

**SGN-2806 Neural Computation (5 cr)**

Examination 6.4.2010 / Ari Visa

1. How does the error-correction learning differ from the competitive learning? Describe the both techniques and compare them.	6p
2. How does a Support Vector Machine work? Describe how to train a Support Vector Machine. How can you use a Support Vector Machine in multi category classification? When are you using it? What are the limitations?	6p
3. You have a lot of unlabeled data and only a few labeled examples available. Propose, based on the course, a neural network method that is capable to cluster and visualize the data. Describe the method briefly. What are the limitations?	6p
4. Propose one neural network method that is capable to work with incomplete data. Describe how the method works. How to train it? Why it is capable to work with incomplete data?	6p
5. You know that you have time delays in your system. The time delays have been estimated about constants. Suggest a suitable neural network to model such a system. Use a simple model. How the backpropagation algorithm can be used in training?	6p