

# NOON TALK @ DIATI

19  
2017

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

**Mercoledì 6 DICEMBRE 2017  
ore 13.00**

**Politecnico di Torino  
Sala Riunioni  
Primo Piano, DIATI ingresso 3**



**POLITECNICO  
DI TORINO**

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

## **Paolo Vezza**

RTDb at DIATI

### **"Eco-hydraulics: an integrated approach for environmental river management"**

Prof. Costantino Manes moderates the discussion

#### **ABSTRACT**

Eco-hydraulics is a inter-disciplinary science that studies river ecosystem processes and functions including physical habitat dynamics, e-flows (environmental or ecological flow regimes), wetland and river restoration, and passage systems for migrations of fish and other aquatic organisms. These eco-hydraulic themes were historically developed to a large degree independently, yet they form a holistic approach aiming to maintain healthy and sustainable aquatic ecosystems. Eco-hydraulics rely on classical aspects of traditional physical and ecological disciplines (hydrology, hydraulics, geomorphology, aquatic ecology and biology), but try to synthesize such aspects in a more comprehensive and coherent way. In this speech we present the work of researchers and engineers working on eco-hydraulics that has enabled, and continues to promote, inter-disciplinary advances as the best way to develop ecologically compatible solutions for water resources management, in line with national laws and European directives. This research activities are based on a range of tools and approaches - from empirical field surveys and studies or laboratory experimentation, to numerical modelling and simulations – aimed to address fundamental and applied science. The integration of the eco-hydraulic principles in common management practices may enable efficiencies, synergies and more sound ecologically-based designs of hydraulic infrastructures, hydropower development and management of sediment transport.

#### **BIOGRAPHY**

Paolo Vezza currently works as assistant professor at the Department of Environment, Land and Infrastructure Engineering of the Politecnico di Torino. He received a Master degree in Hydraulic Engineering and a Ph.D. degree in Water and Land Management, both from Politecnico di Torino. His main research interests have been focused on theoretical and applied research in the field of hydrology, hydraulics and water resources management. Since He got the PhD in 2010, He held a Marie Curie Fellowship hosted by the Universidad Politecnica de Valencia (UPV, Spain) and worked as post-doctoral fellow in Italy, Spain and UK. Nevertheless, He currently collaborates with researchers and institutions in USA, Japan, Latin America and West Africa to study diverse aspects of environmental river management, having an active role in projects focused on hydropower production and the impact assessment of water abstractions. His academic activity currently includes more than 20 ISI peer-reviewed papers with an H-index of 8 (source: ISI Web of Science).



**Save the date for our next speaker-event, on January 17, at 13.00**