

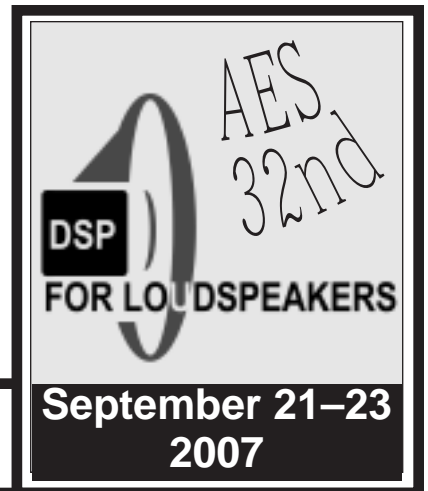
# AUDIO ENGINEERING SOCIETY

## CALL for PAPERS

### AES 32<sup>nd</sup> International Conference

#### *DSP for Loudspeakers*

Pharmakon Conference Center, Hillerød, Denmark



**Dates:** September 21–23, 2007, **Location:** Hillerød, Denmark

**Chair:** Jan Abildgaard Pedersen, Email: 32nd\_chair@aes.org

**September 21–23  
2007**

Digital signal processing (DSP) offers loudspeaker system designers a very powerful set of tools. It may be as simple as a delay line, which hardly needs DSP anyway. Or it may be a precise and detailed filtering with just the desired magnitude and phase characteristics. Such filtering may be used to construct a single very accurate loudspeaker, or used for room correction, or it may be used to create beam-steering arrays or even wavefield synthesis. In addition to filtering, digital signal processing may be used for distortion compensation, or for enhancing the subjective performance by means of nonlinear processing. On the analysis side, DSP can be used to monitor in real time the state of the loudspeaker and model important driver parameters such as voice coil temperature. Through the last couple of decades, AES members have been in the forefront of this research.

Meanwhile, the maturity and price/performance ratio of essential system components such as processors, software development tools, AD/DA converters, and power amplifiers have reached a point where it makes commercial sense for a large part of the audio industry to apply loudspeaker-specific DSP in their products. Indeed, there are already classes of products completely depending on it.

This international conference aims to present the state of the art within the rich and still emerging field of loudspeaker-specific DSP and create an inspiring and synergetic meeting between professionals in the fields of electroacoustics, psychoacoustics, room acoustics, transducer physics, and DSP.

The AES 32nd International Conference Committee invites submission of technical papers for presentation at the conference in 2007 in Hillerød, Denmark. By **2007 April 10**, a full paper of 4 to 10 pages should be submitted online at [www.aes.org/32nd\\_authors](http://www.aes.org/32nd_authors), where paper templates will be available for downloading. You can visit this site for more information and complete instructions for using the site anytime after 2006 December 15. If you are planning to submit a paper, please create a partial submission (title and tentative abstract) as early as you can so the organizers can monitor interest in real time. The 32nd Conference Review Committee, based on full-paper submissions, will determine acceptance of papers and inform all authors before 2007 May 31 by email. Following acceptance, appropriate revisions based on the comments of the reviewers will be allowed, but no substantial rewriting. Revised papers must be submitted by 2007 July 10.

## PROPOSED TOPICS FOR PAPERS

### Loudspeaker State Monitoring and Protection

- Driver protection
- SPL control
- Fault diagnostics

### Adaptive Systems

- Room equalization
- Thermal compensation
- Active noise cancellation

### Nonlinear Processing

- Distortion reduction
- Dynamic EQ
- Nonlinear perceived bandwidth extension
- Good distortion

### Speaker Measurement Techniques

- Sound quality assessment
- Distortion characterization
- Modeling

### Filter Structures and Design Algorithms

### Spatial Processing

- Beam-forming
- Toward holophonic wallpaper, e.g. wavefield synthesis

### Active Transducers

### New Directions

## SUBMISSION OF PAPERS

Please submit complete papers of 4 to 10 pages at [www.aes.org/32nd\\_authors](http://www.aes.org/32nd_authors) no later than **2007 April 10**.

If you have any questions, contact:

### PAPERS CHAIR

**Knud Bank Christensen**, The TC Group  
Email: 32nd\_papers@aes.org

## SCHEDULE

**Paper deadline: 2007 April 10**

**Acceptance emailed: 2007 May 31**

**Revised paper deadline: 2007 July 10**