

Small Project for the MUMPs Design (This can be used as your final project)

Due October 27 (Thursday) --- introduction to your device (1 transparency)

Due November 3 (Thursday) --- CAD layout presented in the class (1 transparency)

Due November 10 (Thursday) --- One CAD layout file due at a specific place that TA will assign

Project teaming: maximum 2 students per team

Possible Term MUMPs project topics (You are welcome to create your own topics)

1. New thermal actuators by using electro-thermal effects. (for example, the heatuator explained in the class and shown in internet movies)
2. New actuators by using electro-static forces.
3. Devices driven by existing microactuators (comb drives, heatuators).
4. Design of new accelerometers.
5. Optimal design of existing microactuators.
6. Design of microdevices for investigating fundamental mechanics (fluid mechanics, solid mechanics, dynamics)
7. Design of mechanical flexures (springs).
8. Grippers.
9. Motors.
10. Mechanical property testing structures (residual stress, Young's modulus, Fatigue ...).
11. Optical applications.
12. Hinge type microstructures.
13. Bio-medical applications.
14. Mechanical design of micromechanisms.
15. Test structures for characterizing processes and materials.
16. Gyroscopes?
17. Computer aided design tools for MEMS.
18. Other related MEMS topics.