



Henry Samueli School of Engineering and Applied Science

# Electrical and Computer Engineering

## CHIPS Act/Commons Interaction

2022

# Organization

## ● Campus

- ✓ 10,000 students/year – ~1/3 CC transfer
- ✓ 3<sup>rd</sup> largest public sector employer

## ● School of Engineering

- ✓ ~250 faculty
- ✓ Relevant fields to CHIPS – ChemE, MSE, MAE, Physics

## ● ECE Department

- ✓ ~1100 student
  - 550 ugrad + 550 grad (50% PhD)
- ✓ ~47 faculty
- ✓ ~\$35M/year funding

# Facilities

## ● UCLA Nanolab

- ✓ Merger of our Nanoelectronics Research Facility (NRF) and Integrated Systems Nanofabrication Clean Room (ISNC)

- ✓ <https://nanolab.ucla.edu/>

- ✓ Management

- Wilson (Yousheng) Lin
- Adam Stieg
- Faculty: Rob Candler (Engr), Jeff Miller (Phys Sci)



## ● Advanced Research Computing

## ● Many supporting centers



C-DEN

Center for Design-Enabled Nanofabrication  
Berkeley UCLA UCSD



*The Center for High Frequency Electronics*

*Electrical Engineering Department, University of California at Los Angeles*

# Related Faculty (1)

Lab  
Leadership



**K. Wang**



**S. Iyer**



**R. Candler**



**J.C.S. Woo**

Material/  
Devices



**M. Jarrahi**



**E. Ahmadi**



**B. Williams**

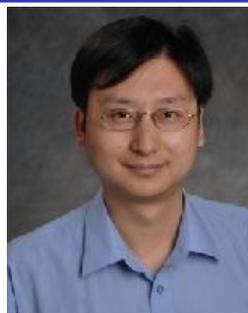


**C.W. Wong**

Devices/  
Circuits



**A. Babakhani**



**Y.E. Wang**



**M.F. Chang**



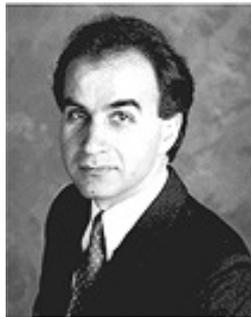
**S. Emaninejad**

# Related Faculty (2)

Analog/RF



**A. Abidi**



**B. Razavi**

Mixed-Signal /  
Digital



**D. Markovic**



**C.K. Yang**



**S. Pamarti**

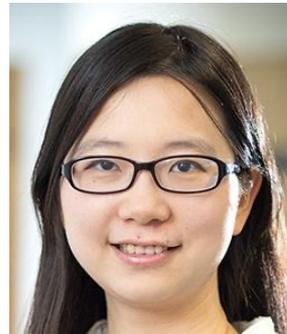
CAD /  
Architecture



**L. He**



**D. Cabric**



**Y. Tian**



**P. Gupta**

# Workforce Development

- **Education (w/ MSE, MAE and ChemE)**
  - ✓ **Device physics**
    - Theory courses on material/device structures
    - Fab and device design capstone
    - Seminar sequence on modern fabrication flow
  - ✓ **Physical design courses**
    - Analog, digital, RF, mixed-signal design
    - New effort on IC fabrication and test
  - ✓ **UGrad and Grad sequences**
- **Research**
  - ✓ **New junctions**
  - ✓ **New devices**
  - ✓ **New circuits**
  - ✓ **Integration**
- **Applications**
  - ✓ **THz/Next-G Communications**
  - ✓ **Medical electronics**
  - ✓ **III-V/2-6 structures**