Special Session title: Advances in Risk and Uncertainty Analysis of Hydrological and Water Resources Systems

Special Session Conveners: Prof. Athanasios Loukas, Dr. Lampros Vasiliades

Brief Description and topics:

Assessing the impact of risk and uncertainty in water resources systems is a crucial step towards decision making. Decision makers are interested in determining and quantifying these variables (risk and uncertainty) of existing and proposed hydrotechnical projects. For such reasons, modeling methodologies need to provide reliable predictions and quantify the corresponding uncertainties. This session welcomes contributions that develop novel methodologies to model the hydrological processes and water resources within the context of risk analysis.

Furthermore, this session invites studies presenting approaches, concepts, models and datasets that help understand the nature and causes of water resources. Submissions are encouraged on all aspects of water resources:

- Hydrological risk in existence of nonstationarity
- Hydrological design methods and applications considering changing environments.
- Water scarcity (competition, conflict, collaboration)
- Water resources engineering and management
- Flooding (vulnerability, dynamic flood risk)
- Water access (quality, quantity, reliability, equity) as well as drivers (infrastructure, economic policy, trade, governance)
- In addition to water, energy, and food resource availability and distribution.

Research on adaptation strategies or solutions to water resources, including lessons learned from past or contemporary methods are also invited.