Homework I Adaptive Systems, winter ’98/’99

Hand out: December 7th

Hand in: December 21st

Maximum number of points: 90. Mark: \(\frac{\text{points} + 10}{10}\).

- It is allowed to discuss the problems with your colleagues.
- Corporation in groups of two people of approximately the same level is allowed.
- Everybody hands in his or her own version.
- It is not allowed to copy from each other.

**Remark.** Exercises 1, 6, 9 and 10 (in the numbering below, not the numbering in the book) are compulsory. From the remaining exercises, you have to do at least three. Clearly indicate which exercises you are handing in. If you do more than required, you may get *bonus points*.

Exercises 4, 8 may be more suitable for the mathematicians among you. Exercise 6 should be interesting for all of you.

Exercises 9 and 10 are simulation exercises to illustrate the theory.

In case you encounter obscurities do not hesitate to contact me.

1. Chapter III: 13. There is a type in the first line: \(\theta_0\) should be \(\theta^0\).
3. Chapter IV: 1. In part (a) the reference is wrong: 2.5.3 should be 2.6.5.
   In part (b), (4.152) should be (4.15).
5. Chapter IV: 3.
7. Chapter IV: 5. (4.3f8) should be (4.18). Derive ... from (4.19) is misleading. Replace (4.19) by ‘(4.14,4.17) and \(M\psi(k) = x(k)\)’.