INTRODUCTION TO ELECTRONICS & PHOTONICS FACULTY AND THEIR RESEARCH INTERESTS

www.ece.ucsb.edu/Faculty

Prof. John Bowers

DAN BLUMENTHAL

• fiber-optic networks
• photonic packet switching
• wavelength converters
JOHN BOWERS

- photonic integrated circuits
- high speed photonic and electronic devices
- femtosecond lasers and physics
- MEMs switches

Department of Electrical & Computer Engineering

LARRY COLDREN

- semiconductor integrated optoelectronics
- single-frequency, tunable, and surface-emitting lasers
- materials growth and planar processing techniques

Department of Electrical & Computer Engineering
NADIR DAGLI

- design, fabrication, & modeling of photonic integrated circuits
- ultra-fast electro-optic modulators
- novel photonic device processing
- micro resonator filters

STEVE DENBAARS

- MOCVD of III-V compound semiconductor materials and devices (InP, GaN)
- materials characterization
- materials properties on device performance Blue LEDs, Blue Lasers, and High Temperature, High Power Electronic Devices

Department of Electrical & Computer Engineering
UMESH MISHRA

- high-speed, high power transistors (GaN)
- semiconductor device physics
- quantum electronics, optical control
- design and fabrication of millimeter-wave devices
- processing & integration techniques

CHRIS PALMSTRØM

- spintronics
- metallization of semiconductors
- surface and thin film analysis
- molecular beam and chemical beam epitaxial growth of compound semiconductors, metallic compounds, oxides
- thermoelectric, magnetic, multifunctional materials
MARK RODWELL

- very high bandwidth heterojunction bipolar transistors
- GHz integrated circuits
- microwave power amplifiers
- submillimeter-wave electronics

JON SCHULLER

- nanophotonics
- organic optoelectronics
- plasmonics
- metamaterials
POCHI YEH

- electro-optics
- optical phase conjugation
- nonlinear optics
- dynamic holography
- optical computing
- neural networks

BOB YORK

- microwave and millimeter-wave circuits and devices
- ferroelectric thin-film technology and applications
- electromagnetic theory and antennas
- quasi-optics