

02457 NON-LINEAR SIGNAL PROCESSING

Curriculum (pensum) FALL 2006 E06, 2 pages!

The course is based on the textbook by C.M. Bishop: “Neural Networks for Pattern Recognition”, Clarendon Press, Oxford (1995), and 9 Matlab exercises and a mini project, published in postscript format on the course homepage: `ex1.ps` - `ex10.ps`, `ex10b.ps`, `ex10c.ps`.

The **oral exam** will be held in building 321 on December 06, and January 2007, the precise time and location will be announced by email via campusnet. The exam is based on the exercises. The examination questions will be based on exercises 2-9 and the mini project, and the student is encouraged to base the examination on own results obtained via the exercises. There will be a 20-25 minute preparation period prior to the examination. Grading will be based on the oral examination only.

The curriculum (pensum) is composed of the exercise texts `ex2.ps-ex10.ps`, `ex10b.ps`, `ex10c.ps` and the following parts of Chapters 1-9 in “Neural Networks for Pattern Recognition”:

Chapter 1

Sections 1.1-1.4: p. 1-8.

Sections 1.8-1.10: p. 17-27.

Chapter 2

Sections 2.1-2.3: p. 33-43.

Section 2.5: p. 50-52.

Section 2.6: p. 59-67, except proof in subsection 2.6.2.

Chapter 3

Section 3.1: p. 77-84.

Section 3.4: p. 89-97.

Section 3.6: p. 105-112.

Chapter 4

Sections 4.1-4.4: p. 116-133.

Section 4.8: p. 140-146.

Section 4.10: p. 150-153.

Chapter 5

Section 5.2-3: p. 167-171.

Section 5.6-5.10: p. 177-191.

Chapter 6

Section 6.0-6.1: p. 194-206.

Section 6.7: p. 230-236.

Section 6.9: p. 237-240.

Chapter 7

Sections 7.1-7.2: p. 253-259.

Section 7.5: p. 263-267.

Sections 7.6-7.7: p. 272-282, except proof in subsection 7.7.1.

Section 7.9: p. 285-287.

Chapter 8

Sections 8.1-8.2: p. 295-300.

Section 8.4: p. 302-304.

Section 8.6: p. 310-313.

Chapter 9

Sections 9.1-9.2: p. 332-340.

Section 9.5.3: p. 359-362.

Section 9.8: p. 371-377.

Lars Kai Hansen,
IMM, November 2006.