The Department of Computer Science

University of Nevada, Reno

cordially invites you to a Master's colloquium

Parallel Optimization of a NeoCortical Simulation Program

A thesis submitted in partial fulfillment of the
requirements for the degree of Master of Science
with a major in Computer Science.

by

James Frye

Abstract: This thesis describes work done in optimizing an existing NeoCortical Simulation Program (NCS), including the development of a set of parallel profiling and measurement tools.

The NCS program is an ongoing project of the Brain Computation Lab. Previous development work was most recently presented in E. Courtenay Wilson's thesis. It will be shown that from that base, this work has increased sequential computation speed by at least an order of magnitude; increased the demonstrated model size by three orders of magnitude; created a program which exhibits near-linear speedup over the number of processors tested; and, despite having added significant additional functionality, has decreased the code base by some 45 percent.

3:00 pm, Wednesday, December 10, 2003

Room 234, Scrugham Engineering and Mines (SEM)

for more information contact Dr. Fred Harris @ 784-6571 (fredh@cs.unr.edu)