

Sound field reconstruction: a comparison between different technologies

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This presentation is an introduction to two methods for the reconstruction of a sound field: high-order Ambisonics and the Least Square Method. The theoretical background to these two approaches is presented and some sound field reconstruction animations, obtained with numerical simulations, are shown in order to illustrate the differences in the performance of the two methods. Finally, an important result is presented: the mathematical proof that high-order Ambisonics and Least Squares Methods are formally equivalent under certain regularity conditions of transducer arrangements. This result is confirmed by numerical simulations.