

#### HOW YOU COULD HELP

Being an **organization**, you could help to improve the current state of Advanced Voice Function Assessment (AVFA) by influencing politicians and professionals to take steps and initiatives in order to ensure that the information is brought out to the public. Another task is making sure that *official systems* are created, that coordinates and disseminates research outcomes among laryngologists, phoniaticians, voice pathologists, engineers and computer scientists. This would involve creating *communication centers*, where these professionals will meet to *communicate* in a scientific way their interdisciplinary opinions and results.

#### HOW THE STRUCTURE CAN BE CHANGED

The role of **organizations** would be to keep up with equipment and to influence politicians for better structures, including cooperation between the various experts, as well as appealing to the public. The public should be made aware of the cooperation, and the possibilities it brings.

#### GET INVOLVED

In order to optimize implementation of new tools of advanced voice assessment, cooperation with organizations is necessary. Through this cooperation theoretical research will be combined with new developments to propel AVFA and to generate scientific and clinical data to improve voice production models and voice treatment protocols.

#### LITTLE ATTENTION GIVEN TO COOPERATION

Creating AVFA will drastically improve currently felt absence of cross professional cooperation in clinical voice care. This new approach will result in eliminating current intervention patterns, --wherein an individual faced with a problem of the voice receives uncoordinated care from physicians, voice pathologists or other voice care specialists. By creating AVFA, this voice care pattern will be changed.

### *The aim of COST: Enhance advanced voice function assessment*



COST is supported  
by the EU RTD  
framework  
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## COST Action 2103

# Advanced Voice Function Assessment



Information for Health  
Professionals and  
Professional Voice Users

*Organizations*

# A NEW STRUCTURE

Many people, especially those who need to use voice at work may experience voice problems that may have profound effects on their professional and social life styles. Many lay individuals, including health care providers are not aware of how these voice disorders may be acquired, treated, prevented, and how devastating voice loss, even for a short time may be to a human being. This clearly unsatisfactory situation calls for an immediate and focused action.

## WHO ARE WE?

COST 2103 is a European Cooperative Research Action group that brings together clinicians, scientists and researchers from more than 15 countries, working in the fields of laryngology, phoniatrics, voice-speech pathology and therapy, speech acoustics, signal processing, and computer sciences.

## WHAT DO WE WANT?

1. To improve voice production models and algorithms impacting voice/speech processing applications, and to improve the assessment and treatment protocols of voice disorders.
2. To develop accurate and clinically useful methods: (a) to improve the quality of life for patients with voice problems and, (b) to protect people who use their voice as a primary tool of labour in their occupation against developing voice disorders.
3. To build databases of voice signals to test the above outline methods.
4. To assist selected European Union Committees (i.e. the Committee on Phoniatrics of the European Laryngological Society) in issuing guidelines and to publish voice/speech protocols for diverse European language groups.

## WHAT DO WE DO?

We coordinate research of five working groups.

### Working Group 1: *Modelling*

Goals: Improving voice production models for both normal and pathological conditions, and algorithms for speech synthesis.

### Working Group 2: *Analysis & Assessment*

Goals: Develop accurate and robust objective/quantitative methods for assessing pathological voice functions.

### Working Group 3: *Data Bases*

Goals: Build, collect and manage databases of pathologic voices from several European language groups.

### Working Group 4: *Substitution & Occupational Voices*

Goals: Develop new instruments and devices for monitoring and evaluating occupational voice problems, as well as for investigating quality and improvement of voice in a post-surgically and or post radiation larynx compromised by various oncologic treatments.

### Working Group 5: *Dissemination*

Goals: Raise public awareness about voice disorders and voice-related quality of life. Develop liaison with various professional associations, governmental authorities, health policy makers etc.

**Regular meetings.**

**Mutual exchange for enhanced cooperation.**

## THE NEED FOR A NEW STRUCTURE: ADVANCED VOICE ASSESSMENT

In order to obtain a holistic picture, and true *advanced voice function assessment* cooperation between especially laryngologists, phoniatrists, engineers, voice pathologist, by the help of **organizations**, is inevitable and necessary.

## WHAT SHOULD BE DONE

The environment at people's work places needs to be examined and public guidelines need to be made; many people have trouble with air conditioners and air refreshing products. Dust is another major factor. Teachers and pedagogues, and many others with voice related jobs, are in the danger zone for both voice- and ear damage, as they work in a very noisy environment. Specially designed ear plugs and speaking courses could prevent a lot of damage for this group.

## PREVENTION AND TREATMENT

The tools (guidelines) to prevent voice disorders are relatively simple and many disorders are due to the lack of knowledge about speaking/singing technique, (food) allergies and infections, stomach acid bacteria (helicobacter) and reflux, and life style in general (cigarettes, alcohol, foods, artificial additives). Furthermore, it is of immense importance to have measuring **equipment** that helps determining diagnosis. The equipment includes provision of *acoustical* measures, *physiological* measures, as well as *psychological* measures of the voice.