An Introduction to Neural Networks

Tentative Course Schedule

Instructor: Ömer Morgül
Office/Phone: 203/1529
TA: İsmail Çırak.

Class Time:
Tu. 11:40-12:30 (EB 204)
Thu. 8:40-10:30 (EB 204)

This is an introductory course on Artificial Neural Networks for senior undergraduate and graduate students. Prerequisites are linear algebra, ordinary differential equations and computer programming. There will be 3-4 term projects and some homework (not on a regular basis).

Course Policy:
1: Students are required to check the course web site frequently for course related announcements. For course web page, see: www.ee.bilkent.edu.tr
2: All assignments must be prepared individually. Disciplinary action will be taken for those who copy from each other.

Topics:
1- Introduction.
2- Neuron model, neural network structures.
3- Learning rules and tasks.
4- Perceptron, single layer feedforward networks.
5- Multilayer feedforward networks, least mean square algorithm, error back-propagation.
6- Recurrent (Hopfield) networks.
7- Associative memory, analysis and design.
8- Self-organizing networks.
9- Radial basis functions.
10- Applications.

We will closely follow the following book:

Supplementary Books: