

# Computer-intensive Statistics and Data Mining 1MS009

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## 1 Time table (preliminary)

Lectures 1, 2, 3: Introduction to R, Random number generation (Chapter 2 of the script)

Lectures 3, 4, 5: Monte Carlo Methods, MCMC (Chapter 3)

Lectures 6, 7, 8: Bootstrap (Chapters 4)

Lectures 9, 10, 11: Nonparametric density, Nearest neighbor method, Kernel methods (Chapter 9)

Lectures 12, 13, 14: Rigde regression, Spline (Chapter 10)

Lectures 15, 16, 18: Wavelets , Model assessment (Chapter 10)

Lectures 19, 20: EM Algorithm, Simulation Methods

10/12, 8.15 and 13/12 10.15 Student presentations OBLIGATORY!

Lecture 23, repetition

16/12 TENTAMEN

## 2 Obligatory Assignments

1. Homework: Random Numbers, distributed: 27/10 deadline: 4/11
2. Homework: MC, MCMC, distributed: 2/11 deadline: 11/11
3. Homework: Bootstrap, distributed 4/11 deadline: 19/11
4. Homework: Density estimation, distributed 15/11 deadline: 30/11
5. Homework: Nonparametric regression, distributed 30/11, deadline: presentation