



SENIOR CAPSTONE PROJECT PRESENTATIONS

Civil, Electrical, and Mechanical Engineering

Friday, April 26, 2019

9:30am – 4:00pm

Student Center Ballroom B

Computer Science and Information Technology

Friday, April 26, 2019

11:00am - 3:00pm

Building 42, Room 114B



Senior Capstone Projects

Senior Capstone Projects represent the culmination of the educational experience, integrating the classroom with real world problems. The students handle open-ended engineering and computational problems whose solutions require a synthesis of engineering knowledge, computational analysis, creativity, market needs, safety and esthetics. Projects are supervised by instructors and industry mentors.

Panel of Judges

Representatives from Civil Engineering, Electrical and Computer Engineering, Mechanical Engineering, Computer Science departments faculty and External Advisory Board members.

Supervising Faculty

Dr. Pradeep Behera, PE, D.WRE, Professor and Chair, Civil Engineering
Dr. Li Chen, Associate Professor, Computer Science
Dr. Bryan Higgs, Assistant Professor, Civil Engineering
Dr. Kate Klein, Associate Professor, Mechanical Engineering
Dr. Esther T. Ososanya, Professor and Chair, Electrical and Computer Engineering
Dr. Devdas Shetty, P.E., Professor and Dean
Dr. Lara Thompson, Associate Professor, Mechanical Engineering
Dr. Pawan Tyagi, Associate Professor, Mechanical Engineering
Dr. Jiajun Xu, Assistant Professor, Mechanical Engineering
Dr. Ahmet Zeytinci, P.E., Professor, Civil Engineering

Acknowledgements

Lockheed Martin
National Science Foundation (NSF)
National Nuclear Security Administration (NNSA)
Office of Naval Research (ONR)
Hung Ha
Pablo Sanchez Guerrero
Gebretensae Tzadu

COMPUTER SCIENCE AND INFORMATION TECHNOLOGY

Quantitative Data Analysis of the YouTube Web Site

Abdulaziz Moharib I. Almoharib

Analysis of the Mango Database System

Nejat Awali

Analysis of the Smart Contract in the Ethereum BlockChain

Rahmma Awali

Practical Design of the Local Area Network for Small Companies

Nathnael Bekele

UDC Blockchain Design and Implementation

Diau Said, Surafel Hailu, Efreem Beyene

Predictive Analytics for Business

Christian Garcia

A Traveling Web System Design

Mohammed Hamdi

Design and Implementation of a Bank Account User Interface

Kaleb Lambebo

Design of a Personal Finance Application System

Aaliya Muhammad

Sentiment and Personality Analysis for YouTube Audiences

Christian Mundell

Face Recognition Using Tensorflow and Keras

Sidi Ould Messoud

Research on the Effects of Video Game Play to High School Students

Gerson Quinteros

BigData Analytics Using SQLITE

Nechelle Robin

A Website Design for Student Information Systems

Kidus Tuffa

Android App for the Washington Transit System

Jassar Vasquez-Calderon

Design of a Grocery Store Web Site

Yonas Wedajo

The Dynamic Web Page for the Restaurant Ordering System

Tewodros Wegayehu

Deep Learning for Object Detection

Eaan Whiteside

Advisor for CSIT projects: Dr. Li Chen

CIVIL ENGINEERING

Planning and Design of Civil Engineering Systems for the City of Città Futura

Mohammed Fallatah, Abdullah Abduh, Salman Alhuwayshil, Ahmad Kabli, Basel Alanazi , Ahmed Aboalola, Abdulaziz Alanazi

Advisors: Dr. Pradeep Behera, Dr. Ahmet Zeytinci and Dr. Bryan Higgs

Planning and Design of Civil Engineering Systems for the City of Morvackoh

Victoria Church, Christiamily Sanders, Omar Alfalah, Rakan Almuqbil, Hisham Bin Anzan, Khalid Bingonih, Mousa Bingouyh

Advisors: Dr. Pradeep Behera, Dr. Ahmet Zeytinci and Dr. Bryan Higgs

Planning and Design of Civil Engineering Systems for the City Mara-villa

Sandae Tait, Ahmed Abdelaziz, Ahmed Altimyat, Ammar Samman, Meshal Alanazi, Fawaz Alanazi, Zayed Alshaibani, Faisal Alanazi
Advisors : Dr. Pradeep Behera, Dr. Ahmet Zeytinci and Dr. Bryan Higgs

Planning and Design of Civil Engineering Systems for the Paradise City

Mawaki Remi Bidjada, Saud Alsharif, Turki Alshehri, Basheer Almutairi, Salman Almotairi, Fahad Alanazi, Abdullah Alanazi, Huwaydi Alshammari
Advisors : Dr. Pradeep Behera, Dr. Ahmet Zeytinci and Dr. Bryan Higgs

ELECTRICAL AND COMPUTER ENGINEERING

Design and Implementation of Wireless Sensor Network for Water Quality Monitoring

Hamad Alanazi, Christian Alfaro, Saad Alqahtani, Alana Torres Vidal
Advisor: Dr. Esther T. Ososanya

5 Degrees of Freedom Robotic Arm Movement

Youssef Aklook, Khalid Aldhahri, Sorour Alshahwani
Advisor: Dr. Esther T. Ososanya

Smart Home System Using Wireless Communication

Gabriel Torres, Joao Brusamolin
Advisor: Dr. Esther T. Ososanya

Smart Mirror

Abdulaziz Masoudi, Nada Abdelaziz, Fana Zewede
Advisor: Dr. Esther T. Ososanya

Solar Powered Drip Irrigation System

Samer Alhajri, Sandra Nkamgna, Thamer Alanazi, Sonja Kotlica
Advisor: Dr. Esther T. Ososanya

Flight Control of a 50mm Gun Launched Hybrid Projectile

Saul Henderson

Advisors: Dr. Devdas Shetty, Dr. Jiajun Xu and Dr. Esther T. Ososanya

MECHANICAL ENGINEERING

Design and Development of a Microemulsion Enhanced Absorption System for Waste Heat Utilization

Alamoudi Abdullatif, Chidera Igwebuike, Abdulah Allaban, Takele Gemed, Mohammad Shehadeh
Advisor: Dr. Jiajun Xu

Title of Project

Tobias Goulet, Omar Aldakheel, Firas Alessa. Abdullah Aldossary, Mubarak Aldossary
Advisors: Dr. Pawan Tyagi, Dr. Jiajun Xu

Design, Modeling and Fabrication of a 50mm and Gun Launched Hybrid Projectile

Christopher Riso, Rudy Villegas, Park Heung Min, Christopher Carter, Saul Henderson
Advisors: Dr. Devdas Shetty, Dr. Jiajun Xu and Dr. Esther T. Ososanya

Helium Ion Machined Nano-Channels for Energy

Emad Alharbi, Faisal Almuahini, Kwabena Asante, Salim Mouflih
Advisors: Dr. Kate Klein, Dr. Jiajun Xu

Design of a Lower Limb Exoskeleton

Mohammad Abdallah; Abdulaziz Albluwi; Abdulailah Mohammed Alhejazi; Abdulbari Khan; Pius Suh; Marwan Saleh
Advisors: Dr. Lara Thompson, Dr. Jiajun Xu