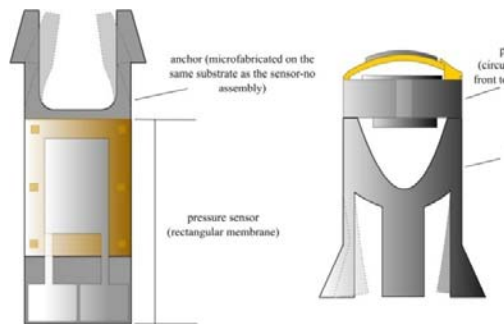


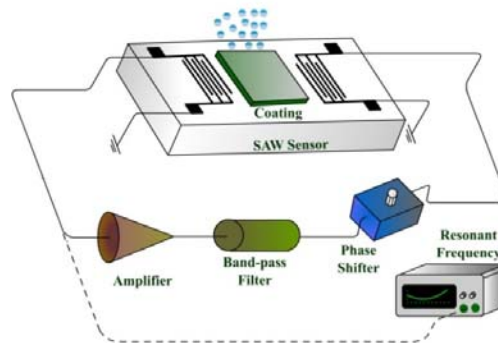
MEMS Sensors

Rajesh Rajamani (PI), Peng Peng, Kalpesh Singal, Shyam Sivaramakrishnan
Mechanical Engineering, University of Minnesota
NNIN Facility utilized: Nanofabrication Center

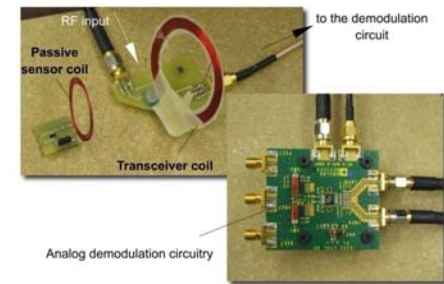
Muscle Force Sensor for Neuromuscular Diseases



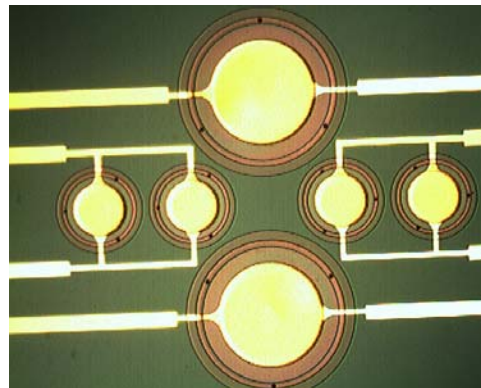
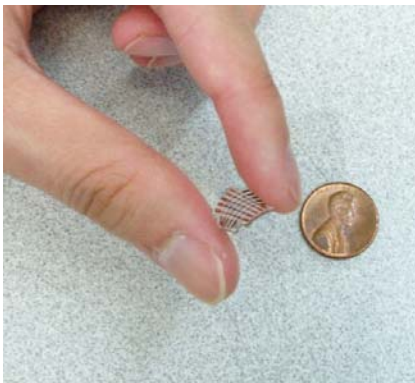
Wireless Carbon Nanotube Sensors for Breath Analysis in Humans



Battery-less Wireless MEMS Sensors



MEMS Tactile Sensors for Minimally Invasive Applications



Publications

- 1) P. Peng, R. Rajamani and A.G. Erdman
"Flexible Tactile Sensor for Tissue Elasticity Measurements," Vol. 18, No. 6, pp. 1226-1233, IEEE/ASME Journal of Microelectromechanical Systems, December 2009.
- 2) H.S. Kim, S. Sivaramakrishnan, A.S. Sezen and R. Rajamani
"A Novel Real-Time Capacitance Estimation Methodology for Battery-Less Wireless Systems," IEEE Sensors, Vol. 10, No. 10, pp. 1647-1657, October 2010.
- 3) S. Sivaramakrishnan, R. Rajamani and B.D. Johnson
"Dynamic Model Inversion Techniques for Breath-by-Breath Measurement of Carbon Dioxide from Low Bandwidth Sensors," IEEE Sensors, Vol. 10, No. 10, pp. 1637-1646, October 2010.