The Department of Computer Science and Engineering

University of Nevada, Reno

cordially invites you to a Master's colloquium

A Web Based Application for Model Creation and Output Visualization with the NCS Brain Simulator

A thesis submitted in partial fulfillment of the
requirements for the degree of Master of Science
in Computer Science and Engineering.

by

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Abstract:

UNR's Brain Computation Lab has developed the NeoCortical Simulator (NCS) to simulate brain activity on relatively large models. Initially, NCS inputs could only be configured using convoluted text files or Python scripts. The NCS Daemon was created to act as a service for accessing NCS from remote applications. This thesis presents the NCS web interface, a web application for creating brain models and simulation parameters, as well as visualizing outputs in realtime as dynamic graphs, and has the ability to view constructed models in 3D. The web interface has many features to work with NCS directly, including the ability to launch simulations, save working models to a database, or export models as JSON files or Python scripts. The web interface is designed to be the front-end for NCS.

4:00 pm, Thursday, May 12, 2016

Scrugham Engineering and Mines (SEM) room 201

Committee: Dr. Fred Harris, Dr.Sergiu Dascalu,and Dr. Yantao Shen