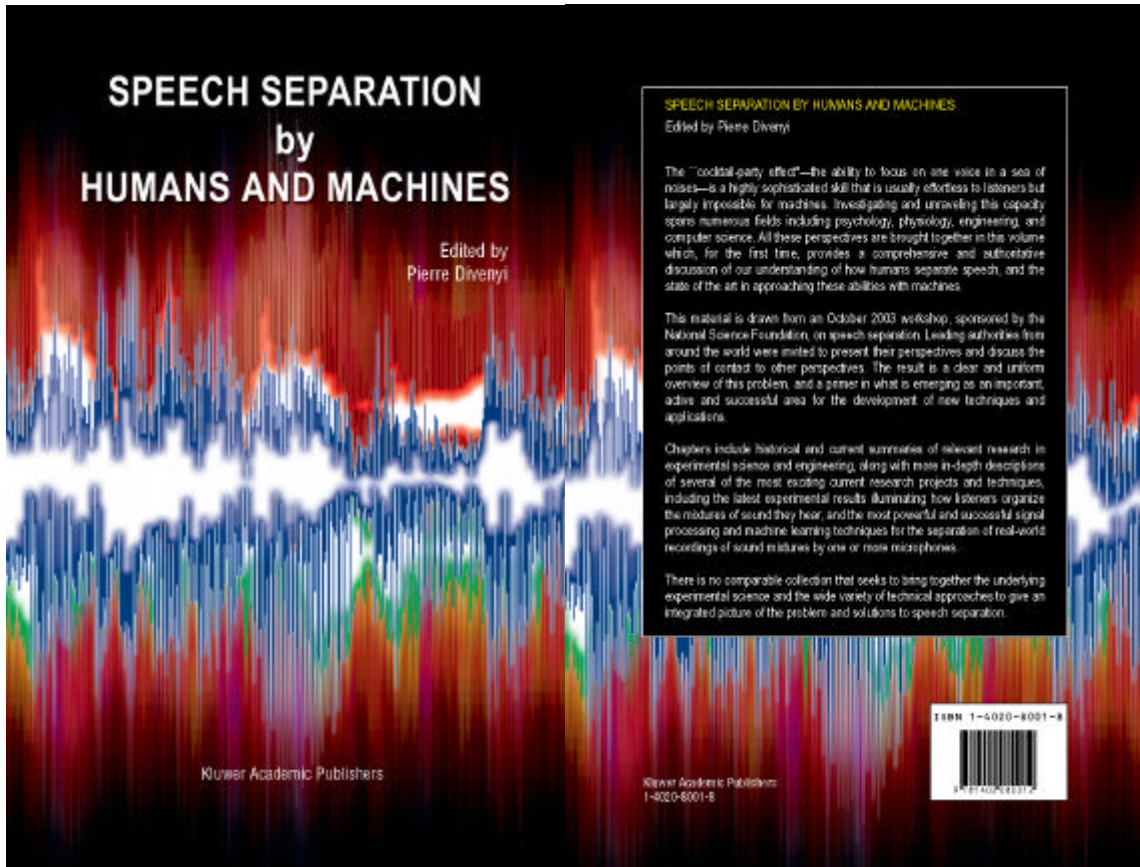


From the back cover of the book **SPEECH SEPARATION BY HUMANS AND MACHINES** edited by Pierre Divenyi, Ph.D.

The ‘cocktail-party’ effect – the ability to focus on one voice in a crowd where many people are speaking at once – is a highly sophisticated skill, usually effortless to listeners but largely impossible for machines. Investigating and unraveling this capacity spans numerous fields including psychology, physiology, engineering and computer science. All these perspectives are brought together in this volume. This is the first collection to date that seeks to bring together the underlying experimental science and the wide variety of technical approaches to give an integrated picture of the problem and solutions to speech separation.



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This material is drawn from an October 2003 workshop, sponsored by the National Science Foundation, on speech separation. Leading authorities from around the world were invited to present their perspectives and discuss the points of contact to other perspectives. The result is a clear and uniform overview of this problem, and a primer in what is emerging as an important, active and successful area for the development of new techniques and applications.

Chapters include historical and current summaries of relevant research in experimental science and engineering, along with more in-depth descriptions of several of the most exciting current research projects and techniques, including the latest experimental results illuminating how listeners organize the mixtures of sound they hear, and the most powerful and successful signal processing and machine learning techniques for the separation of real-world recordings of sound mixtures by one or more microphones.

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