



MAVEBA
2021
Firenze, Italy

FOREWORD

This book of Proceedings includes the contributions presented at the 12th International Workshop on Models and Analysis of Vocal Emissions for Biomedical Applications – MAVEBA 2021, held in Firenze from 14 to 16 December, 2021.

The previous edition of MAVEBA in December 2019 was an opportunity to happily celebrate the twentieth anniversary of MAVEBA with “historical” colleagues and many new ones. No one would have imagined that just a couple of months later everyone’s life would have changed dramatically due to the COVID-19 pandemic!

This year’s edition wants to be a sort of revenge for life and a wish to start again meeting each other for everyone. For this reason it is mostly carried out not in a virtual way but in person.

I thank all the participants who, with their presence, wanted to be next to me once again. I also thank those who could not participate directly for personal or security reasons.

Thus, the question that I asked me two years ago is still the same, and I give the same answer: MAVEBA started because of curiosity and continued thanks to the enthusiasm of the participants: and today? Curiosity and enthusiasm are still there despite pandemic, with the awareness of a fascinating and increasingly interdisciplinary world.

The main subjects of MAVEBA 2021 still concern methods for analyzing the human voice and retrieving its features related to particular physiological or neurological conditions. 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. The interdisciplinarity, that has always characterized the MAVEBA workshops, is well highlighted by the themes addressed, that are listed below.

The papers presented at MAVEBA 2021 and collected in this volume are divided into eight Sessions.

SESSION I – MODELS AND ANALYSIS

SESSION II – SPEECH

SESSION III – NEUROLOGICAL DISORDERS

SESSION IV - BIOMECHANICS

SESSION V - SINGING

SESSION VI – NEWBORNS AND CHILDREN

SESSION VII - PARKINSON

SESSION VIII – COVID-19

I am very grateful to the authors for their contribution and to all participants, near and far, but present anyway, that stimulated the discussion and helped to propose new research themes and methodologies of analysis in the continuously evolving field of the study of the human voice.

Claudia Manfredi
MAVEBA 2021 Chair

ACKNOWLEDGEMENTS

I greatly acknowledge my PhD student Dr.Eng. Lorenzo Frassinetti, who manages and constantly updates the website, collaborated in reviewing the Proceedings and in solving the daily difficulties with patience and professionalism, Dr. Eng. Benedetta Olmi, research fellow, the biomedical Engineering students Federico Calà, Angela Parente, Valentina Guarguagli and the ScaramuzziTeam Congress Agency for its professionalism.