

SEMINAR ANNOUNCEMENT

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING
COLLEGE OF DESIGN AND ENGINEERING
Website: <https://cde.nus.edu.sg/ece>

Area: Microelectronic Technologies & Devices (MTD)

Host: Assoc Prof Aaron James Danner

TOPIC	:	Did experts and market overlook a potential of Distributed Mode Loudspeakers?
SPEAKER	:	Prof Piotr Kleczkowski Professor, AGH University of Krakow, Poland
DATE	:	Tuesday, 15 September 2026
TIME	:	4:00PM-5:00PM
VENUE	:	E3-06-01

ABSTRACT

Loudspeakers that operate on the principle of bending waves are referred to as distributed mode loudspeakers (DMLs). The first wave of interest in DML technology occurred at the turn of this century, with strong hopes. A characteristic known from the early analysis is their very wide angle of sound radiation. This property has been found recently to have a profound effect on the perceptual qualities of the reproduced sound. A series of experiments has been carried out to evaluate subjective preference for either the DMLs or a reference quality conventional active loudspeaker system. In the experiments, the DMLs were compensated for their shortcomings. The hypothesis that DMLs provide more perception of envelopment than conventional loudspeakers was proven. The results indicated that compensated DMLs attain a sound quality that is overall close to that of reference conventional systems, but offer a unique quality of spaciousness.

BIOGRAPHY

Piotr Kleczkowski is a professor at AGH University of Krakow, Poland. An interdisciplinary researcher, his interests include acoustics (specifically, audio engineering) and environmental protection (specifically, air quality). He has been the author of the first interdisciplinary textbook in Poland on air pollution, a textbook on psychoacoustics and a video-based e-book on the same topic (in English), two books on signal processing in audio engineering, and a co-author of a textbook on environmental pollution. He created a new major at AGH University – Acoustical Engineering. His students have received many prestigious awards in international competitions. A member of the Education Committee of the Audio Engineering Society, a former Chairman of the Polish Section of the AES, an expert of the European Research Executive Agency of the European Commission, and a member of the Climate Council of UN Global Compact Poland. He was a visiting professor at Cranfield University in the UK. He was also a former member of the City Council of Krakow.

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