

MicroSystems Laboratory (PI: Professor Andrei M. Shkel)



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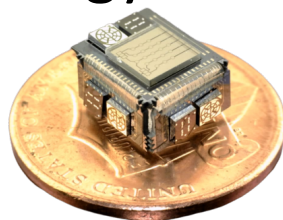
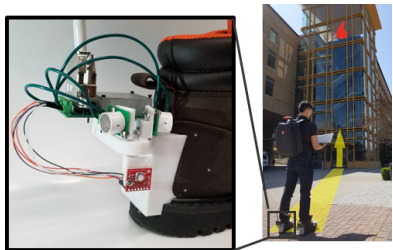
Research Group Members

- Sina Askari
- Mohammad Asadian
- Yusheng Wang
- Yu-Wei Lin
- Danmeng Wang
- Daryosh Vatanparvar
- Chi-Shih Jao
- Austin Parrish
- Snehan Peshin
- Tian Bao
- Doreen Hii
- Yi Zhuang
- Dania Hassan

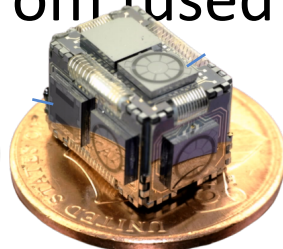
Projects we are working on in the upcoming year

Project/research summary

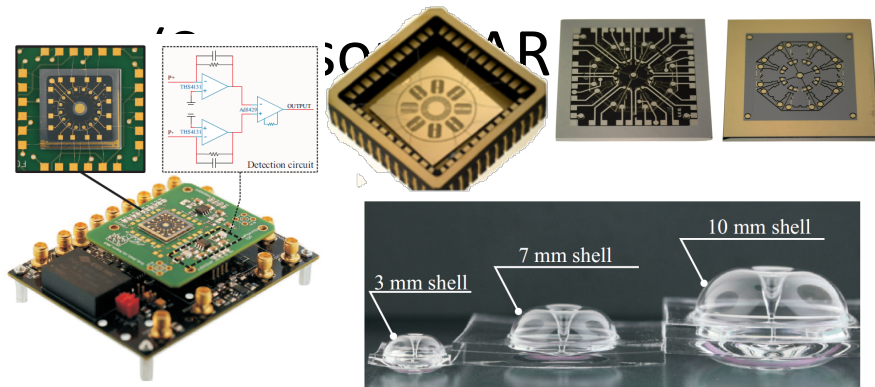
- *uNavChip* (Ultimate Navigation Chip): Chip-Scale Personal Navigation System Integrating Deterministic Localization and Probabilistic Signals of Opportunity (Sponsor: NIST)
- *2D/3D-deMIRA* (Double-Ended Mechanical Integrator of Rotation Rejecting Accelerations): developing precision chip-scale gyros from fused quartz MEMS



uNavChip_v2
(150mm³)



uNavChip_v1
(450mm³)



Possible areas of collaboration with other groups

- ASIC for inertial sensors (Op-Amps, AGC, PLL, etc.)
- On-Chip spectrum analyzer based, for example, on RF MEMS banks (for on-chip detection of signals of opportunity and subsequent use for localization)
- Complex micro-glass structures for a broad spectrum of biomedical applications (expertise in deep ICP etching of glass and micro-glassblowing)
- Access to animal models for research on vestibular prosthesis (interfacing to vestibular nerve)