An EVT Approach to Modeling Joint Extremes in Climate and Mortality

This paper contributes to insurance risk management by modeling extreme climate risk and extreme mortality risk in an integrated manner via extreme value theory (EVT). We conduct an empirical study using monthly temperature and death data in the U.S., and find that the joint extremes in cold weather and old-age death counts exhibit the strongest level of dependence. Based on the estimated bivariate generalized Pareto distribution, we quantify the extremal dependence between death counts and temperature indexes. Methodologically, we employ the cutting edge multivariate peaks over threshold (POT) approach, which is readily applicable to a wide range of topics in extreme risk management.

Liste des horaires :

- Le 27 mars 2020 de 15h à 16h Site de Gerland
  Salle 2301