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International Doctoral Program in Civil and Environmental Engineering

SEMINAR

How science can ease application - Examples from hydrology

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Location:

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Collegamento da remoto al seguente link:

https://teams.microsoft.com/l/meetup-join/19%3ameeting_NjI3MDMxYTMtZDZmNi00OTlkLWE5Y2ItZGFhODAyY2ZjN2Rk%40thread.v2/0?context=%7b%22Tid%22%3a%22067e7d20-e70f-42c6-ae10-8b07e8c4a003%22%2c%22Oid%22%3a%22fa19f6c2-6b18-4de4-b45f-3c8b36015efd%22%7d

Timetable:

November 15th 2022 - 3:00 p.m. (CET)

Abstract

This contribution will present four examples of the development of new scientific concepts that were subsequently used to support decision-making in socially relevant projects. The first is a new fieldwork-based mapping method of runoff generation mechanisms in a karst environment, which was then applied to support land management in the water supply basins of the Vienna Water Supply Agency. The second is new methods of forecasting flow ensembles that are used to issue flood warnings for the Danube and for scheduling the transit of cargo ships. The third example is a new project flood regionalisation method based on the concept of flood frequency hydrology, which was applied to estimate flood risk zones in the HORA project. The zones are used by the Austrian Federal Ministry for flood risk management and by the insurance industry to customise their policies. The last example is research on probability propagation from extreme rainfall to flooding in a spatial context in catchment areas. This research was used by the governments of the Tyrol and Bavaria to support decision-making on flood protection for the river Inn and its tributaries. It is believed that advances in science are not only useful for practical applications, but there are also very relevant benefits from scientific research applications.



Prof. Günter Blöschl heads the Institute of Hydraulic Engineering and Water Resources Management, Vienna University of Technology. His research focuses on understanding floods and droughts, including the effects of climate change. He is a senator of the Helmholtz Association and has been president of the European Geosciences Union and the International Association of Hydrological Sciences. He has received numerous awards, including an ERC Advanced Grant on flood changes, and is a member of the Academies of Sciences of Austria, Germany and the United States.

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