

# Vibration Energy Harvester Microdevice Design, PSED Cluster 2012-2013

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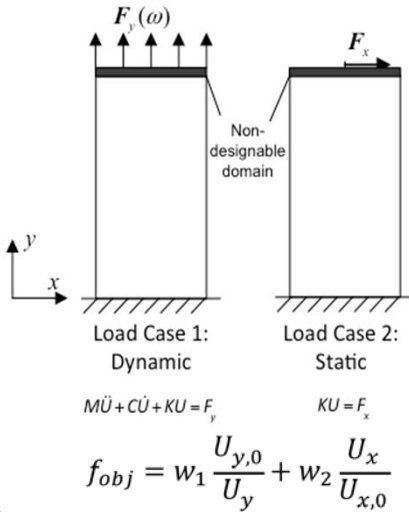
Academic Disciplines:  
**MECHANICAL ENGINEERING**

June 13, 2013

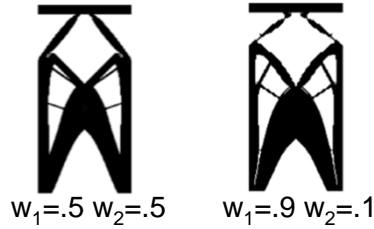
**GOAL:** Use design loop with topology optimization and 3D micromanufacturing to improve vibration energy harvester microdevice for <200 Hz frequency sources

OPTIMIZATION

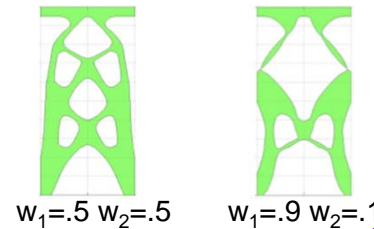
## Objective Formulation



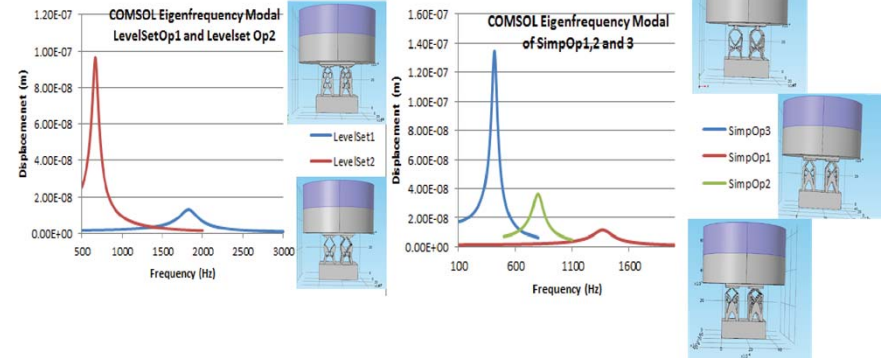
## SIMP Results



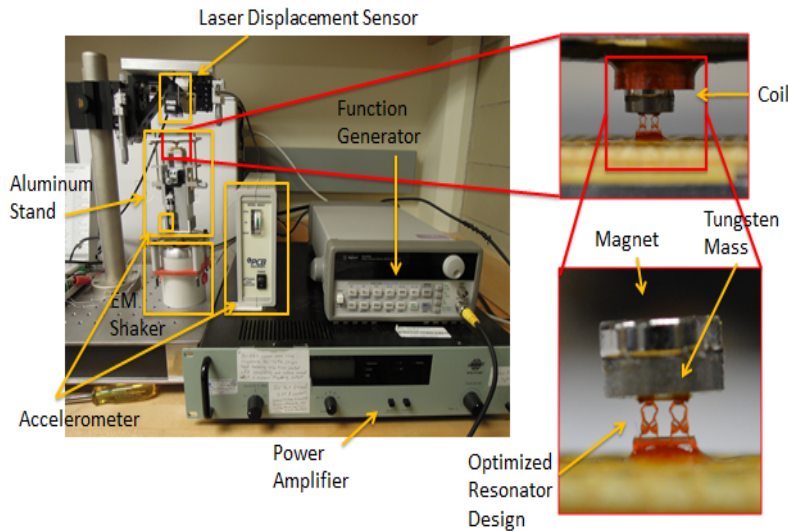
## Level Set Results



SIMULATION



VALIDATION



FABRICATION

