



Phonetic Analysis of Speech Corpora

Jonathan Harrington

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DESCRIPTION

An accessible introduction to the phonetic analysis of speech corpora, this workbook-style text provides an extensive set of exercises to help readers develop the necessary skills to design and carry out experiments in speech research.

- Offers the first step-by-step treatment of advanced techniques in experimental phonetics using speech corpora and downloadable software, including the R programming language
- Introduces methods of analyzing phonetically-labelled speech corpora, with the goal of testing hypotheses that often arise in experimental phonetics and laboratory phonology
- Incorporates an extensive set of exercises and answers to reinforce the techniques introduced
- Accessibly written with easy-to-follow computer commands and spectrograms of speech
- Companion website at www.wiley.com/go/harrington, which includes illustrations, video tutorials, appendices, and downloadable speech corpora for testing purposes.
- Discusses techniques in digital speech processing and in structuring and querying annotations from speech corpora
- Includes substantial coverage of analysis, including measuring gestural synchronization using EMA, the acoustics of vowels, consonant overlap using EPG, spectral analysis of fricatives and obstruents, and the probabilistic classification of acoustic speech data

ABOUT THE AUTHOR

Jonathan Harrington is Professor of the Institute of Phonetics and Speech Processing (IPS), University of Munich, Germany. His recent research has primarily focused on modelling the acoustic and perceptual mechanisms of sound change. He is co-editor of *Speech Production: Models, Phonetic Processes, and Techniques* (with Marija Tabain, 2006) and *Techniques in Speech Acoustics* (with Steve Cassidy, 1999).

FEATURES

- - An introduction to the quantitative analysis of speech signal processing, computer programming, and statistical techniques in speech sciences
 - Helps the reader to develop the necessary skills to create, query, and analyze speech
 - Taking a workbook approach, provides an extensive set of exercises with answers for solving problems in phonetics and laboratory phonology
 - Uses examples that can be recreated using online samples of acoustic and articulatory speech corpora, and the freely available R software
 - Uses text instead of equations where possible, creating an introduction to the subject that is accessible for students from a non-technical background
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