

Seminar/Talk

Hydraulic engineering and modelling needs and research developments

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BOKU

Host: Björn Hof

Rivers provide mankind with key benefits, such as water supply, food, hydropower, navigation, irrigation, ecosystem services and recreation. They are fundamental to life and frequently possessmajor cultural significance. Rivers are currently threatened by unsustainable overuse, increasinghuman pressure on their catchments and problems of increased floods and droughts driven by climatechange, leading to changes in morphology, increased pollution, degradation of aquatic habitats, extinction of fish species etc.. In this context Hydraulic Engineering has accompanied society sincethousands of years, but the new challenges lead to new demands and needs in terms of research. Thelecture is focusing on recent examples of ongoing research using field monitoring, physical and numerical modelling. In particular the spatio-temporal variability of sediment transport will bediscussed in relation to floodrisk management, hydropower, navigation and ecology. Thereby deficitsin existing knowledge show the need for fundamental research, whereby especially scaling issues areof importance. In this context, the new CD-Laboratory Sediment Research and Management aims toanalyse bedload and suspended sediment transport processes and their interaction with engineeringmeasures in order to meet management needs. Finally the new research infrastructures, namely thealready existing research channel and the planned modern BOKU hydraulic engineering laboratory, being a unique research infrastructure with a free flowing discharge of up to 10 m3 s-1, allowing thestudy of basic processes and interrelations with river engineering measures, are presented.

Thursday, January 25, 2018 10:00am - 11:00am

Mondi Seminar Room 1, Central Building



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