Lower Tail Independence of Diffusion Hitting Times

The coefficient of tail dependence is a quantity that measures how extreme events in one component of a bivariate copula depend on extreme events in the other component. It is well known that the Gaussian copula has zero tail dependence, a shortcoming for its application in credit risk modeling and quantitative risk management in general. I will discuss recent work showing that this property is shared by the joint distributions of hitting times of bivariate (uniformly elliptic) diffusion processes.