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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Sources of Variability and Distortion in the Communication Process -- Environment-Independent Adaptive Speech Recognition: A Review of the State of the Art -- Confidence Measures, Dialog Modeling and User Interface -- From Cost Sensitive Embedded Applications to PC-based Systems -- Future Outlook for Robust ASR.
Sommario/riassunto	Robust Speech Recognition in Embedded Systems and PC Applications provides a link between the technology and the application worlds. As speech recognition technology is now good enough for a number of applications and the core technology is well established around hidden Markov models many of the differences between systems found in the field are related to implementation variants. We distinguish between embedded systems and PC-based applications. Embedded applications are usually cost sensitive and require very simple and optimized methods to be viable. Robust Speech Recognition in Embedded Systems and PC Applications reviews the problems of robust speech recognition, summarizes the current state of the art of robust speech recognition while providing some perspectives, and goes over the complementary technologies that are necessary to build an application, such as dialog

and user interface technologies. Robust Speech Recognition in Embedded Systems and PC Applications is divided into five chapters. The first one reviews the main difficulties encountered in automatic speech recognition when the type of communication is unknown. The second chapter focuses on environment-independent/adaptive speech recognition approaches and on the mainstream methods applicable to noise robust speech recognition. The third chapter discusses several critical technologies that contribute to making an application usable. It also provides some design recommendations on how to design prompts, generate user feedback and develop speech user interfaces. The fourth chapter reviews several techniques that are particularly useful for embedded systems or to decrease computational complexity. It also presents some case studies for embedded applications and PC-based systems. Finally, the fifth chapter provides a future outlook for robust speech recognition, emphasizing the areas that the author sees as the most promising for the future. Robust Speech Recognition in Embedded Systems and PC Applications serves as a valuable reference and although not intended as a formal University textbook, contains some material that can be used for a course at the graduate or undergraduate level. It is a good complement for the book entitled Robustness in Automatic Speech Recognition: Fundamentals and Applications co-authored by the same author.