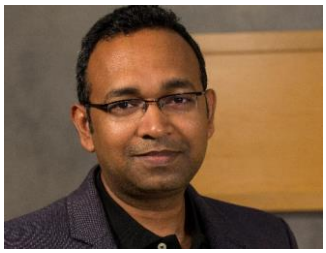

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Research Theme

Building and Construction Materials and Manufacturing (BCMM)

Research Areas

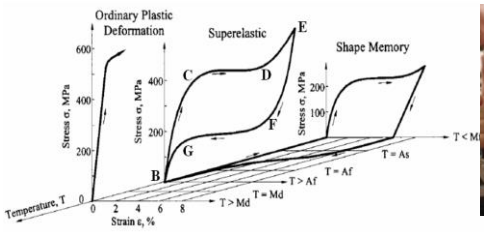
- Novel shape memory alloys (SMAs) in seismic engineering (e.g .bracing, energy dissipation devices etc)
- Damage free self-centering civil infrastructure
- High performance low-cost recycled construction material
- Large-scale testing, non-destructive testing and structural health monitoring (SHM)
- Seismic strengthening /repairing /retrofitting.

Research Facilities/Tools

Applied Lab for Advanced Materials & Structures (ALAMS) is equipped with 500 kN, 4-250 kN MTS, 50 kN fatigue rated dynamic actuators, DAQ system, DIC system, Strong floor and Reaction Frame. Other equipment include:

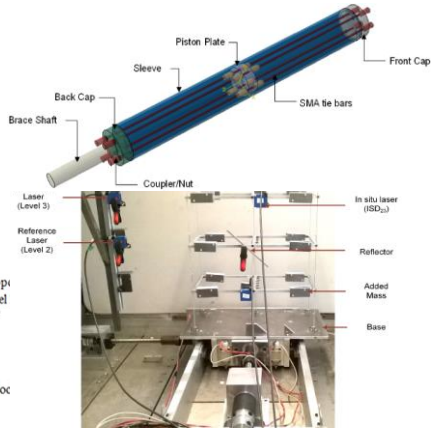
- 500 kN MTS fatigue testing machine.
- Freeze-thaw chamber
- NDT testing equipment (Schmidt hammer, corrosion meter, James bond tester, ultra sound crack detector, rebar scanner, various sensors for SHM.

Shape Memory Alloy (SMA)

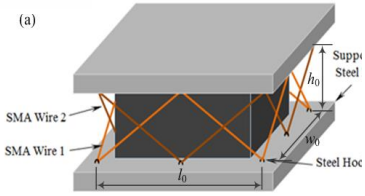


Seismic Repairing

Piston-based Self-centering Bracing



Rack Clad Building



SMA-wire based elastomer bearing

Laser-based sensing to measure drift