Zakhar Kabluchko
Universität Ulm

EXTREMES OF INDEPENDENT GAUSSIAN PROCESSES

A stochastic process is called *max-stable* if the maximum of any finite number of independent copies of the process, taken pointwise, has the same distribution as the process itself up to an affine transformation. Max-stable processes appear as limits of maxima of n i.i.d. stochastic processes as n goes to infinity. In this talk we will be interested in max-stable processes appearing as limits of maxima of independent *Gaussian* processes. The class of limiting processes will be completely described and its properties will be discussed. These processes are related to competing systems of particles distributed according to a Poisson random measure and moving independently of each other according to the law of some Gaussian process. We also discuss α-stable processes related to the particle systems mentioned above and show that they appear as limits of sums of independent geometric Brownian motions.