

Titles of MTHE 493 Projects for Fall Term 2022/Winter Term 2023

(Supervisors in parentheses)

Wireless Transmission of Traffic Images

Brian Arthur, Smeet Chheda, Rose Goldfarb, Ryan Norenberg (T.Linder)

Image Communication from Wildlife Conservation Cameras

Timothy Liu, Mitchell Fillmore, Patrick Wilson, William Jackson (T.Linder)

Data Compression via Nonlinear Transforms using Artificial Neural Networks

Ariana Bakhtyari, Michael Barrack, Jonah Beber, Brock Macdonald (T.Linder)

Data Compression via Nonlinear Transform Coding using Artificial Neural Networks

Spencer Hill, Wylie Schenkman, Jordan Curnew, Mark Benhamu (T.Linder)

Design of a Smart Morphing Surface for Lift Optimization of Wind Turbine Blades in a Low Wind Speed Environment

Mattia Bacchelli, Kaija Edwards, Vaughan Love (G. Mazzone)

The Use of Tuned Liquid Dampers in Airport Tower Stabilization

Sana Ahmad, Girisa Maharaj, Yutong Lan (G.Mazzone)

Optimal Design of a Vibration Energy Harvester for Wave Power

Michael Geale, Gabrielle Janfield, Alessia Panzica, Jenna Whitehead (G.Mazzone)

Optimal Design of a Vibration Energy Harvester

Ari Fialkov, Daniel Harrington, Michael Oyhenart, Tommy Schmidt (G.Mazzone)

Control System Design for Mobile Aquaculture Cage

Alex Rodriguez, Jameson Smith, Noah Sanci, Andrea Sorokine (M. Mohebbi)

Structure of Mobile Aquaculture Cages.

Willow Cherny-Bayer, Nicholas Eto, Joran Hayes, Chris Metzler (M . Mohebbi)

Structural Design of an Autonomous Aquaculture Cage

Eric Woodward, Marty Fay, James McCarron, Xavier McMaster-Hubner (M. Mohebbi)

Optimizing a Portable Concentrator Photovoltaic Unit

Luca Gebauer-Barrett, Jacob Nadal, Alistor Salmon, Hana Turcke (M. Mohebbi)

Concentrator Photovoltaic Unit for Telecommunication Repeater Stations

Peter Danilin, Ryan Turnbull, Katherine Whyte, Alison Wong (M.Mohebbi)

Optimal Distribution of Nurses During a Pandemic using Q-learning

Gillian Atack, Reece Fuller, Mackenzie Gilewicz, Jinyuan Yang (S. Yuksel)

Optimizing Insulin Treatment for Type I Diabetics:A Reinforcement Learning Approach

Benjamin Armstrong, Daniel Martin, Ryan Simpson, Emma Stickley (S.Yuksel)

Deep Learning Algorithm to Predict Pediatric Risk of Serious Infection Proceeding CVL Insertion

Philip Basaric, Andrew Jung, Sarah Morrison, Jonathan Kidd (Y.Tian & D. Lin)