DEVELOPMENT OF TECHNOLOGIES FOR QUIET AND COMFORTABLE ENVIRONMENT

Acoustic laboratory (Ce-101, Ce-B01)



Welcome to aural demonstration using sound field simulator!

SAKAMOTO LAB.

[Development of technologies for quiet and comfortable environment]

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Development of technologies for quiet and comfortable environment

Our laboratory treats various acoustical issues about development of technologies for quiet and comfortable environment. Evaluation methods of acoustical environment and techniques of control and prediction of sound will be introduced.

• Development of prediction methods : Numerical analysis • Room acoustic design : Auditorium, Music practice room, Open-type classrooms • Acoustic measurement : Sound propagation, Sound insulation and absorption • **Development of sound field simulation** : 6 channel recording-reproduction system • Subjective evaluation : Concert halls, Living environments, Public spaces, Offices, Healthcare facilities, other small spaces such as a car cabin

Sound environment in road tunnel





Measurement of acoustic properties by using a parametric loudspeaker



In-situ measurement Scale model experiment Subjective evaluation by using 3dimensional sound field

Sharp directivity of a parametric loudspeaker is expected to enable an accurate measurement of acoustical properties of materials, without extraneous edge diffraction of the material or obstructive reflections boundaries. Basic from room examination on the measurement studied method being is experimentally.

Virtual Sources

Secondary waves :

 $f = f_1 - f_2$

In-situ measurement of road traffic noise



Road traffic noise is one of the most important issues for environmental assessment. Accurate sound power levels of road vehicles are determined

Sound environment of healthcare facilities



Environment of hospital ward is essential for patient's quality of life. Acoustical conditions in a hospital ward are experimentally examined to

through in-situ measurement.

investigate adequate environment of the room.

