



**MAVEBA**  
**2025**  
Firenze, Italy

## FOREWORD

This book of Proceedings includes the contributions presented at the 14<sup>th</sup> International Workshop on Models and Analysis of Vocal Emissions for Biomedical Applications – MAVEBA 2025, held in Firenze from 16 to 17 December, 2025. The previous edition of MAVEBA, held in September 2023 was celebrated on site in a nice Florentine summer, that allowed participants enjoy outdoor visits. This 14<sup>th</sup> edition comes back to the traditional winter time, which compensates for the colder climate with the warmth of the Christmas atmosphere. We are both happy and proud that we are together again: a demonstration of strength and continuity of this small scientific community that kept us in touch and in friendship despite the difficulties for a quarter of a century. Indeed, the series of MAVEBA International Workshops started in 1999 and, overcoming pandemics, is continuously proposed every two years as a multidisciplinary meeting. It concerns the study of the human voice both from the methodological point of view and its biomedical applications. The aim is that of assessing reliable procedures for objective and quantitative definition of levels of voice disorders, singing voice parameters, newborn cry features, vocal fold and vocal tract modelling and mechanics. It welcomes contributions ranging from fundamental research and advanced technologies and can benefit from new and powerful scientific tools such as Artificial Intelligence. The emphasis is still translational research, the link with the “real” complex world of the human being. This 14<sup>th</sup> Workshop will offer again the participants an interdisciplinary platform for presenting and sharing knowledge and recent results in this multifaceted subject that involves bioengineers, otolaryngologists, phoniatricians, neurologists, logopaedicians, linguistics, singers, actors, and any specialist in related fields, with applications ranging from the newborn to the elderly.

The papers presented at MAVEBA 2025 are divided into three Special Sessions and other four Sessions:

### SPECIAL SESSIONS

**I – THE ROLE OF AI IN THE FIELD OF PHONIATRICS AND LARYNGOLOGY: PRESENT AND FUTURE**  
(organized by G. CANTARELLA)

**II – HISTORICAL ASPECTS OF VOICE RECORDINGS AND ANALYSIS** (organized by P.H. DEJONCKERE)

**III – UPDATES ON VOICE RANGE PROFILE MEASUREMENTS** (organized by M.KOB AND G. BARACCA)

**SESSION I – ANALYSIS OF PATHOLOGICAL VOICE**

**SESSION II – SINGING VOICE ANALYSIS**

**SESSION III – VOICE ANALYSIS AND SYNTHESIS**

**SESSION IV – VOICE EMOTIONS AND PERSONALITY**

As for the past edition, MAVEBA 2025 includes a Student Competition, which selects the best paper, both as far as contents and the student presentation and communication skills. A prize of 200 CHF is offered by Electronics Journal (MDPI, Section Bioelectronics). Moreover, the winner will be granted by a certificate and one year of free online access offered by Logopedics Phoniatrics Vocology journal (LPV), an international, scientific, peer-reviewed, open access journal. We are very grateful to both journals for the generous offer that allows young scholars to see their talent recognized.

### ACKNOWLEDGEMENTS

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*Claudia Manfredi*  
*Antonio Lanatà*  
*Lorenzo Frassinetti*  
MAVEBA 2025 Chairs