

This work considers various approaches for modelling multivariate extremal events. First we review theory in the univariate case| the Fisher-Tippett theorem and the generalized Pareto distribution. We proceed with an extension to the multivariate case using the spectral measure and point processes for modelling dependence between components, ending with a review of parametric dependence models and ways to fit them to data. We compare these classical methods to a new semi-parametric conditional approach. Finally, we apply the discussed methods in a simulation and on a dataset, compare the results and highlight classes of problems that the various approaches are suitable to.