



A Copula based multisite weather generator

Mahyar Mehdizadeh and András Bárdossy

Stuttgart, Institute of Hydraulic Engineering, Civil Engineering Hydrology and Geohydrology, Stuttgart, Germany
(mahyar.mehdizadeh@gmail.com, +49 -711 / 685 - 64681)

This work is an example for application of Copula to develop a multisite weather generator. Classical statistical models are commonly used for modeling dependent random variables. Modeling the dependencies between variables in such models is not independent of the choice of the marginal distributions. Copulas, on the other hand, overcome to this limitation by modeling the spatial dependence structure between variables, independent of their marginal distribution. An application of a Copula based model for generating synthetic precipitation in a precipitation station network, located in Germany, is presented and the ability of model in preserving properties of daily precipitation data is discussed.