

## AES Audio Product Education Institute Webinar Explores Automotive Immersive Audio

The graphic features a dark blue background with a pattern of car speakers. At the top right, the text reads "APEI Automotive Audio Webinar Immersive Audio in Automobiles". Below this, it says "Online Event - September 15 9:00 AM Pacific (12:00 PM Eastern)". On the left, the Audio Product Education Institute logo is shown, consisting of a stylized bar chart and the AES logo. At the bottom, three circular headshots of speakers are displayed: Andreas Ehret (Dolby), Mathias Johansson (Dirac), and Roger Shively (JJR Acoustics). The JJR Acoustics logo is also present in the bottom right corner, with the text "Sponsored by" above it.

The AES Audio Product Education Institute (APEI), created to promote methodologies, practices and technologies involved in developing and bringing audio products to market, will present a new free webinar on its Automotive Audio education pillar, addressing “Immersive Audio in Automobiles,” on Wednesday, September 15 (12:00pm EDT).

Expanding on a series of webinars covering automotive audio design and applications, the session will explore the different ways to translate immersive audio content and generate immersive experiences. Currently top-of-mind for both automotive brands and consumers, immersive audio reproduction results from a convergence of multiple technologies and concepts, from multichannel playback to acoustic auralization of perceived listening spaces, to DSP enhancement of sound reproduction.

The term “Immersive Audio” used to describe a channel-based, height-inclusive, object-oriented production process first appeared eleven years ago, and criteria

standards by the Society of Motion Picture and TV Engineers (SMPTE) were added subsequently. With consumers now being offered immersive, 3D audio, and spatial audio experiences in all types of playback platforms, and with actual immersive audio formats, such as Dolby Atmos, becoming widely recognized, it's only natural that automotive audio has followed the trend and strives to take it a step further.

During this webinar, Roger Shively (JJR Acoustics), APEI's Automotive Audio pillar chair, will discuss what we define as "Immersive Audio," how this is driving automotive audio speaker architectures, and how existing architectures are being used. Other topics to be explored include the challenges of tuning and distributing sound for the intended experience, the role of cross-talk cancellation, a comparison of content-based up-mixing vs. context-based up-mixing, and how to tune the car for immersive sound formats. Furthermore, what approaches are relevant for entry-, mid- and highest-tier systems?

To detail these topics and discuss the available technologies and solutions, Shively invited two key industry vendors, both leading the space from different perspectives.

Mathias Johansson, the Co-Founder and Chief Product Officer of Dirac Research, will discuss the nature of immersive content and the desired immersive experience and how to tune a car accordingly. Johansson will also cover other uses of immersive audio such as unconventional speaker layouts or Advanced Driver-Assistance Systems (ADAS). As a pioneer in the field of sound processing and optimization, Johansson has a rich experience in sound field control and immersive audio. He holds a PhD in signal processing from Uppsala University, Sweden.

Andreas Ehret, Director, Automotive, at Dolby Laboratories, will discuss how Dolby Atmos extracts the spatial objects from music and reproduces them to reveal details that provide great spatial clarity and depth, and how that is applied to automotive audio. Based out of Nuremberg, Germany, Ehret works on developing and expanding Dolby's Automotive business with Dolby Atmos in cars a key strategic ingredient.

Register for free at the website of the AES Audio Product Education Institute below.

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