Einladung zum Vortrag
von
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Dimension walks and Schoenberg spectral measures for isotropic random fields

Schoenberg (1938) showed how Bochner's basic representation theorem for positive definite functions (e.g. the correlation function of a stationary stochastic process) `simplifies' for spatial processes (d-dimensional random fields) which are isotropic: the standard Fourier kernel function is replaced by the characteristic function of a random direction in d-space and the spectral measure, instead of being on d-space, is on the positive half-line.

The talk describes how Wendland's `dimension walks', which were defined earlier by Matheron as Descente and Montee in studying relations between d-D and either (d+2)-D or (d-2)-D correlation functions, are equivalent to simple modifications of their d-Schoenberg measures. Another family of dimension walks arises from projections from unit d-spheres to lower dimensional spheres, first via the kernel functions in the Schoenberg representation and then more generally, for d-Schoenberg measures.


Ort: Universität Ulm, Helmholtzstr. 18, Raum 220

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

gez. V. Schmidt