Host of ECE Department – Hamerschlag Hall
What we do

In a nutshell, we develop...

new **Circuits, Devices, Algorithms** and **Systems**

to solve the **Grand Challenges in**

- Computing
- Communication
- Storage
- Sensing

in the era of Big Data
Emerging applications

- biomedical systems
- cyber-physical systems
- distributed Systems
- smart infrastructure
- neural Systems
- IoT and smart devices
Areas of study

**Device Sciences and Nanofabrication:** Solid state physics, semiconductors, magnetics, electromagnetic fields and waves, optics

**Signals and Systems:** Data analysis, machine learning, digital signal processing, communication systems, control systems, power systems

**Circuits:** Analog and digital circuits, integrated circuit design

**Computer Hardware:** Logic design, computer architecture

**Computer Software:** Programming, embedded systems, data structures, compilers, networks, operating systems
Facts & Numbers

People

• 217 PhD students, 300+ MS, 500+ BS
• 79 core faculty (tenure, research, teaching), 74 courtesy, 36 adjunct

U.S. News & World Report

• UG: #1 CE, #6 EE
• Grad: #3 CE, #8 EE

Global: Pittsburgh, Silicon Valley, Africa, Portugal, Thailand
CMU ECE: Our Programs and Degrees

- **PhD Program**: ~ 4-5 years
  - start program
  - satisfy Ph.D. requirements

- **Professional MS Program**
  - satisfy project requirements
  - reactivate application

- **MS Program**
  - satisfy course requirements

- **BS in ECE**
- **MS in SE**
- **MS in ECE**
- **PhD in ECE**

3 ~ 4 semester program
MS are professional degrees

Research focus
Professional MS Programs

• You’re admitted into a professional degree program
  – MS in Electrical and Computer Engineering
    – Pittsburgh, Silicon Valley, Thailand, Africa
  – MS in Software Engineering
    – Silicon Valley
  – E&TIM (dual degree)
    – Pittsburgh or Silicon Valley

• Goal is to prepare you for developing creative pioneering solutions in industry through rigorous technical coursework
  – Optional research experience with CMU faculty
PhD Programs

• You’re admitted directly into the PhD Program
  – You start the PhD program immediately—an MS is not required
• PhD Programs in ECE
  – Pittsburgh, Portugal, Thailand
• If you don’t have an MS already, can get one along the way
  – The MS requirements are virtually a subset of the PhD
  – It provides a good milestone toward the PhD
ECE Student Organizations

ECE

ECE Graduate Organization

Outreach

IEEE Student Chapter
Carnegie Mellon University

ECE SAC
CMU's ECE Student Advisory Council

BUILD18

WinECE

HKN