NOON TALK @ DIATI

30 | 2019

Mercoledì 6 Febbraio 2019
ore 13.00

POLITECNICO DI TORINO

Dipartimento di Ingegneria dell'Ambiente, del Territorio e delle Infrastrutture

Politecnico di Torino
Sala Riunioni, primo piano,
DIATI ingresso 3

Riccardo Vesipa
RTDa at DIATI

Hydraulics: a science with a long history and a great future.

Examples in geomorphology, biology and technology

Prof. Luca Ridolfi moderates the discussion

ABSTRACT

Over the centuries, the understanding of the dynamics of water flows and the resulting innovations in hydraulic engineering have contributed to important economical and social advances. Nowadays, powerful experimental, numerical, analytical, and survey tools are used to dig deeper in the understanding of the hydraulic mechanisms occurring in a vast spectrum of technological, biological, and environmental processes. The comprehension of the fundamental hydraulic mechanisms leads to novel perspectives about the control, management and optimization of the related processes. In this talk, the focus is on three research topics in which such major advances are being achieved. Firstly, the use of water-induced stresses aimed at inactivating microorganisms in water will be shown. Secondly, an overview of the complex interactions occurring in the fluvial environment between sediments, vegetation and stream flow stochasticity will be given. Finally, some examples of relevant hydraulic issues affecting water distribution systems will be illustrated.

BIOGRAPHY

Riccardo Vesipa is Researcher at the Department of Environment, Land and Infrastructure Engineering of the Politecnico di Torino since 2018. He graduated in Civil Engineering in 2009 and received his PhD in 2013. His main activity concerns the modeling of hydraulic processes. He worked with theoretical and numerical models, and a significant part of his work involved physical modeling in flume facilities and pilot plants. The main topics of his research are fluvial eco-morphodynamics, water distribution networks, water treatment by hydrodynamic cavitation, and control algorithms in waterworks.
He has also worked in tight collaboration with industries and water supply companies to solve issues related with the optimization of a large mountain water distribution network, the development of innovative water disinfection techniques and the management of wind gusts. Riccardo was also involved in a EU funded capacity building project aimed at improving the water management in an Ethiopian city.

Please bring your own mug. Coffee and tea will be provided

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Save the date for our next speaker-event, on March 6 2019, at 13:00.