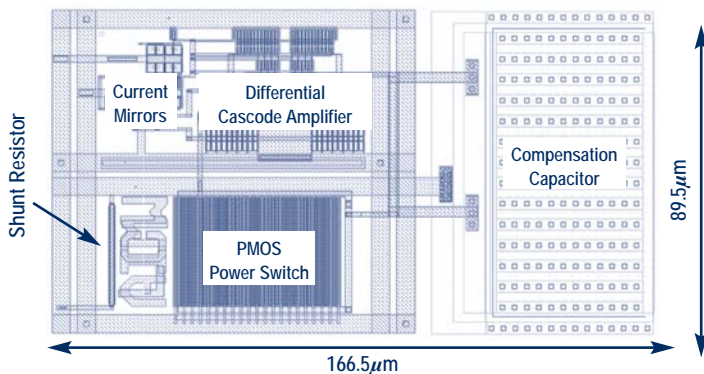


EECS 413: Monolithic Amplifier Circuits

Credits: 4

Prerequisite: EECS 311

This course is an introduction to CMOS analog and mixed signal design. Some bipolar circuits are considered. The course begins with a review of MOS and bipolar transistors basics, and small signal analysis. Single stage and differential amplifiers are described. CMOS opamps, stability, and frequency compensation are covered. Advanced topics such as switched capacitor circuits, band gap references are discussed. This course includes a major design project. Students work with $.25\mu\text{m}$ CMOS, using industry-standard Cadence design tools for schematic entry, simulation, and layout.



Regulator developed as EECS 413 project.



Instructor:

Professor Michael P. Flynn received his BE and MEngSc degrees from the National University of Ireland at Cork, and PhD degree from Carnegie Mellon University. He has worked at the National Microelectronics Research Centre, National Semiconductor, Texas Instruments, and Parthus Technologies. He was an adjunct faculty member at the National University of Ireland, Cork, from 1997 to 2001. Dr. Flynn joined the University of Michigan in 2001. His technical interests are in data conversion, gigabit serial transceivers, and RF circuits. In 2004, he received the NSF Early Career Award. He serves on the

Technical Program Committees of ISSCC and A-SSCC. He is a senior member of the IEEE, a member of Sigma Xi, and a Thrust Leader for Wireless Interfaces at University of Michigan's WIMS-NSF Engineering Research Center.