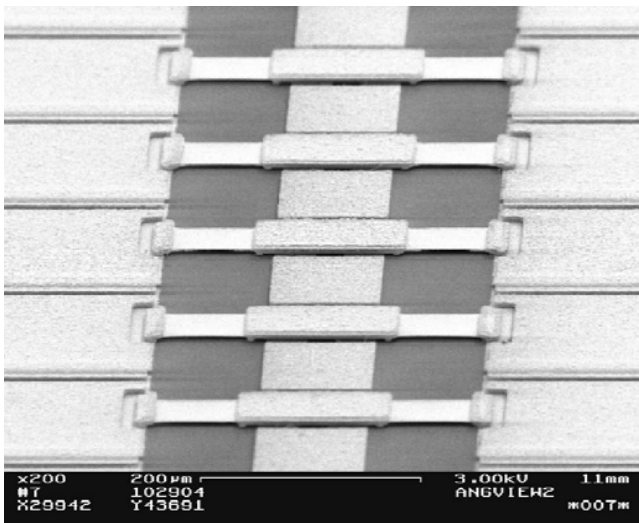


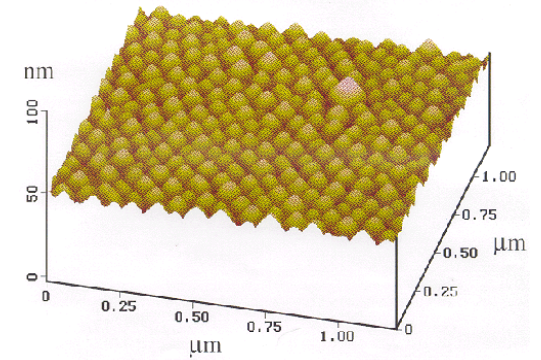
Nested Ring-Slot Antennas with integrated Schottky diodes.



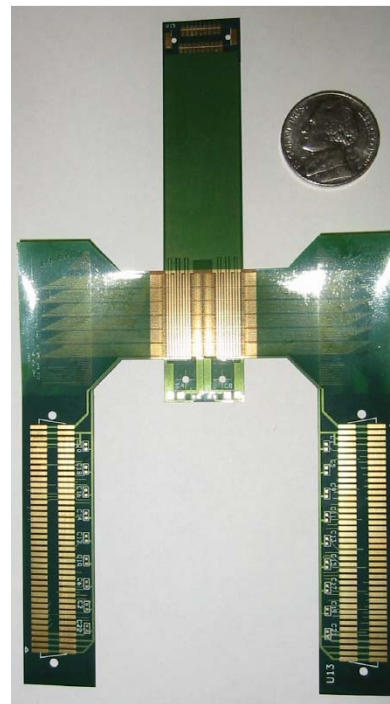
RF-MEMS devices along a microwave transmission line.

## Microelectronics

- Digital ICs
- Mixed-signal ICs
- RF circuits
- Solid-state devices
- MEMS



Self-assembled GeSi Quantum Dots.



Intel's Pentium 4 contains tens of millions of transistors.  
Courtesy: Intel

## Microelectronics - Courses

- ECE 556 – (Weikle) Microwave Engineering I (Spring)
- ECE 652 – (Weikle) Microwave Engineering Lab (Spring)
- ECE 632 – (Calhoun) Introduction to VLSI (Fall)
- ECE 587 – (Gupta) Introduction to Microsystem Design (Spring)
  
- ECE 655 – (Weikle) Microwave Engineering II (Fall 08 & 10)
- ECE 753 – (Weikle) Electromagnetic Field Theory (Fall 07 & 09)
  
- ECE 541 – (Campbell) Optics and Lasers (Fall)
- ECE 642 – (Gupta) Optics for Optoelectronics (Fall)
- (PHYS 531 – Optics)
- (PHYS 532 – Fundamentals of Photonics)
  
- ECE 862 – High Speed Transistors (not offered, on catalogue)
- ECE 863 – High Frequency Diodes (not offered, on catalogue)

## Semiconductor Devices: Courses

➤ <b>ECE 663</b>	Semiconductor Devices	Spring '08 (Harriott)
➤ <b>ECE 666</b>	IC Fab Lab	Fall '07 (Swami)
➤ <b>ECE 686</b>	Fundamentals of Nanoelectronics	Spring '07 (Ghosh)
➤ <b>MSE 567</b>	Electronic & Optical Prop.	Fall '07 (Reinke)
➤ <b>ECE 564</b>	IC Fabrication	Spring '07 (Swami)
<b>ECE587</b>	Intro. Microsystem Design	Spring '07 (Gupta)
ECE 791	Nano-electronics	Spring '08 (Harriott)
ECE 763	Semiconductor Physics	Spring '09 (Harriott)

## Microelectronics - Faculty

Scott Barker – Application of MEMS to microwave and millimeter-wave circuits.

Travis Blalock – Mixed signal CMOS VLSI circuits.

Tom Crowe – Terahertz Schottky diode fabrication.

Boris Gelmont – Theoretical studies of semiconductor devices and materials.

Tatiana Globus – Optical and THz spectroscopy of biological macromolecules.

Jeffrey Hesler – Microwave and millimeter-wave devices and circuits.

Art Lichtenberger – Millimeter-wave and THz superconducting integrated circuits.

Mircea Stan – Low-power VLSI for embedded/portable systems.

Bobby Weikle – Microwave and millimeter-wave circuits and systems.

# Faculty Research Areas in Semiconductor Devices

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