



## **Spatial dependence of discharge extremes**

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The spatial dependence of discharge extremes is important both for flood events and for the description of the spatial extent of droughts. Single numbers such as correlation, rank correlation or Kendall tau are usually used to describe dependence of streamflow series. All these measures are kind of integrals over the whole range of discharges therefore not necessarily good to describe the specific features of extremes. In this contribution, a method to decompose correlation according to the frequency of the underlying Fourier waves is presented. The components corresponding to the high frequency waves are related to the simultaneous occurrence of the floods, while high correlation of the low frequency waves corresponds to long term behavior and can be used to describe the possible spatial extent of droughts. Examples from several hundred catchments in Austria and Germany are used to illustrate the methodology.