

J. Freitas, "Rare events on fractal landscapes"

We study the existence of limiting laws of rare events corresponding to the entrance of the orbits on certain target sets in the phase space. The limiting laws are obtained when the target sets shrink to a fractal set of zero Lebesgue measure. We consider both the presence and absence of clustering, which is detected by the Extremal Index (EI). The EI turns out to be very useful to identify the compatibility between the dynamics and the geometrical structure of the fractal set.