

## WAVE FIELD SYNTHESIS: BASICS AND APPLICATIONS

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### ABSTRACT

The presentation first introduces the basic ideas of Wave Field Synthesis. Since the early research at Delft Technical University, many groups have started research in WFS and first commercial applications are in place. WFS has been used for open air concerts, for theme parks, for virtual reality systems and is making the first steps into the world of digital cinema. The presentation will discuss some of these applications and current limitations of WFS.

### 1. BIOGRAPHY

Curriculum Vitae Prof. Dr.-Ing. Dr. rer. nat. h.c. mult. Karlheinz Brandenburg

Dr. Karlheinz Brandenburg has been a driving force behind some of today's most innovative digital audio technology, notably the MP3 and MPEG audio standards. He is acclaimed for seminal work in digital audio coding and perceptual measurement techniques, Wave Field Synthesis (WFS) and psycho-acoustics.

As an IEEE Fellow, Prof. Brandenburg serves on the IEEE Signal Processing Society's Technical Committee on Audio and Electro-acoustics and he is Governor and a Fellow of the Audio Engineering Society (AES).

His honors include the AES Silver Medal, the "IEEE Masaru Ibuka Consumer Electronic Award", the German Future Award, which he shared with his colleagues and the Cross of the Order of Merit of the Federal Republic of Germany. Furthermore he is member in the "Hall of Fame" of the Consumer Electronics Association and of the International Electrotechnical Commission.

The author of numerous articles and co-editor of "Applications of Digital Signal Processing to Audio and Acoustics", Dr. Brandenburg holds about 100 patents.

He is professor at the Institute for Media Technology at Ilmenau Technical University and director of the Fraunhofer Institute for Digital Media Technology IDMT in Ilmenau, Germany.