

Electrical & Computer Engineering

POSTER SESSION, 8:30am to 12:00pm Harrington Gym

Automated Wearable ECG Editing With DNN

Vincenza Burdulis, Jacob Nguyen,
Daniel Sardak (CS/DS)
Advisor: Bashima Islam

Design of AI-Enabled Chatbot

Qihan He, Rolando Salamea-Lopez, Colin Mettler
(CS), Guillermo Morel Mendez (CS), Hrishikesh
Nair, Quincy Payne (ME), Federico Perez (DS),
Xiao Xiao (CS)
Advisors: Lin Cheng (MME), Bo Tang

Developing DC/DC Converter Topology for Fuel Cell Charging of 280-400V Hybrid-Battery Bus

Ryan Cote, Edison Doko, Efthymios Marios
Loukedes, Kathlyn Sirowich, Meng Wang
Advisor: Gregory Noetscher
Sponsor: Honeywell International, Inc.

Development of ECE 331X

Alessandra Fabela
Advisor: Alexander Wyglinski

FPGA Accelerated SAT Solver

Sam David (ECE/CS), Joshua Eben, Andrew Gray,
Patrick Hunter (ECE/CS), Matthew Lund, Coco
Mao (Xinyun Mao)
Advisor: Koksal Mus

FSAE Electric Car

Hussain Bhatti, Harris Brancazio (ME), Henrique
Checcucci Bahia dos Santos (ME), John
Demedeiros, Emma Dimming (RBE), Connor
Dowgielewicz (ME), Zoe Goodman, Carson
Graham (CS), William Gunn (ME), Sam Kierstead
(ME), Evelyn Maude (RBE), Arnav Sacheti
(CS/ECE)

Advisors: William Michalson (RBE), David
Planchard (MME), Andre Rosendo (RBE)

Hybrid GaN-SiC Power Switches for Future E- Mobility Applications

Wassim Faker
Advisor: Stephen Bitar

Industrial Control System

Christopher Danti, Casey Frommer
Advisor: Gregory Noetscher
Sponsor: Babcock Power Services

Integrated Solutions Towards Wireless Transcutaneous Oxygen Monitor

Ali Atta (ECE/BME), Olivia Kendzulak, Ryan
McSweeney, Naisargi Mehta (ECE/BME)
Advisor: Ulkuhan Guler

Luminescence-Based Sensing for Transcutaneous CO₂ and SpO₂ Assessment

Evan Apinis, Kleo Golemi, Kosti Pano
Advisor: Ulkuhan Guler

Modular Gaming Table

Kaiwen Chen (ME), Jimmy Clemente (ME), Joshua
DeVoy (ME), Nikolaos Konstantinou, Emma
Nollman (ME), Chloe Trotta-Smith (ME)
Advisors: Medhi Mortazavi (MME), Donald Brown

Music for Muscular Dystrophy

Luke Harrington, Joshua Hollyer, Dexuan Tang
Advisor: Stephen Bitar

Open-Source Design of a Cryptographic ASIC

Trevor Drane
Advisor: Patrick Schaumont

Opportunistic Communication with Zero and Low Power Radios

Aisling Corcoran, Alberto Flores, Tai Le, Allan Villatoro, Elisabeth Whittemore
Advisor: Bashima Islam

Scanning Array for EMI Detection

Sarah Chen, Michael Iberger
Advisor: Gregory Noetscher

SCApeGoat: Side-Channel Analysis Library

Samuel Karkache (ECE/CS), Trey Marcantonio
Advisors: Fatemeh Ganji, Patrick Schaumont

Shunt Resistor Based Circuit Breaker Design for Ground Fault and Arc Fault Detection

Pari Nguyen, Olivia Peterson, Dominic Ridolfi, Elinor Ross, Mason Roth
Advisors: Reinhold Ludwig, Edvina Uzunovic
Sponsor: Schneider Electric

soloPlane: Modular Electronic Mallet Instrument

William Merry (RBE), Robert Oleynick (ECE/CS), Nathaniel Reppucci
Advisors: Scott Barton (HUA), Patrick Schaumont

Speech Driven 3D Modeling

Ryan Antes, Jacob Hand
Advisor: Ziming Zhang (ECE/CS)

T-Scope: Side-Channel Leakage Assessment with a Hardware-Accelerated Online TVLA Test

Andrew Malnicof, Hao Wang
Advisor: Patrick Schaumont

Wireless Wearable Electromyogram (EMG) Shoulder System

Julia Antocci, Thomas Flanagan, Max Kanefsky, Timothy Walsh
Advisor: Edward Clancy

Variable Planar Inductor

Abigail Brachtl, Maria Cox, Brendan O'Mullan, Brooke Schoen
Advisor: Gregory Noetscher