Record Nr. UNINA9910299957503321 Autore Benesty Jacob Titolo Fundamentals of Speech Enhancement / / by Jacob Benesty Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2018 3-319-74524-7 **ISBN** Edizione [1st ed. 2018.] Descrizione fisica 1 online resource (106 pages) SpringerBriefs in Electrical and Computer Engineering, , 2191-8112 Collana Disciplina 006.454 Soggetti Signal processing Image processing Speech processing systems Multimedia information systems Signal, Image and Speech Processing Multimedia Information Systems Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references at the end of each chapters and index. Sommario/riassunto This book presents and develops several important concepts of speech enhancement in a simple but rigorous way. Many of the ideas are new; not only do they shed light on this old problem but they also offer valuable tips on how to improve on some well-known conventional approaches. The book unifies all aspects of speech enhancement, from single channel, multichannel, beamforming, time domain, frequency domain and time-frequency domain, to binaural in a clear and flexible framework. It starts with an exhaustive discussion on the fundamental best (linear and nonlinear) estimators, showing how they are connected to various important measures such as the coefficient of determination, the correlation coefficient, the conditional correlation coefficient, and the signal-to-noise ratio (SNR). It then goes on to show how to exploit these measures in order to derive all kinds of noise reduction

algorithms that can offer an accurate and versatile compromise

between noise reduction and speech distortion.