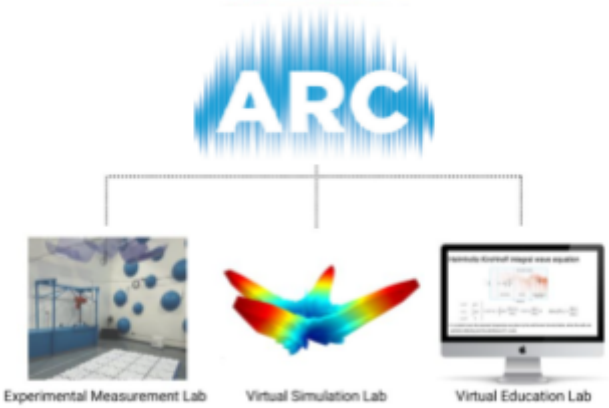
The ARC: Introducing the Acoustical Research Center



Welcome to the ARC. The ARC consists of the Experimental Measurements Lab, the Virtual Simulation Lab, and the Virtual Education Lab.

The **Experimental Measurements Lab** contains a 10,065 ft3 (285 m3) rev room, a 2'x2', 25' long, 7-ton low-frequency impedance tube, offering the capability of measuring absorption from 20-200 Hz, and a 6"x6" impedance tube to measure absorption and fabric transparency, between 63 and 4,000 Hz, using a single sample. It also contains a scale model boundary layer goniometer to measure the diffusion and scattering coefficients.

The new **Virtual Simulation Lab** utilizes the first wave-based BEM virtual goniometer program, called VIRGO, to predict the diffusion and scattering coefficients of any shaped surface from a CAD file, eliminating the need to make prototypes.

The new **Virtual Education Lab** allows us to provide collaboration with specifiers, as part of our ARC Associates Alliance program, and acoustical education in short LinkedIn posts with an extensive curriculum of topics derived from our 4 decades of research, publication, and books. We will describe how reflective, diffusive, and absorptive surface treatments scatter directionally and randomly incident sound and how RPG utilizes this knowledge to develop leading-edge innovative products in our Diffuse Reflections series.

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