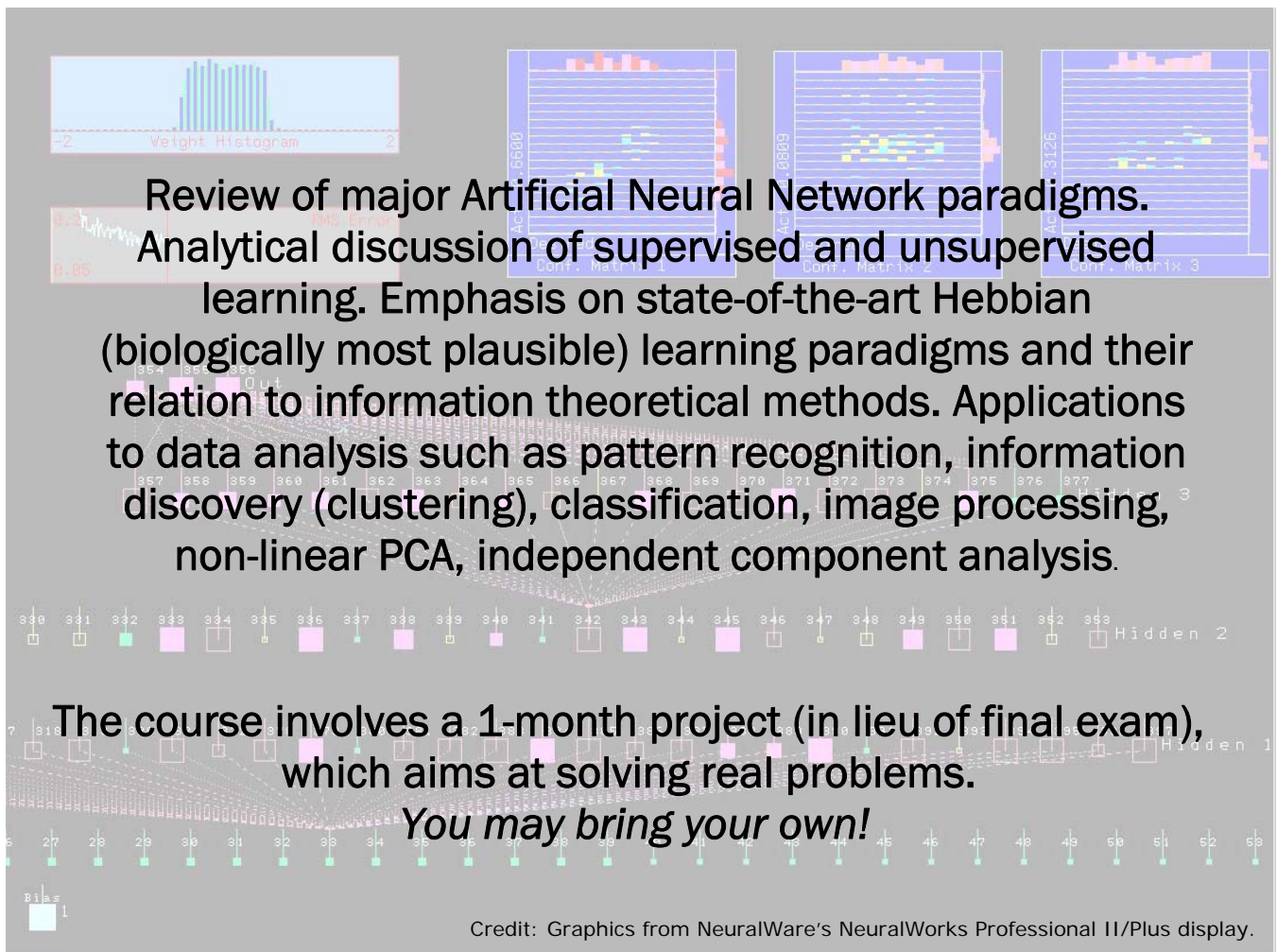


COMP / ELEC / STAT 502
Spring 2012
Rice University

Neural Networks and Information Theory I.

(Neural information processing)



Review of major Artificial Neural Network paradigms. Analytical discussion of supervised and unsupervised learning. Emphasis on state-of-the-art Hebbian (biologically most plausible) learning paradigms and their relation to information theoretical methods. Applications to data analysis such as pattern recognition, information discovery (clustering), classification, image processing, non-linear PCA, independent component analysis.

The course involves a 1-month project (in lieu of final exam), which aims at solving real problems.
You may bring your own!

Credit: Graphics from NeuralWare's NeuralWorks Professional II/Plus display.

More at

<http://www.ece.rice.edu/~erzsebet/ANNcourse.html>

or inquire in DH 2040