

# SAKAMOTO LAB.

## [Development of technologies for quiet and comfortable environment]

Advanced Mobility Research Center

Applied Acoustic Engineering

Department of Architecture,  
Graduate school of Engineering

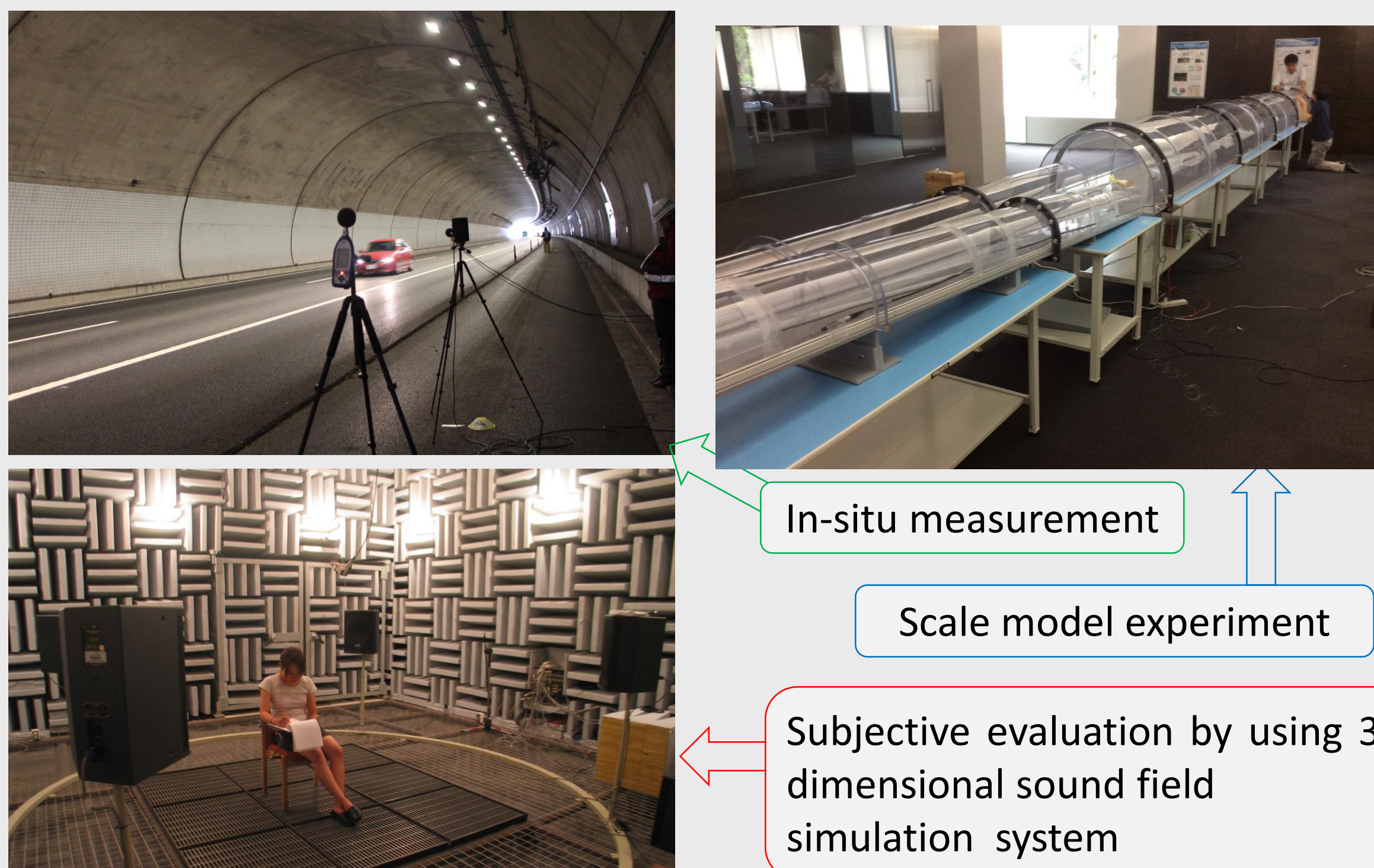
<http://www.acoust.iis.u-tokyo.ac.jp>

## Development of technologies for quiet and comfortable environment

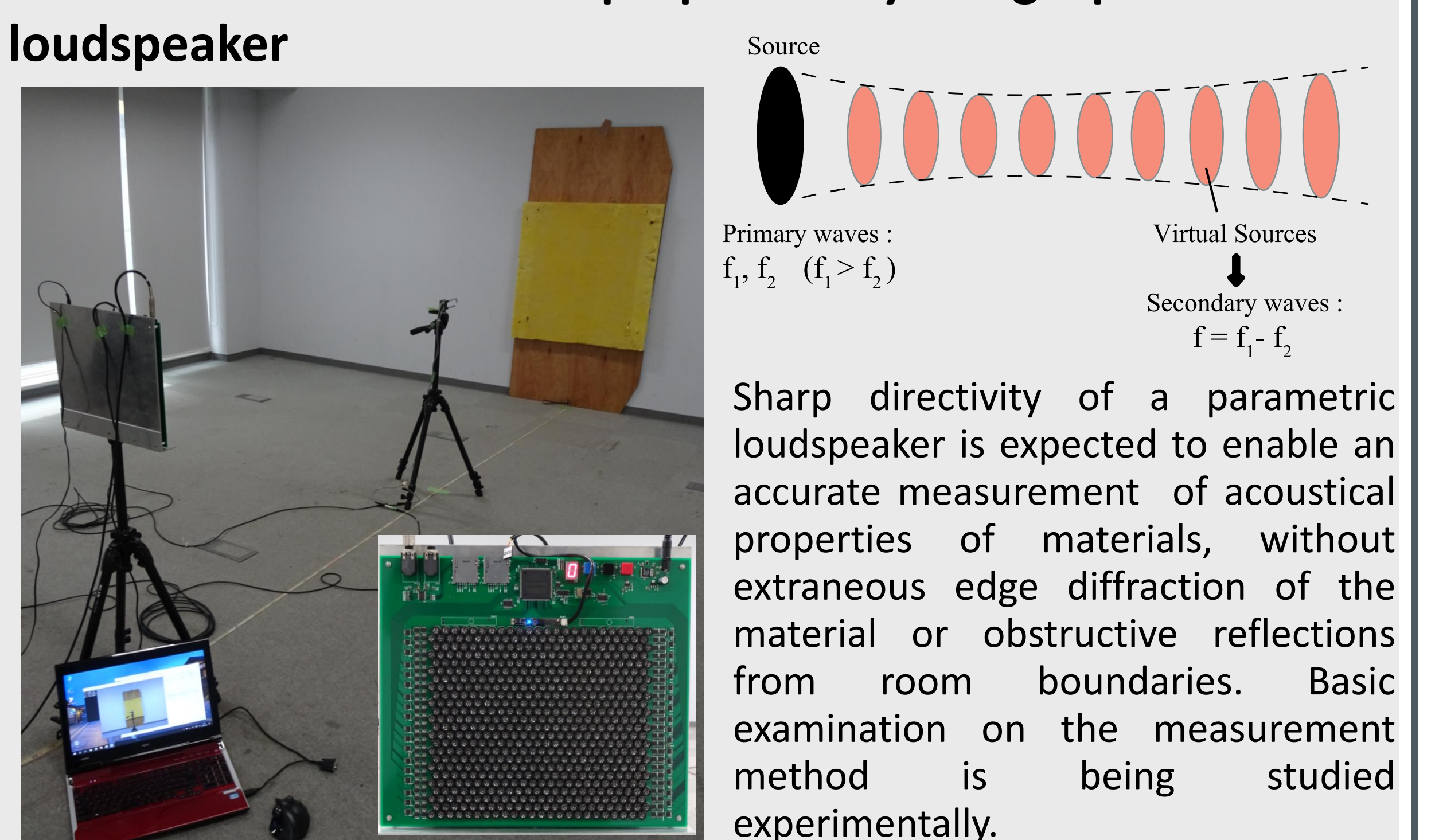
Our laboratory treats various acoustical issues about development of technologies for quiet and comfortable environment. Evaluation methods of acoustical environment and techniques of control and prediction of sound will be introduced.

- ◆ **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 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 through in-situ measurement.

### 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 investigate adequate environment of the room.