

Lecture series on
Adaptive M - Estimation
by
Prof. Jean - Michel Loubes
CNRS and University of Paris Sud, Paris (France)
from February 28th to 12th of March, 2005

The course will be organized as follows:

Monday,	28 th Feb.	14:15 - 16:00	Adaptive M estimation: introduction I
Tuesday,	1 st Mar.	11:15 - 13:00	Adaptive M estimation: introduction II
	Exercises	18:15 - 19:00	
Thursday,	3 rd Mar.	11:15 - 13:00	Concentration inequalities
	Exercises	18:15 - 19:00	
Friday,	4 th Mar.	09:15 - 11:00	Model selection estimators
	Exercises	15:15 - 16:00	
Monday,	7 th Mar.	14:15 - 16:00	Wavelet estimators
	Exercises	18:15 - 19:00	
Tuesday,	8 th Mar.	11:15 - 13:00	Adaptive model selection estimation
	Exercises	18:15 - 19:00	
Thursday,	10 th Mar.	11:15 - 13:00	Inverse Problems: an introduction
	Exercises	18:15 - 19:00	
Friday,	11 th Mar.	09:15 - 11:00	Inverse Problems: adaptive estimation
	Exercises	15:15 - 16:00	

Adaptive estimation is concerned with the estimation of a signal when no prior assumption is made on the regularity of the observed functions. Yet, the estimator must be optimal, with regards to its rate of convergence. The function to be estimated can be directly observed (direct estimation) or observed through the image of a non invertible operator (inverse problem). The estimators we will construct will use wavelet basis and model selection theory. Applications abound in almost all areas of science and technology, including economics, geology, hydrology, medical imaging, signal processing and meteorology.

There will be ample time for discussion with the lecturer. After each lecture, the participants are asked to work on an exercise sheet which will be discussed at the same day, beginning with Tuesday, 3rd of March, 2005. Knowledge of MatLab or R is required. The course is primary for members of the GK 1023 and the PhD program Applied Statistics & Empirical Methods. Please register via email with A. Munk (munk@math.uni-goettingen.de) until 1st of February 2005. The number of participants will be limited to 16. Course material will be provided on the ZfS and GK homepages, respectively.

Location: Seminar room of the IMS, Maschmühlenweg 8 - 10

Further information:

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More information about the author:

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