The Faculty

CPE200, Fall 2023

Hank Dietz

http://aggregate.org/hankd/
Computer Engineering is NOT a department

- Electrical & Computer Engineering
  https://www.engr.uky.edu/research-faculty/departments/electrical-computer-engineering/people

- Computer Science
  https://www.engr.uky.edu/research-faculty/departments/computer-science/people/faculty

- The following descriptions are mine… and imperfect in various ways
Robert Adams

• Research area(s):
  - Computational Electromagnetics

• Website:
  https://www.engr.uky.edu/directory/adams-robert
Jeff Ashley

• Teaching
  - Digital logic

• Website:
  https://www.engr.uky.edu/directory/ashley-jeff
Jihye Bae

- Research area(s):
  - Signal Processing
  - Machine Learning
  - Neural interfaces and Signal Processing

- Website:
  https://jihyebae.engr.uky.edu/
Corey Baker

• Research area(s):
  - Networking and IoT
  - Cybersecurity
  - Mobile health environments

• Website:
  https://www.cs.uky.edu/~baker/
Cody Bumgardner

- Research area(s):
  - Networking
  - Cybersecurity
  - Computational biology and bioinformatics

- Website:
  http://codybum.com/
Kenneth Calvert

- Research area(s):
  - Networking
  - Systems
  - Cybersecurity

- Website:
  https://protocols.netlab.uky.edu/~calvert/
Jin Chen

• Research area(s):
  - Artificial intelligence and machine learning
  - Bioinformatics
  - Medical images and health records analysis

• Website:
  https://www.engr.uky.edu/directory/chen-jin
Zhi David Chen

- Research area(s):
  - Nanotechnology
  - Electronic devices and materials

- Website:
  https://web.engr.uky.edu/~zhichen/
Fuhua (Frank) Cheng

- Research area(s):
  - Graphics
  - Game development

- Website:
  https://www.cs.uky.edu/~cheng/
Qiang (Shawn) Cheng

- Research area(s):
  - Computer vision
  - Artificial intelligence and machine learning
  - Computational biology and bioinformatics
  - Medical imaging

- Website:
  https://www.engr.uky.edu/directory/cheng-qiang-shawn
Samson Cheung

- **Research area(s):**
  - Signal processing
  - Machine learning and data mining
  - Image and video processing
  - Networking
  - Cybersecurity

- **Website:**
  https://www.engr.uky.edu/directory/cheung-samson
Aaron Cramer

- Research area(s):
  - Power and energy

- Website:
  https://www.engr.uky.edu/directory/cramer-aaron
Henry (Hank) Dietz

- Research area(s):
  - Compilers and languages
  - Computer architecture
  - Operating systems
  - Parallel & quantum computing
  - Computational photography
  - Making technologies

- Website:
  http://aggregate.org
Paul Dolloff

- **Research area(s):**
  - Power and energy

- **Website:**
  https://www.engr.uky.edu/directory/dolloff-paul
Kevin Donohue

- Research area(s):
  - Biomedical signals
  - Detection and estimation
  - Pattern recognition
  - Distributed sensor systems
  - Music and speech
  - Ultrasound

- Website:
  https://www.engr.uky.edu/directory/donohue-kevin
Paul Eberhart

- **Teaching**
  - Digital logic
  - Embedded systems

- **Website:**
  [https://www.engr.uky.edu/directory/paul-eberhart](https://www.engr.uky.edu/directory/paul-eberhart)
Kevin Eby

- Teaching
  - Computer science senior project

- Website:
  https://www.engr.uky.edu/directory/eby-kevin
Joseph Elias

• Research area(s):
  - VLSI design tools

• Website:
  https://www.engr.uky.edu/directory/elias-joseph
Zongming Fei

• Research area(s):
  - Networking
  - Systems
  - Cybersecurity

• Website:
  https://www.cs.uky.edu/~fei/
Judy Goldsmith

• Research area(s):
  - Artificial intelligence
  - Theory and algorithms
  - Ethics

• Website:
  http://cs.uky.edu/~goldsmit/
James Griffioen

• Research area(s):
  - Networking
  - Systems
  - Cybersecurity
  - Scientific computing
  - Numerical analysis

• Website:
  https://protocols.netlab.uky.edu/~griff/
Regina Hannemann

• Teaching
  - Senior project

• Website:
  https://www.engr.uky.edu/directory/hannemann-regina
Brent Harrison

• Research area(s):
  - Game development and graphics
  - Artificial intelligence and machine learning
  - Data science

• Website:
  https://corgilabai.com/
Todd Hastings

- Research area(s):
  - Nanotechnology and nanofabrication
  - Biological and chemical sensors
  - Photonics
  - Quantum computing

- Website:
  https://hastings.engr.uky.edu/
JiangBiao He

• Research area(s):
  - Power and energy

• Website:
  https://ampere.engr.uky.edu/
Lawrence Holloway

- Research area(s):
  - Manufacturing
  - Robotics and controls
  - Power and energy

- Website:
  https://www.engr.uky.edu/directory/holloway-lawrence-e
Abdullah-Al-Zubaer Imran

• Research area(s):
  - Artificial intelligence and machine learning
  - Data science
  - Computer vision
  - Medical imaging

• Website:
  https://aaz-imran.github.io/
Dan M. Ionel

• Research area(s):
  - Power and energy

• Website:
  https://sparklab.engr.uky.edu/
Michael T. Johnson

- Research area(s):
  - Signal and speech processing
  - Machine learning

- Website:
  https://johnson.engr.uky.edu/
Ramakanth Kavuluru

- Research area(s):
  - Artificial intelligence and machine learning
  - Data science
  - Computational biology and bioinformatics
  - Medical imaging

- Website:
  https://protocols.netlab.uky.edu/~rvkavu2/
Hana Khamfroush

- **Research area(s):**
  - Networking
  - Systems
  - Cybersecurity
  - Artificial intelligence and machine learning
  - Data science

- **Website:**
  https://www.cs.uky.edu/~khamfroush/
Daniel Lau

- Research area(s):
  - Signal processing
  - Machine learning
  - 3D photogrammetry
  - Digital communications

- Website:
  https://www.engr.uky.edu/directory/lau-daniel
Xin Liang

• Research area(s):
  - Parallel, distributed, & heterogenous systems
  - Data management
  - Scientific visualization
  - Numerical methods

• Website:
  https://lxaltria.github.io
Yuan Liao

• Research area(s):
  - Power and energy
  - Signal processing
  - Machine learning

• Website:
  https://www.engr.uky.edu/directory/liao-yuan
Cai-Cheng Lu

- Research area(s):
  - Computational electromagnetics

- Website:
  https://www.engr.uky.edu/directory/lu-cai-cheng
James Lumpp

- Research area(s):
  - Computer architecture
  - Embedded systems
  - Spacecraft systems and satellites
  - Autonomous vehicles
  - Parallel and distributed systems

- Website:
  https://www.engr.uky.edu/directory/lumpp-james-e
Janet Lumpp

• Research area(s):
  - Nanotechnology
  - Electronic systems fabrication

• Website:
  https://www.engr.uky.edu/directory/lumpp-janet-k
Dakshnamoorthy (Mani) Manivannan

- Research area(s):
  - Networking
  - Systems
  - Cybersecurity

- Website:
  http://cs.uky.edu/~manivann/
Neil Moore

• Teaching
  - First-year engineering
  - DUS for Computer Science

• Website:
  https://www.engr.uky.edu/directory/moore-neil
Alexandra “Zan” F. Paterson

- **Research area(s):**
  - Organic materials and devices

- **Website:**
  https://www.engr.uky.edu/directory/paterson-alexandra-f
Sayed Ahmad Salehi

- Research area(s):
  - Energy-efficiency for deep learning & IoT
  - DNA computing and molecular programming
  - Stochastic and approximate computing
  - Signal processing architectures

- Website:
  https://salehi.engr.uky.edu/
Luis Sanchez Giraldo

• Research area(s):
  - Computational learning, intelligence and perception
  - Signal processing
  - Machine learning

• Website:
  https://cliplab.engr.uky.edu/
Brent Seales

- Research area(s):
  - Computer vision
  - Artificial intelligence and machine learning
  - Data science
  - Digital restoration
  - Surgical technology

- Website:
  https://www2.cs.uky.edu/dri/
A. B. Siddique

- Research area(s):
  - Natural language processing
  - Large language models and GPT

- Website:
  https://www.cs.uky.edu/~siddique/
Simone Silvestri

- **Research area(s):**
  - Networking
  - Systems
  - Cybersecurity
  - Machine learning

- **Website:**
  https://silvestri.engr.uky.edu/
Joseph Sottile

• **Research area(s):**
  - Power and energy

• **Website:**
  https://www.engr.uky.edu/directory/sottile-joe
Jeffrey Talbert

• Research area(s):
  - Biomedical informatics

• Website:
  https://scholar.google.com/citations?hl=en&user=5H0Y89gAAAAJ
Ishan Thakkar

• **Research area(s):**
  - Computer architecture
  - On-chip and inter-chip networks
  - Design with emerging technologies, e.g., silicon photonics, phase change, spintronics
  - Memory architecture
  - Quantum computing

• **Website:**
  https://ithakkar.engr.uky.edu/
Bruce Walcott

• Research area(s):
  - Manufacturing
  - Robotics and controls
  - Embedded systems

• Website:
  https://www.engr.uky.edu/directory/walcott-bruce-l
Peng Wang

• **Research area(s):**
  - **Signal processing**
  - **Machine learning**
  - **Sustainable manufacturing**

• **Website:**
  https://manufai.engr.uky.edu/
Xiaojin (Jennifer) Wang

• Research area(s):
  - Artificial intelligence and machine learning
  - Data science
  - Medical imaging

• Website:
  https://www.engr.uky.edu/directory/wang-xiaojin-jennifer
Stephen Ware

- Research area(s):  
  - Artificial intelligence  
  - Game development and graphics  
  - Narrative intelligence (storytelling)

- Website:  
  http://cs.uky.edu/~sgware/
Yang Xiao

• Research area(s):
  - Networking
  - Systems
  - Cybersecurity

• Website:
  https://yang-sec.github.io/
Biyun Xie

- Research area(s):
  - Robotics: kinematically-redundant, fault-tolerant, collaborative, human interaction
  - Autonomy

- Website:
  https://bxie.engr.uky.edu/
John Young

• Research area(s):
  - Computational electromagnetics

• Website:
  https://web.engr.uky.edu/~jyoung/
YuMing Zhang

• **Research area(s):**
  - Manufacturing
  - Robotics and controls
  - Welding

• **Website:**
  https://www.engr.uky.edu/ism/research/wr/
Your Assignment

• Who would you like the class to see?
  - 1\textsuperscript{st} choice
  - 2\textsuperscript{nd} choice
  - 3\textsuperscript{rd} choice

• Your choices should include someone from CS and someone from ECE