

# Making racetrack noise bearable with physics

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During the 182nd ASA Meeting, Bonnie Schnitta, from SoundSense LLC, will discuss her efforts to reduce the noise in a Michigan neighborhood from a nearby raceway. Credit: Schnitta

Although racetracks can be fun for communities, they usually come with very high levels of noise that can sour nearby neighborhoods to the experience.

During the 182nd Meeting of the Acoustical Society of America, Bonnie

Schnitta, from SoundSense LLC, will discuss her efforts to reduce the [noise](#) in a Michigan neighborhood from a nearby raceway. The session, "Actions and mathematical modeling that will bring [noise levels](#) from a racetrack or raceway to a level the community will accept," will take place May 23 at 11:05 a.m. Eastern U.S. at the Sheraton Denver Downtown Hotel.

Raceways can produce noise from many kinds of vehicles, such as race cars, street [race cars](#), racing motorcycles, go-karts, monster trucks, and cheering spectators. Schnitta and her team examined several different types of barriers, including berms, acoustic barriers, or dense foliage, to block that noise from reaching surrounding houses and businesses.

"We have found that using a berm at a [safe distance](#) from the raceway track is the most economical method, although an acoustic collapsible barrier works well too," said Schnitta. "It typically takes a 200-foot depth of foliage to equal one acoustic fence or berm."

The team mathematically modeled a Michigan raceway, paying special attention to sections of the track where vehicles typically accelerate, producing the most noise. From there, the sound was mitigated with strategically placed berms. The goal was to reduce the sound heard in the surrounding neighborhood to at most 5 decibels above background levels.

Schnitta said the most effective solution to raceway noise might even be social in nature. The raceway made an agreement with a nearby church to suspend operations during the services in combination with acoustic treatment and said the best strategy is diplomatic with the mathematical-driven solution set used in the discussion.

"I have found that no matter what the noise problem is, if there is a civil conversation between the source of the noise and the receiver, an

agreeable outcome comes more quickly," said Schnitta. "Sometimes, a simple offer of free admission to see what all the 'noise' is about can make a difference."

**More information:** [acousticalsociety.org/asa-meetings/](https://acousticalsociety.org/asa-meetings/)

Provided by Acoustical Society of America

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