



## **Comparison of spatial interpolation of rainfall with emphasis on extreme events**

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The sparse network of rain-gauges has always motivated the scientists to find more robust ways to include the spatial variability of precipitation. Turning Bands Simulation, External Drift Kriging, Copula and Random Mixing are amongst one of them. Remote sensing Technologies i.e. radar and satellite estimations are widely known to provide a spatial profile of the precipitation, however during extreme events the accuracy of the resulted areal precipitation is still under discussion.

The aim is to compare the areal hourly precipitation results of a flood event from RADOLAN (Radar online adjustment) with the gridded rainfall obtained via Turning Bands Simulation (TBM) and Inverse Distance Weighting (IDW) method. The comparison is mainly focused on performing the uncertainty analysis of the areal precipitation through the said simulation and remote sensing technique for the Upper Main Catchment. The comparison of the results obtained from TBM, IDW and RADOLAN show considerably similar results near the rain gauge stations, but the degree of ambiguity elevates with the increasing distance from the gauge stations. Future research will be carried out to compare the forecasted gridded precipitation simulations with the real-time rainfall forecast system (RADVOR) to make the flood evacuation process more robust and efficient.