

Preface

I know what you are asking yourself – “there are a lot of books available in speech processing, what is novel in this book?” Well, I can summarize the answer for this question in the following points:

1. You always see different algorithms for speech enhancement, deconvolution, signal separation, watermarking, and encryption, separately, without specific applications for these algorithms.
2. You also see literature books and research papers on speaker identification concentrating on how to extract features, and the comparison between feature extraction methods.
3. How to make use of speech enhancement, deconvolution, and signal separation to enhance the performance of speaker identification systems is a missing issue. This book presets this issue and gives comparison studies between different algorithms that can be used for this purpose.
4. Speech watermarking and encryption are studied for the first time in this book in a framework that enhances the security of speaker identification systems.
5. Performance enhancement and security enhancement of speaker identification systems are contradicting objectives. How they affect each other is also studied in this book.

Finally, I hope that this book will be a starting step towards an extensive study to build speaker identification systems with multilevels of security.

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<http://www.springer.com/978-1-4419-9697-8>

Information Security for Automatic Speaker
Identification

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2011, XIII, 122 p. 110 illus., 45 illus. in color., Softcover

ISBN: 978-1-4419-9697-8