Yeow Lab

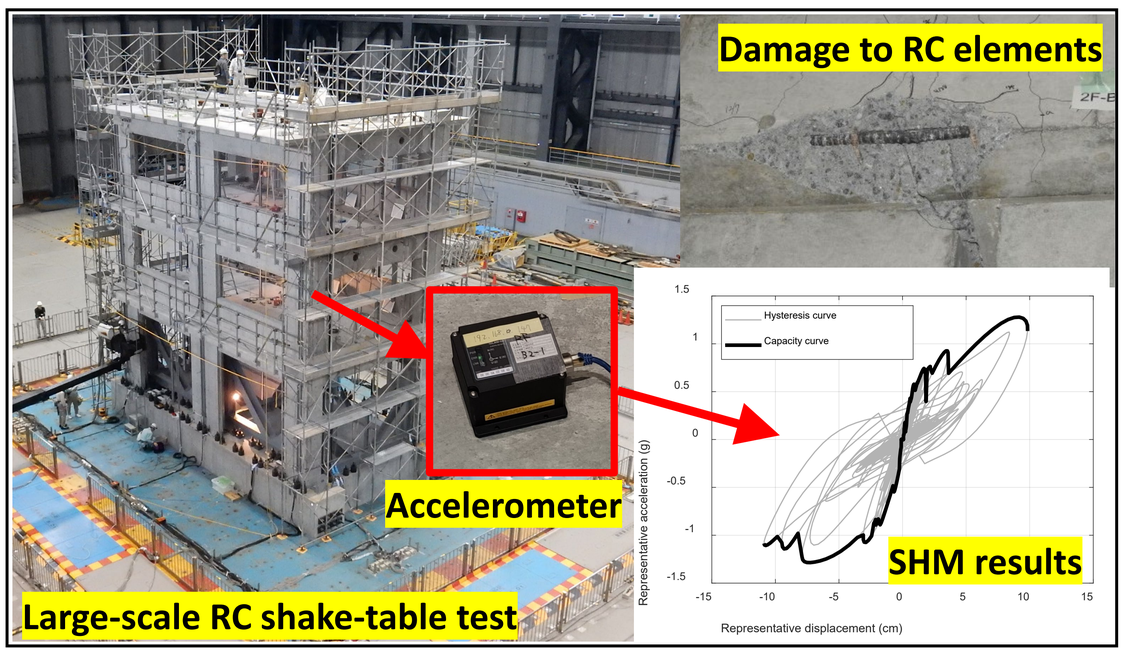
Enhancing the resilience of buildings against natural disasters

Multidisciplinary Resilience Research Center

https://sites.google.com/view/yeowlab-isct/home_en

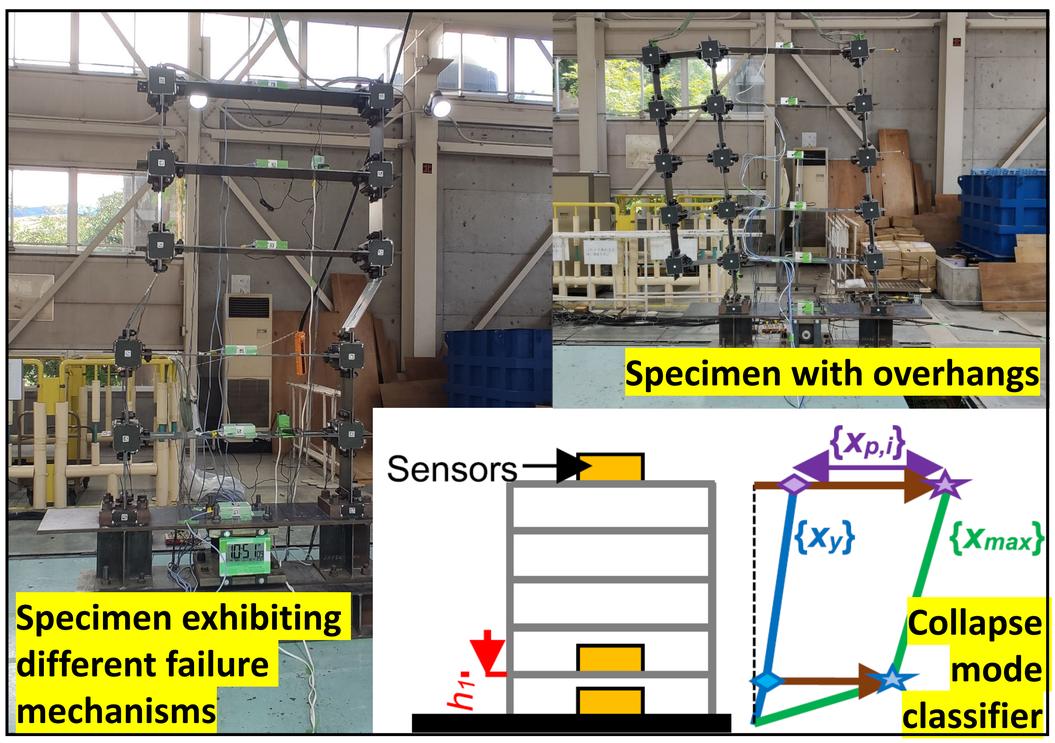
- Application of SHM for building safety evaluations
- Seismic design of irregular buildings
- Mechanics-based RC component damage evaluation

To enhance building resilience against natural disasters, we must seek to understand building performance through structural health monitoring (SHM). This data can be used to improve building design, numerical simulations, and safety assessments. Through experimental and analytical research, our group addresses real-world challenges in SHM, building design and building assessment methods to realize a more resilient society.



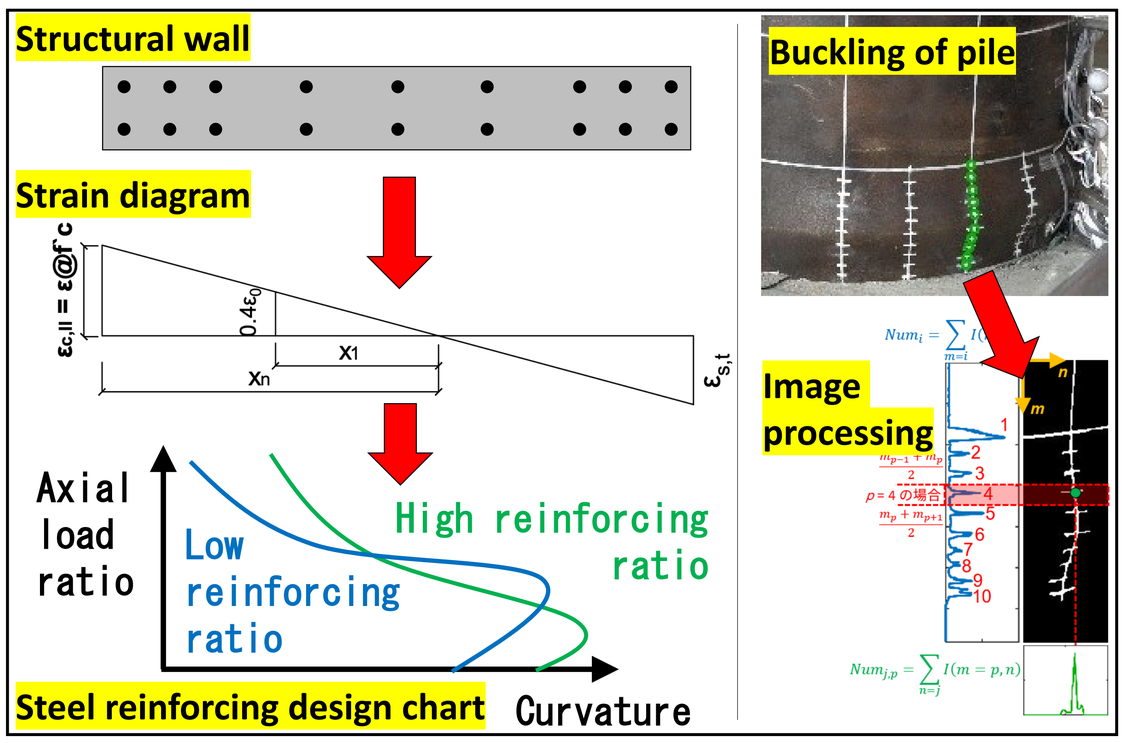
Shake-table test of large RC building

- Part of Tokyo Metropolitan Resilience Project
- Understand performance of RC components with spandrel walls
- Calibration and verification of SHM methods



Shake-table tests of irregular buildings

- Verification of numerical simulations
- Design of buildings with overhangs
- Development of a collapse mode classifier model



Damage mechanics for concrete elements

- Mechanics-based damage estimation methods
- Design tools for performance-based design
- Image processing for identifying onset of damage