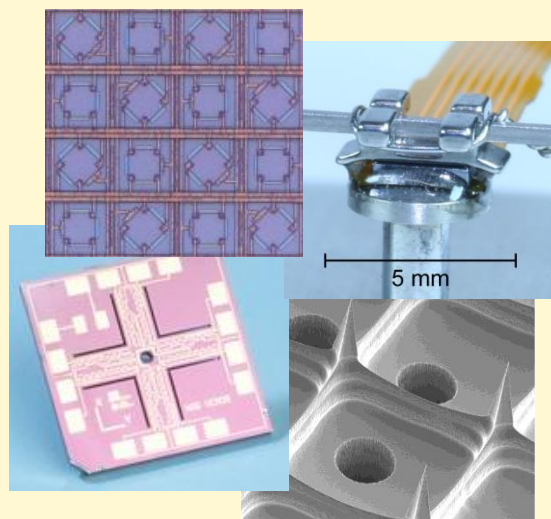


Staff: 1 professors and about 20 team members including secretary, technician, group leaders, post-docs, PhD students, and temporary staff

Research fields: Silicon and CMOS micro structures, sensors, and systems from fundamental understanding via technology to applications

Research topics in Micro and NanoSystems

- MEMS technology development
- Silicon based micro structures and systems
- CMOS microsystems
- MEMS materials characterization
- Physical sensing and life science applications
microsensors for mechanical stress, magnetic field energy harvesting, microneedles for dermatology and neuroscience, thermal and mechanical sensors
- Physical modelling of MEMS



Silicon based microstructures, sensors, and systems

Technology

- Complete technology of IMTEK cleanroom service center (600 m² Si, thin film, MEMS and packaging technologies, and characterization)
- KOH and TMAH wet silicon etching
- Deep reactive ion etching (STS Multiplex)
- SU8 and other thick resist technologies
- Electrodeposition: Au, Ni

Design, simulation & characterization tools

- ANSYS, COMSOL Multiphysics, AutoCAD
- CADENCE suites for design and simulation
- Electromechanical probe station, std. prober
- Bulge test, microtensile test, bending bridge
- 12-DOF mechanical test setup
- Vibration analysis systems (MSA400, others)
- LN₂ cryostat, climate chamber, T shock test
- Helmholtz coil, Brucker magnet, ...