

**ICWRER conference, Koblenz 2013  
Session abstract**

**Title: Statistical tools and methods water resources research and management**

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Statistical and probabilistic methods have been traditionally applied for addressing many hydrological and geophysical problems, such as extreme flood and precipitation frequency analysis, extreme drought analysis and prediction, spatial analysis of hydrological processes such as rainfall and infiltration, stochastic simulation of hydrological processes such as streamflow and precipitation, short and long range forecasting of hydrological processes, ocean waves prediction, etc. While the field has been well-established and much experience has been gained over the years, the development of new statistical methods and tools and the advances in computing hardware and software have further enlarged the scope of applications.

The main interest is toward, but not limited, to non-stationarity and changes in hydrology, uncertainty in statistical hydrological models, time series analysis and multivariate methods for hydrological modeling and forecasting, extreme events in geophysical processes.