

Senior Project Topics

Status: August 23, 2020

Advisor	Topics	#Students		
	EE			
Ahn, Ahn	Smartphone Healthcare System for Monitoring Snoring and Sleep	1		
	Diagnostics for COVID-19 using Smartphone Analyzer	1		
Allgood, Taylor	UC Student Entrepreneur Website			
Bahk, Je-Hyeong	Development of LabVIEW Program for Photoluminescence Excitation Spectroscopy	2		
Boolchand, Punit				
Cahay, Marc	Nano-Vacuum Field Effect Transistor (NVFET) Modeling	1		
	Numerical Simulations of Field Emission carbon nanotubes	1		
Chawla, Neha	Bearcat Pantry Stocker Application			
Emmert, Marty	Side Channel Attack Mitigation for Hardware and Embedded Systems Security, Assurance and Trust.	4+4		
Esfandiari, Leyla	Customized classification algorithm for data analysis of a nanopore sensor	2		
Fan, Howard	Fast Talk by Speech Processing	1		
	Real-Time Radio Indoor Location	4		
Ferendeci, Altan				
Gallagher, Jim	Wing Control Module for Flapping-Wing Micro Air Vehicle	3		
	Low-Cost Vision Based Position Tracker	3		
	Low-Cost Vision Telepresence Robot			
	Operating Systems Simulator Suite	3		
Heikenfeld, Jason				
Helmicki, Arthur				
Hunt, Victor				
Hunter, Richard	Cleaning robot for stadium seats and isles with a device similar to 2020 Mine weeper. Utilizing cleaner and UVB light source.	4		
	Design and build a 1GHz Sinewave generator	4		
Jha, Rashmi	Ultra-Low Power Neuromorphic Processor for Implementing AI.			
	Wearable breathing monitoring technology for detecting abrupt breathing patterns for diagnosis of many diseases.			
	Low-Power AI Processors Testing Under Outdoor and Extreme Environments IOTs and Sensors.			
Kosel, Peter	Optically Driven Power Converter	1		
	Magnetic Fields of Ionic Currents	1		
Li, Tao	Wireless Magnetoelastic Sensors for Implantable Biomedical Applications	3		
	Micromachined Chemical Sensor for Harsh Environments	3		
Minai, Ali				
Niu, Nan	From Security Policies to Formal Specifications	3		
	Machine Learning and Deep Learning: What Happens After Training?	3		
	Assumptions of Behavioral Models	3		
Norouzi, Mehdi				
Debnath, Kumar				
Rezayat, Mohsen	FridgeCart-Zero Hunger-Track (Siemens)			
Steckl, Andrew	Conductive Fiber Membranes by Electrospinning for Medical Applications	1		
	Cells-on-Fibers - Combining Electrical and Materials Engineering with Biology	1		
	Properties of Fluorescent Dyes - From OLEDs to Cancer Therapy	1		
Vanderelst, Dieter				

Kalafut, Kathryn				
Wang, Boyang	Encrypted Traffic Analysis in VPN with Neural Networks Identifying Authorship of Source Code with Neural Networks	3 3		
Wee, William				
Wei, Wei	Flight control development and optimization for Quadcopter	3		
	CE			
Atluri, Gowtham	Data Science Techniques for Discovering Dynamic Brain Activity Deep Learning in Pedestrian Localization for GPS-denied Environments Data Science Techniques for Discovering Communities Susceptible to Opioid Crisis	3 3 3		
Zach Fuchs				
Dai, Rui				
Wilsey, Philip	https://eecs.ceas.uc.edu/~wilseypa/classes/srProjects/ 10 topics available			
Vemura, Ranga	Trusted Digital Hardware Design Embedded Systems Design and Development	4 4		
	ET			
Massoud, Rabiee	Research related to battery/storage units for electric energy. Their charging and discharging method using embedded controllers	2+2+2		
Zhou, Frank	Novel RGB, Lidar Image Processing Application Smart Golf Swing plane ABET data collection	4 4 2		
	Staff - Technical			
Heyl, Jason (J)	PSLab_the circuit board solution for Electronics			
Montjoy, Robert				
Simkins, Jeff	UV meter Video camera that can follow a 5 axis mill spindle			
David Tashjian				
	External			
Duke Energy/John Ruehl	Ground Faults in solar farms that reduce inverter performance	(1)		
Baja	Baja car project (Mechanical)	(1)		
McDonald, Maxwell	Search for Molecular origin of Eutectic in PxSe100-x glasses	(1)		
Ramamoorthy, P.A, Emeritus	Intelligent self-diagnosing devices, applications	(1)		
Schutte, Michael-Rockwell	Using a Micro 850 trainer to control a greenhouse Virtual Training Station - Using the capabilities of the Common Gateway Interface (CGI) Derby Dash in Great Lakes Science Center Automated Guided Vehicle (AGV) or Autonomous Mobile Robots, Robots	(1) (1) (1) (1)		
Mast, David	Development of combined NFC Tag – Gas sensor	(1)		
	Total	100		