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Fakultät Mathematik, Informatik
und Naturwissenschaften
Fachbereich Mathematik
Bundesstr. 55 (Geomatikum)
20146 Hamburg

Kolloquium über Mathematische Statistik und Stochastische Prozesse

Freitag, den 08.06.2012, 16.15 Uhr, Hörsaal 5

DR. ETIENNE ROQUAIN (Université de Paris VI) [1]

"On Adaptation of False Discovery Rate"

Zusammenfassung/Abstract

The false discovery rate (FDR) is a tool coming from multiple testing theory which is extensively used in many practical applications like microarrays, neuroimaging and source detection. It is defined as the expected proportion of errors among the items declared as significant. Maintaining this (expected) ratio below a nominal level α provides a global type I error control for which many items can be declared as significant, even if the dimension strongly increases. Surprisingly, the FDR, which was initially designed to address a pure multiple testing problem, has recently been shown to enjoy remarkable properties in other frameworks of statistical decision theory, as estimation or classification. Namely, when the signal is sparse, it is adaptive to the unknown sparsity contained in the data. In this talk, after a short presentation of the FDR concept, we will investigate the adaptation to the unknown sparsity of the FDR.

[1]DR. ETIENNE ROQUAIN
Université de Paris VI
Case courrier 188
4, Place Jussieu
75252 PARIS CEDEX 05
FRANCE
etienne.roquain@upmc.fr
http://etienne.roquain.free.fr/

Kontakt: Juniorprof. Dr. Angelika Rohde, Tel. 040 42838 4931, Raum T23,
Email: rohde@math.uni-hamburg.de