

The World of Sound

A lecture by **Dr. Malcolm J. Crocker**

Monday, May 22, 2017 Silesian
University of Technology



Dr. Crocker will give a Lecture on May 22, 2017 at the Silesian University of Technology. The title of the lecture is "The World of Sound."

Have you ever wondered how bats and owls can use sound to navigate and catch their prey—how owls can even fly silently—how musical instruments make sound—and how sound waves propagate? Come to this lecture to find out!

We all live in a “world” of sound—sounds of nature—insects, birds, water and wind. Both wanted sound—speech and music and unwanted sound (noise)—road traffic, aircraft, machinery noise. Dr. Crocker will discuss wanted sources of sound including musical instruments, speech and noise sources—and how the brain interprets these sounds.

Hearing is one of the most highly developed senses in humans and many animals. We use sound to communicate, listen to music and to detect sources of danger. Dr. Crocker’s lecture will include several demonstrations of sound sources and wave motion ranging from musical instruments to machinery and aerospace noise sources. He will also describe and give examples of music that has been created to imitate the sounds of nature.

Dr. Crocker’s lecture will conclude with discussions of his research conducted with Auburn undergraduate and graduate students on measuring and evaluating the sound quality of automobiles, predicting the launch noise

of Saturn V and the Shuttle, working on the vibration damping of the NASA Hubble Space Telescope, measuring tire noise and designing sound absorbing road surfaces .

Dr. Crocker has been involved in acoustics, noise and vibration research since his master’s degree in 1963. During 1963-1966, he worked at Wyle Labs in Huntsville, Alabama. His research work at that time included studies for NASA of the Saturn V launch noise and turbulent boundary layer transonic flight noise problems during the Moon Landing Program. He has been continuously involved in acoustics research at Auburn and Purdue Universities since that time.

