

Preface

This volume brings together through a peer-revision process advanced research results obtained on nonlinear speech processing, following the tradition initiated by the European COST Action 277: “Nonlinear Speech Processing” (http://www.cost.eu/COST_Actions/ict/277). The research published in this book was discussed for the first time at the 7th edition of the International Workshop on “Nonlinear Speech Processing (NOLISP)” held in Vietri sul Mare, Italy, on May 18–20, 2015.

The workshop afforded a change of perspective in nonlinear speech processing, where the research focus moved from “engineering tools” to “interactional exchanges” and asked for investigations of coding/decoding and computational processes, and social and cognitive speech features for improving the quality of life of end users of communicative interfaces exploiting speech as the main communicative tool for human–machine interaction. The consequences should result in the development of autonomous, adaptive voice user interfaces (VUIs) able to exploit linguistic and paralinguistic information and allow free form of conversations. This approach will foster traverse investigations on the multifunctional role of speech and multimodal communication modes that account for gestures, emotions, and social signal processing for developing friendly and socially believable interactive dialogue systems.

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