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.

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