications in occupational, pathological, and oesophageal voices. The scope of the special issue includes all aspects of voice modelling and analysis, ranging from fundamental research to all kind of biomedical applications and related established and advanced technologies. Original, previously unpublished submissions are encouraged within the following scope of topics:

- Databases of voice disorders
- Robust analysis of pathological and oesophageal voices
- Inverse filtering for voice function assessment
- Automatic detection of voice disorders from voice and speech
- Automatic assessment and classification of voice quality
- Multi-modal analysis of disordered speech (voice, speech, vocal folds images using videolaryngoscopy, videokymography, fMRI and other emerging techniques)
- New strategies for parameterization and modelling normal and pathological voices (e.g. biomechanical-based parameters, chaos modelling, etc)
- Signal processing to support the remote diagnosis
- Assessment of voice quality in rehabilitation
- Speech enhancement for pathological and oesophageal speech
Technical aids and hands-free devices: vocal prostheses and aids for disabled
- Non-speech vocal emissions (e.g. infant cry, cough and snoring)
- Relationship between speech and neurological dysfunctions (e.g. epilepsy, autism, schizophrenia, stress etc.)
- Computer-based diagnostic and training systems for speech dysfunctions

**Composition and Review Procedures**
The emphasis of this special issue is on both basic and applied research related to evaluation of voice quality and diagnosis schemes, as well as in the results of voice treatments. The submissions received for this Special Issue of Speech Communication on *Advanced Voice Function Assessment* will undergo the normal review process.

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**Important Dates**
- **Deadline for submission:** June, 15th, 2010.
- **First Notification:** September 15th, 2010.
- **Revisions Ready:** October 30st, 2010
- **Final Notification:** November, 30th, 2010
- **Final papers ready:** December, 30th, 2010
- **Tentative publication date:** January, 30th, 2011

**Submission Procedure**
Prospective authors should follow the regular guidelines of the Speech Communication Journal for electronic submission (http://ees.elsevier.com/specom). During submission authors must select the Section “Special Issue Paper”, not “Regular Paper”, and the title of the special issue should be referenced in the “Comments” (Special Issue on *Advanced Voice Function Assessment*) page along with any other information.