

Category: Uncategorized

# Cycles: A Simulation Tool for Studying Cyclic Neural Networks

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## Abstract:

A computer program has been designed and implemented to allow a researcher to analyze the oscillatory behavior of simulated neural

networks with cyclic connectivity. The computer program, implemented on the Texas Instruments Explorer / Odyssey system, and the

results of numerous experiments are discussed. The program, CYCLES, allows a user to construct, operate, and inspect neural networks containing

cyclic connection paths with the aid of a powerful graphics based interface. Numerous cycles have been studied, including cycles with

one or more activation points, non-interruptible cycles, cycles with variable path lengths, and interacting cycles. The final class, interacting cycles,

is important due to its ability to implement time-dependent goal processing in neural networks.