

# Lecture 3

## Foundry Service:

### MUMPs and CMOS/MEMS

- Overview
- PolyMUMPs Process
- CMOS MEMS
- Wafer-Level Packaging

## Overview

- The Multi-User MEMS Processes, or MUMPs™, is a well-established commercial program that provides customers with cost-effective access to surface micromachining for prototyping activities and a seamless transition into manufacturing.
- A program offered exclusively by Cronos (acquired by MEMScAP, Nov. 1, 2002), is designed for general purpose micromachining by various users who wish to design and fabricate MEMS devices.
- MUMPs™ was established in Dec. 1992 and has 81 runs in Oct. 2008. Cronos has renamed MUMPs as PolyMUMPs in 2002 in order to announce their new SOIMUMPs (9th run, 2003) and MetalMUMPs.

(<http://www.memscap.com/memsrus/docs/polymumps.dr.v10.pdf>)