



## Matteo Facchini

birth date/place: February 11, 1988 / Trento (Italy)  
citizenship: Italian

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### Education

PhD at Laboratory of Hydraulics, Hydrology and Glaciology (VAW), ETH Zurich – ongoing, advisors: Prof. R. M. Boes and Dr. A. Siviglia

Master Degree in Environmental and Land Engineering at Università degli Studi di Trento, Italy – “High order ADER-WENO finite volume schemes for Boussinesq-type equations”, advisor: Prof. M. Dumbser, 2013

Erasmus exchange year at the Technische Universität Dresden, Germany – 2011/2012

Bachelor in Environmental Engineering at Università degli Studi di Trento, Italy – “Aspetti dei deflussi di pioggia: dilavamento di superfici stradali e rischi per i bacini limitrofi”, advisors: Prof. S. Dirè and Prof. M. Righetti, 2010

### Work Experience

#### **PHD CANDIDATE, LABORATORY OF HYDRAULICS, HYDROLOGY AND GLACIOLOGY: ZURICH, SWITZERLAND – 2013-ONGOING**

I work on monitoring and modeling the eco-morphological effects of a sediment bypass tunnel (SBT) on the downstream river reach.

#### **SOFTWARE DEVELOPER, LABORATORY OF HYDRAULICS, HYDROLOGY AND GLACIOLOGY: ZURICH, SWITZERLAND – 2013-ONGOING**

Software development of BASEMENT (Basic Simulation Environment for Computation of Environmental Flow and Natural Hazard Simulation), a software used in river engineering modeling.

#### **TUTOR, LEONARDO FORMAZIONE E SVILUPPO: CATANIA, ITALY – 2013**

Tutoring students going to simulate a session of the United Nations (National Model United Nations, NMUN) in New York.

#### **CULTURE OFFICE SUPPORT, OPERA UNIVERSITARIA DI TRENTO: TRENTO, ITALY – 2010-2011**

Sound and light technician at Opera Universitaria cultural events, such as theater shows, concerts and movie show.

#### **EMPLOYEE, ISTITUTO COMPRENSIVO TRENTO 3: TRENTO, ITALY – 2005-2007**

Data implementation: results of questionnaires for the assessment of quality of teaching at the institute.

## Publications

Dumbser, M., Facchini, M., (2015). A space-time discontinuous Galerkin method for Boussinesq- type equations. *Applied Mathematics and Computation*, 272(2): 336-346.

Facchini, M., Siviglia, A., Boes, R.M., (2015). Downstream morphological impact of a sediment bypass tunnel – preliminary results and forthcoming actions. *Proc. First International Workshop on Sediment Bypass Tunnels*, VAW Mitteilungen 232, ETH Zürich, Schweiz, 137-146.

Vetsch D., Siviglia A., Ehrbar D., Facchini M., Gerber M., Kammerer S., Peter S., Vonwiller L., Volz C., Farshi D., Mueller R., Rousselot P., Veprek R., Faeh R. (2016). System Manuals of BASEMENT, Version 2.7. Laboratory of Hydraulics, Glaciology and Hydrology (VAW). ETH Zurich. Available from <<http://www.basement.ethz.ch>>.

## Conferences and Courses Attended:

European Geoscience Conference General Assembly, Vienna (Austria), April 27- May 2, 2014.

Post-graduate Course on Advanced Numerical Methods for Hyperbolic Equations and Applications, Trento (Italy), February 3 - February 14, 2014.

Post-graduate Course on Basic Interdisciplinary River Morphodynamics: First Edition, River Bars, Trento (Italy), October 27 - October 31, 2014.

International Workshop on Sediment Bypass Tunnels, Zurich (Switzerland), April 27 - April 29, 2015.

Introduction to Writing at Doctoral Level, Natural Science & Engineering, C1 level, Fall Semester 2015.

Summer School on Fluvial Geomorphology, Losone (Switzerland), June 27 - July 1, 2016.

## Personal Skills

Languages: Italian (native), English (fluent), and German (fluent)

Communication skills: Participating actively to my hometown life through cultural associations, I learned the importance of interaction with other people and of peaceful communication inside a group. These associations are the Town Marching Band ("Corpo Musicale Città di Trento") of which I have been counselor, the Orchestra "I Filarmonici" of which I have been counselor, and the music school "I Minipolifonici" of which I have been an active member. Moreover I learned how to work in a team as I have been Students' Delegate at High School and at University.

Organizational skills: I learned how to deal with times and deadlines, even with different tasks at the same time through several experiences outside my work field (i.e. counselor in the board of two cultural associations, active student and member of a music school, twice students' spokesman at high school and at university, sound and lights technician at cultural events such as concerts, theater, and cinema).

Technology-related skills: I currently use every sort of technological device at home, including audiovisual equipment and professional equipments thanks to the work conducted with the Opera Universitaria in Trento and to the intense concert activity carried out in the whole Trentino Region and in Italy.

Digital competence: I can use very well OS X, Windows and Ubuntu. I can use some computer programming languages, used for mathematical and engineering purposes (Python, Fortran, and Matlab mainly). I can use other engineering softwares like Comsol Multiphysics, Maple, HecRas, ANSYS CFX. I can perfectly use platforms such as wiki, chat, blog, search engines.