

# Acoustical and Environmental Robustness in Automatic Speech Recognition (The Springer International Series in Engineering and Computer Science)



The need for automatic speech recognition systems to be robust with respect to changes in their acoustical environment has become more widely appreciated in recent years, as more systems are finding their way into practical applications. Although the issue of environmental robustness has received only a small fraction of the attention devoted to speaker independence, even speech recognition systems that are designed to be speaker independent frequently perform very poorly when they are tested using a different type of microphone or acoustical environment from the one with which they were trained. The use of microphones other than a close talking headset also tends to severely degrade speech recognition performance. Even in relatively quiet office environments, speech is degraded by additive noise from fans, slamming doors, and other conversations, as well as by the effects of unknown linear filtering arising from reverberation from surface reflections in a room, or spectral shaping by microphones or the vocal tracts of individual speakers. Speech-recognition systems designed for long-distance telephone lines, or applications deployed in more adverse acoustical environments such as motor vehicles, factory floors, or outdoors demand far greater degrees of environmental robustness. There are several different ways of building acoustical robustness into speech recognition systems. Arrays of microphones can be used to develop a directionally-sensitive system that resists interference from competing talkers and other noise sources that are spatially separated from the source of the desired speech signal.

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Volume 341 of the series The Kluwer International Series in Engineering and Computer Science pp 37- **Acoustical and Environmental Robustness in Automatic Speech** Acoustical and Environmental Robustness in Automatic Speech Recognition The Springer International Series in Engineering and Computer Science pp 81- **Deep Maxout Networks Applied to Noise-Robust Speech Recognition Acoustical and Environmental Robustness in Automatic Speech** Volume 1829 of the series Lecture Notes in Computer Science pp 136-144 The adaptation to the changes of environment is crucial to improve automatic speech recognition systems robustness in various conditions of use . Consumer Packaged Goods Aerospace Engineering. eBook Packages. Springer Book Archive. **Robustness in Automatic Speech Recognition - Springer** Volume 8854 of the series Lecture Notes in Computer Science pp 109-118 (DMN) for acoustic modeling in a noisy automatic speech recognition environment. **Human Language Technology. Challenges of the Information Society: - Google Books Result** Robust Speech Recognition in Embedded Systems and PC Applications. 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Morgan and H. Bourlard, Speech Recognition and Neural Networks: for Robust Automatic Speech Recognition, Signal Processing Magazine, vol. **Recent Developments in Robust Speech Recognition - Springer** Acoustical and Environmental Robustness in Automatic Speech Recognition (The Springer International Series in Engineering and Computer Science) PDF: **Automatic Speech Recognition The Development Of The Sphinx** Acoustical and environmental robustness in automatic speech recognition / by (The Kluwer international series in engineering and computer science. the prior written permission of the publisher, Springer Science+ Business Media, LLC. **Acoustical and Environmental Robustness in Automatic Speech** The need for automatic speech recognition systems to be robust with respect to The Springer International Series in Engineering and Computer Science. **Acoustical and Environmental Robustness in Automatic Speech** The need for automatic speech recognition systems to be robust with respect to of The Springer International Series in Engineering and Computer Science. Volume 355 of the series The Kluwer International Series in Engineering and Computer Science pp 357-384 This chapter compares several different approaches to robust automatic speech recognition. We review ongoing research in the use of acoustical pre-processing to achieve robust speech recognition, discussing **Experimental Procedure - Springer** The Springer International Series in Engineering and Computer Science Acoustical and Environmental Robustness in Automatic Speech Recognition. **Robustness of Speech Recognition System of Isolated Speech in** Acoustical and Environmental Robustness in Automatic Speech Recognition The Springer International Series in Engineering and Computer Science pp 67- **Frequency Domain Processing - Springer** Acoustical and Environmental Robustness in Automatic Speech Recognition Springer International Series in Engineering and Computer Science pp

121-129 **Acoustical and Environmental Robustness in Automatic - Springer** Volume 355 of the series The Kluwer International Series in Engineering and Computer Science pp 1-30 voice interactive command and control systems on personal computers, to large vocabulary speech dictation, In this chapter we review some of the key advances in several areas of automatic speech recognition. **Background on Speech Analysis - Springer** Acoustical and Environmental Robustness in Automatic Speech Recognition (The Springer International Series in Engineering and Computer Science). **An Overview of Automatic Speech Recognition - Springer** Springer International Series in Engineering and Computer Science pp 231-249 Robust speech recognition refers to the problem of designing an automatic **The CDCN Algorithm - Springer** The Springer International Series in Engineering and Computer Science. Volume Acoustical and Environmental Robustness in Automatic Speech Recognition **Automatic Speech and Speaker Recognition - Advanced - Springer** The Springer International Series in Engineering and Computer Science Particularly. applications of automatic speech recognition were rigorously attempt ed **Faculty Publications EECS at UC Berkeley** Acero, A.: Acoustical and Environmental Robustness in Automatic Speech Recognition. The Springer International Series in Engineering and Computer Science