

# PROGRAM AND TIMETABLE

T-61.183 Special Course in Computer and Information Science III, Spring 2003

## Support Vector Machines and Kernel Methods

February 10, 2003

<b>Date</b>	<b>Topic or parts of the book</b>	<b>Presenter</b>
20.1	Initial arrangements, first meeting	J. Karhunen
27.1	Introductory lecture; Chapter 1	J. Karhunen
3.2	Kernels; 2.1–2.3, 2.5	K. Raju
10.2	Risk and Loss Functions; Chapter 3	J. Eriksson
17.2	Regularization; 4.1–4.3, 4.7–4.10	A. Ilin
24.2	Elements of Statistical Learning Theory 5.1–5.4, 5.6–5.7	J. Ahola
3.3	Optimization; 6.1–6.3, 6.6	T. Raiko
10.3	Pattern Recognition I; 7.1–7.4	R. Girdziuskas
10.3	Pattern Recognition II; 7.5–7.9	J. Raitio
17.3	Single-Class Problems: Quantile Estimation and Novelty Detection; 8.1–8.4, 8.6–8.8	S. Ruosaari
24.3	Regression Estimation; 9.1–9.3, 9.6–9.7	P. Lehtimäki
31.3	<i>No meeting!</i>	
7.4	Kernel Feature Extraction; 14.1–14.4, 14.6–14.7	A. Patrikainen
7.4	Kernel Fisher Discriminant; Chapter 15	E. Rinta-Runsala
14.4	Bayesian Kernel Methods I; 16.1–16.3	V. Viitaniemi
14.4	Bayesian Kernel Methods II; 16.5–16.8	J. Venna

Chapters 10-13, 17, and 18 are skipped completely in the course. The seminar is based on the book B. Schölkopf and A. Smola, *Learning with Kernels – Support Vector Machines, Regularization, and Beyond*, The MIT Press 2002.