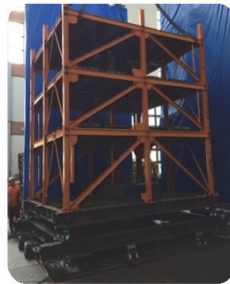
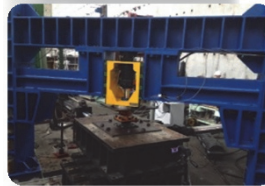




Past



NCREE Taipei Lab



Large-scale Testing Facilities

Now

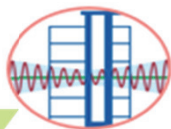


NCREE Tainan Lab



*What we know is still much less than what we need to learn  
In response to academia and industry, we need further  
study on real performance of **passive control technology***

Future



**NAR Labs**  
National Applied Research Laboratories  
National Center for Research  
on Earthquake Engineering

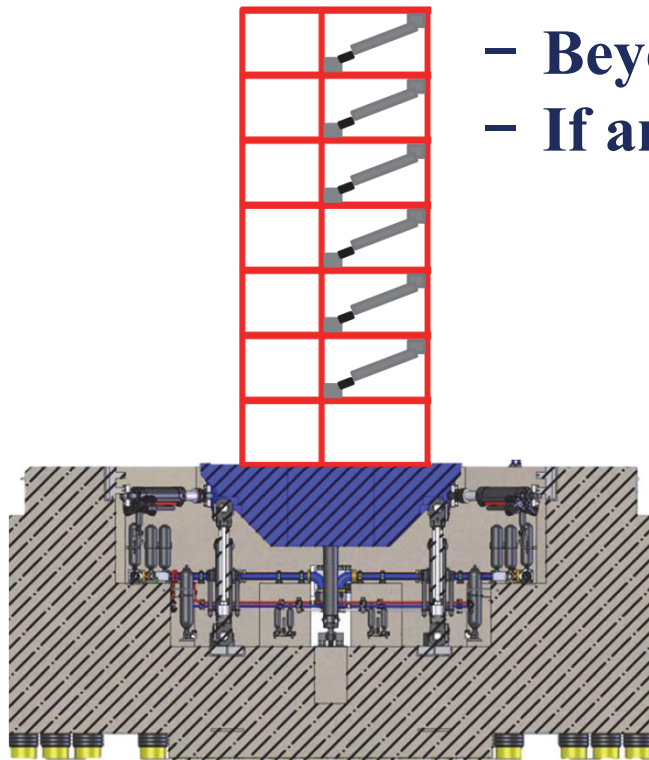
**Innovative Experimental Technologies  
& Numerical Simulation Methods**



# Structures with passive control technology

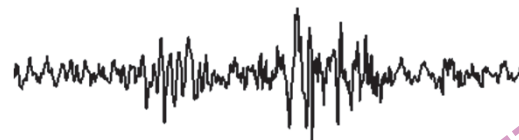
- Near-fault ground motion
- Design strategies
- Beyond design
- If any one fails, ....

Seismically isolated buildings



Scale-down damped buildings

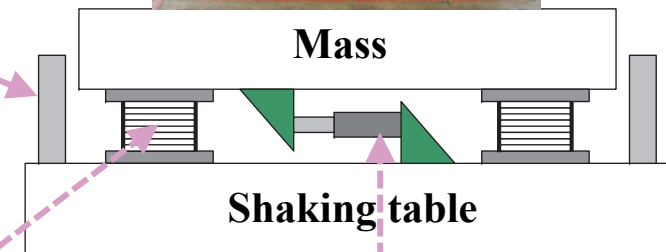
Fail-safe system  
(restraints)



Friction pendulum bearings  
(as large, real as possible)

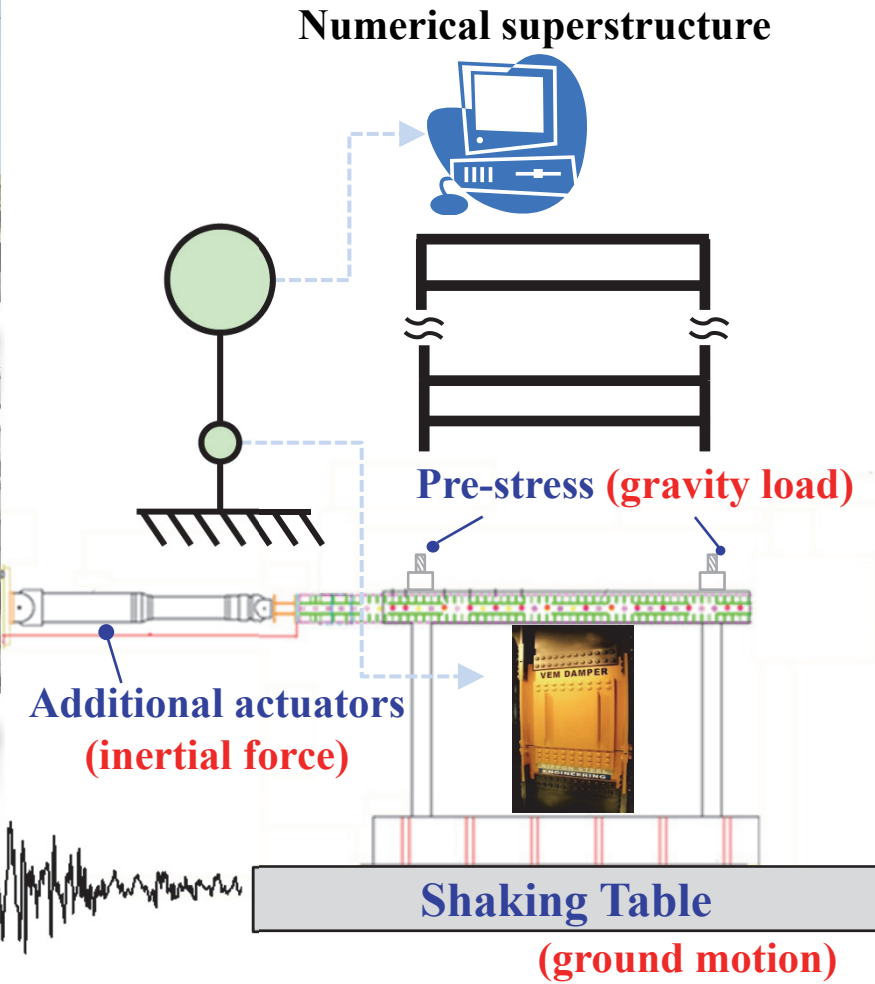


Importance of  
additional dampers

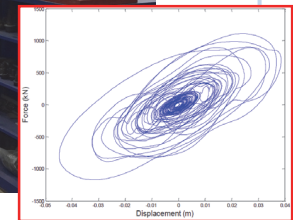
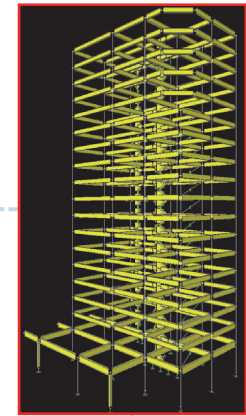




# Low- or mid-rise mixed RC buildings with a weak first story Retrofitted by using VE dampers



- Beyond design
- Actual performance
- Residual performance
- Modeling



New high-rise buildings designed with VE dampers

# Real performance of full-scale seismic isolators in an isolation system

- BATS + MATS + Network-collaborative hybrid simulation
- BATS + Other international labs + Network-collaborative RTHS
- A combination of shear deformation, rotation, and up-lift
- Variation of veridical load
- Beyond design, if any one fails, ....

