Abstract: Barndorff-Nielsen and Shephard [3] investigate supOU processes as volatility models. Empirical volatility has tails heavier than normal, long memory in the sense that the empirical autocorrelation function decreases slower than exponential, and exhibits volatility clusters on high levels. We investigate supOU processes with respect to these stylized facts. The class of supOU processes is vast and can be distinguished by its underlying driving Lévy process. Within the classes of convolution equivalent distributions we shall show that extremal clusters and long range dependence only occur for supOU processes, whose underlying driving Lévy process has regularly varying increments. The results on the extremal behavior of supOU processes correspond to the results of classical Lévy-driven OU processes.

Stichworte: convolution equivalent distribution, extreme value theory, independently scattered random measure, Lévy process, long range dependence, point process, regular variation, shot noise process, subexponential distribution, supOU process, extremal cluster

Buchtitel: