Safety Engineering of Nuclear Systems Measurement Technology and Reliability Quantification



Prof. YUSA Noritaka and Asst. Prof. YOSHIOKA Saijiro For the safety, economic efficiency, and reliability of large structures

Assuring the integrity of large structures including nuclear power plants is one of the most important issues in the present-day society. Since the aging of structures is essentially inevitable, proper maintenance actions should be taken to utilize structures safely while keeping its economic efficiency. To contribute to this, we have performed various researches mainly concerning nondestructive testing and evaluation that are indispensable for formulating proper maintenance actions.



Research Topics

- Development of nondestructive testing and evaluation techniques using DC-GHz electromagnetic fields, including probe design, numerical modeling, signal processing, inverse analysis and so on.
- Development of nondestructive inspection techniques using guided waves and related matters for the structural health monitoring
- Development of methods to probabilistically analyze signals of nondestructive inspections for evaluating the safety of structural components