



Einladung zum Vortrag

von

Prof. Dr. Viktor Benes
CHARLES UNIVERSITY PRAGUE

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Random marked sets and dimension reduction

Random marked sets in the d -dimensional Euclidean space are considered, which have been introduced in a recent paper by Ballani, Kabluchko and Schlather. The case when the random marked set has integer Hausdorff dimension smaller than d is of special interest. Marked point, fibre and surface processes are examples of this kind. Statistical methods are presented for estimation of characteristics and independence testing (between sets and marks). A substantial part of the talk will be devoted to the dimension reduction problem when the random marked set is investigated together with a vector of complementary variables. The question is which covariates influence the random set most significantly. Guan and Wang extended the dimension reduction paradigm from vector data to point processes. Their work is generalized here in three ways. First the extension from point processes to random sets of integer dimension is straightforward. Secondly, in the sliced inverse regression method, the slicing is suggested by means of suitable geometrical marks. Finally, in the refined approach to dimension reduction, the central subspace of first and second order is studied.

Termin: Dienstag, 13. November 2012, 17 Uhr, c.t.

Ort: Universität Ulm, Helmholtzstr. 18, Raum 220

Der Vortrag findet im Rahmen des Mathematischen Kolloquiums statt.
Interessenten sind herzlich eingeladen.

gez. V. Schmidt