CURRICULUM VITAE

Dr. Francesco Comiti
Free University of Bozen-Bolzano
Piazza Università 5 – 39100 Bolzano
Phone: +39-0471017126
Email: francesco.comiti@unibz.it

Affiliations

Faculty of Science and Technology
Free University of Bozen-Bolzano

Current position

Assistant Professor (since March 2009)

Education

- PhD in Environmental Watershed Management (2004) – University of Padova (Italy)
- MSc in Forest and Environmental Sciences (1999) – University of Padova (Italy)

Academic experience

- Research Associate 2008 (2008) – University of Padova (Italy)
- Fulbright Visiting Scholar (2007) – Colorado State University (USA)
- Post-doc fellow (2004-2006) – University of Padova (Italy)

Teaching appointments

- Agricultural Hydrology and Drainage Management

Research activity

1. Areas of scientific interest

- Flow resistance in mountain rivers
- Sediment and wood transport in the channel network
- Channel morphology and ecology of mountain rivers
- Flood hazard in mountain rivers
- Restoration and control of mountain rivers
- Vegetation-sediment-flow interactions in braided rivers
- Evaluation of hydromorphological status of mountain rivers

2. Research projects

- MONITORING II - Practical Use of monitoring in natural disaster management (EU Interreg IV)
- GESTO – Management of sediment transport in mountain basins (Aut. Province of Bolzano)
- IDRAIM 2 - Integration of the UE Directives "Water" and "Floods" for Italian rivers (ISPRA)
- EMERGE – Retreating glaciers and emerging ecosystems in the Southern Alps (Stifterverband für die deutsche Wissenschaft)
- TRUMPS – Towards a reliable inundation mapping in South Tyrol (Aut. Province of Bolzano)
- Effects of climate change on high-altitude ecosystems: monitoring the upper Matsch Valley (Free University of Bozen-Bolzano)
- Sustainable use of biomass in South Tyrol: from production to technology (Aut. Province of Bolzano)

List of publications

Articles in International Refereed Journals

- **Comiti** F., Da Canal M., Surian N., Mao L., Picco L., Lenzi M.A. Channel adjustments and vegetation cover dynamics in a large gravel bed river over the last 200 years. *Geomorphology* 125, 147-159, 2011

- **Comiti**, F., Cadol D., Wohl E.E. Reply to comment by Keith Richardson on "Flow regimes, bed morphology, and flow resistance in self-formed step-pool channels", *Water Resources Research*, 46, W12804, 2010.

- Iroumè A., Andreoli A., **Comiti** F., Ulloa H., Huber A. Large wood abundance, distribution and mobilization in a third order Coastal mountain range river system, southern Chile. *Forest Ecology and Management*, 260 (4): 480-490, 2010.

- MacVicar B., Piegay H., Henderson A., **Comiti** F., Oberline C., Pecorari E. 2009. Quantifying the temporal dynamics of wood in large rivers: field trials of wood surveying, dating, tracking, and monitoring techniques. *Earth Surf. Process. Landforms,* 34, 2031–2046, 2009.

- **Comiti** F., L. Mao, M. A. Lenzi, M. Siligardi. Artificial steps to stabilize mountain rivers: A post-project ecological assessment. *River Research and Applications*, 25(5), 639-659, 2009.

- Surian N., L. Ziliani, F. **Comiti**, M.A. Lenzi, L. Mao. Channel adjustments and alteration of sediment fluxes in gravel-bed rivers of north-eastern Italy: Potentials and limitations for channel recovery, *River Research and Applications*, 25(5), 551-567, 2009.

- **Comiti** F., D. Cadol, and E. Wohl. Flow regimes, bed morphology, and flow resistance in self-formed step-pool channels. *Water Resources Research*, 45, W04424, doi:10.1029/2008WR007259, 2009.

- Mao L., M. Cavalli, F. **Comiti**, L. Marchi, M.A. Lenzi, M. Arattano. Sediment transfer processes in two Alpine catchments of contrasting morphological settings. *Journal of Hydrology*, 364, 1-2, 88-98, 2009.

- Mao L., A. Andreoli, F. **Comiti**, M.A. Lenzi. Geomorphic effects of large wood jams on a sub-antarctic mountain stream. *River Research and Applications*, 24, 249-266, 2008.

- **Comiti** F., A. Andreoli, L. Mao, M.A. Lenzi. Wood storage in three mountain streams of Southern Andes and its hydro-morphological effects. *Earth Surf. Process. Landforms,* 33(2), 242-262, 2008.

- Andreoli A., F. **Comiti**, M.A. Lenzi, Characteristic, distribution and geomorphic role of large woody debris in a mountain stream of the Chilean Andes. *Earth Surf. Process. Landforms*, 32(11), 1675-1692, 2007.

- **Comiti** F., L. Mao, A. Wilcox, E. Wohl, M.A. Lenzi, Field-derived relationships for flow velocity and resistance in high-gradient streams. *Journal of Hydrology*, 340 (1-2), 48-62, 2007.

- Lenzi M.A., L. Mao, F. **Comiti**, When does bedload transport begin in steep boulder-bed streams ? *Hydrological Processes*, 20, 3517-3533, 2006.

- **Comiti** F., A. Andreoli, M.A. Lenzi, L. Mao, Spatial density and characteristics of woody debris in five mountain rivers of the Dolomites (Italian Alps). *Geomorphology,* 78, 44-63, 2006.

- Lenzi M.A., L. Mao, F. **Comiti**, Effective discharge for sediment transport in a mountain river: computational approaches and geomorphic effectiveness. *Journal of Hydrology*, 326, 257-276, 2006.

- **Comiti** F., M.A. Lenzi, Dimensions of standing waves at steps in mountain rivers. *Water Resources Research,* 42, W03411, doi:10.1029/2004WR003898, 2006.

- **Comiti F., A.** Andreoli, M.A. Lenzi**,** Morphological effects of local scouring in step-pool streams, *Earth Surf. Process. Landforms,* 30(12), 1567-1581, 2005.

- Lenzi M.A., L. Mao, F. **Comiti**, Magnitude-frequency analysis of bedload data in an Alpine basin, *Water Resources Research, 40, W0720*, 2004.

- Marion, A., M. A. Lenzi, F. **Comiti**, Effect of sill spacing and sediment size grading on scouring at grade-control structures, *Earth Surf. Process. Landforms,* 29(8), 983-993, 2004.

- Lenzi M.A., F. **Comiti**, A. Marion, Local scouring at bed sills in a mountain river: The Plima River, Italian Alps, *Journal of Hydraulic Engineering, ASCE*, 130(3), 267-269, 2004.

- Lenzi, M.A., L. Mao, F. **Comiti,** Interannual variation of suspended sediment load and sediment yield in an Alpine catchment, *Hydrological Sciences Journal*, 48(6), 899-915, 2003.

- Lenzi, M.A e F. **Comiti**, Local scouring and morphological adjustments in steep channels with check-dam sequences, *Geomorphology*, 55, Special Issue, 97-109, 2003.

- Lenzi, M.A., A. Marion, F. **Comiti**, Local scouring at grade-control structures in alluvial mountain rivers, *Water Resources Research* 39(7), 1176-1188, 2003.

- Lenzi, M.A., A. Marion, A. F. **Comiti**, R. Gaudio, Local scouring in low and high gradient streams at bed sills, *Journal of Hydraulic Research,* IAHR, 40(6), 731-739, 2002.

Articles in National Journals

- Mao L., Burns S., **Comiti** F., Andreoli A., Urciuolo A., Gaviño-Novillo M., Iturraspe R., Lenzi M.A. Acumulaciones de detritos leñosos en un cauce de montaña de Tierra del Fuego: análisis de la movilidad y de los efectos hidromorfológicos. *Bosque*, 29(3), 197-211, 2008.

- Andreoli A., G. Carlig, F. **Comiti**, A. Iroumé, Residuos leñosos de gran tamaño en un torrente de la Cordillera de Los Andes, Chile: su funcionalidad e importancia. *Bosque*, 28(2), 83-96, 2007.

- Da Canal M., **Comiti** F., Surian N., Mao L., Lenzi M.A. Studio delle variazioni morfologiche del f. Piave nel vallone bellunese durante gli ultimi duecento anni. *Quaderni di Idronomia Montana*, 27, 259-271, 2007.

- Pecorari E., **Comiti** F., Rigon E., Picco L., Lenzi M.A. Caratteristiche e quantificazione del legname in alveo in corsi d'acqua di grandi dimensioni: risultati preliminari sul fiume Piave. *Quaderni di Idronomia Montana*, 27, 477-488, 2007.

- Mao L., F. **Comiti**, M.A Lenzi, La resistenza al flusso in un torrente montano ad elevata pendenza con morfologia a step-pool. *Rivista di Ingegneria Agraria*, 3, 29-38, 2006.

- **Comiti** F., V. D'Agostino, V. Ferro, M.A. Lenzi. Fenomeni di erosione localizzata a valle di opere trasversali: integrazioni tra indagini di campo e di laboratorio, *Quaderni di Idronomia Montana,* 25, 217-225, 2006.

- Ferro V., M.A. Lenzi, F. **Comiti**. Un criterio geomorfologico di progettazione delle briglie in massi. *Quaderni di Idronomia Montana*, 26, 285-291, 2006.

- Panazzolo W, F. **Comiti**, L. Mao, M.A. Lenzi. La sistemazione dei torrenti alpini tramite step-pool artificiali: Valutazione della loro efficacia ecologica rispetto a soluzioni di tipo tradizionale. *Quaderni di Idronomia Montana*, 26, 293-302, 2006.

- Lenzi M.A, L. Mao, F. **Comiti**, G. Lucchini. La resistenza al flusso in corsi d'acqua sistemati con sequenze di briglie. *Quaderni di Idronomia Montana*, 26, 375-386, 2006.

- Andreoli A., F. **Comiti**, M.A. Lenzi, I torrenti con morfologia a step pool: analogie con alvei sistemati tramite opere trasversali**.** *Rivista di Ingegneria Agraria,* 3, 1-13, 2005.

- Lenzi M.A., A. Andreoli, F. **Comiti**, I fenomeni di erosione localizzata nella dinamica dei torrenti con morfologia a gradinata**.** *Quaderni di Idronomia Montana,* 22, 279-302, 2005.

Books and Contributions to Books

- **Comiti** F., Mao L. Recent advances on the dynamics of steep channels. In: Gravel bed Rivers 7 (in press).

- **Comiti** F., Lenzi M.A, Mao L. Local scouring at check dams in mountain rivers. In: Conesa-Garcia M., Lenzi M.A. (eds) *Check Dams, Morphological Adjustments and Erosion Control in Torrential Streams*. ISBN/ISSN: 978-1-60876-146-3, 2010.

- **Comiti** F., Mao L., Preciso E., Picco L., Marchi L., Borga M. Large wood and flash floods: evidences from the 2007 event in the the Davča basin (Slovenia). In: AA.VV.. *Monitoring, simulation, prevention and remediation of dense and debris flow II*. vol. 60, 173-182, 2008.

- Mao L., **Comiti** F., Andreoli A., Picco L., Lenzi M.A., Urciulo A., Iturraspe R., Iroumè A. Role and management of in-channel wood in relation to flood events in Southern Andes basins. In: AA.VV.. *Monitoring, simulation, prevention and remediation of dense and debris flow II*. vol. 60, 207-216, 2008.

- Rigon E., **Comiti** F., Mao L., Lenzi M.A. Relationships among basin area, sediment transport mechanisms and wood storage in mountain basins of the Dolomites (Italian Alps). In: AA.VV.. *Monitoring, simulation, prevention and remediation of dense and debris flow II*. vol. 60, 163-172, 2008.

- **Comiti** F., V. D'Agostino. Interventi di sistemazione idraulica dei torrenti e gestione dei cantieri. In: La gestione forestale per la conservazione degli habitat della rete natura 2000. A cura di Masutti L. e Battisti A., Regione Veneto, Accademia Italiana di Scienze Forestali, 76-95, 2007.

- Mao L., M. Cavalli, F. **Comiti**, L. Marchi, M. Arattano. Long-term monitoring of bedload and debris flows in two small catchments of the Eastern Italian Alps. In: Lorenzini G., Brebbia C.A., Emmanouloudis D.E. Monitoring, Simulation, Prevention and remediation of Dense and Debris Flows. Wessex Institute Technology UK, 147-157, 2006.

- Mao, L., F. **Comiti**, A. Andreoli, M.A. Lenzi, G.R. Scussel, Bankfull and bed load effective discharges in a steep boulder-bed channel. In Walling, D.E., Horowitz, A.J. (eds), Sediment budget I, IAHS Publ. N°291, 189-195, 2005.

- **Comiti**, F., A. Andreoli, M.A Lenzi, Dimensions of scour holes and effectiveness of grade-control structures in two cobble-gravel bed rivers, Scour and Erosion, vol. 1, Stallion Press, 358-365, 2004.

Other Publications

- Mao, L., **Comiti**, F., Lenzi M.A., Bedload Dynamics in Steep Mountain Rivers: Insights from the Rio Cordon Experimental Station (Italian Alps). In: Gray, J.R., Laronne, J.B., and Marr, J.D.G. (eds) Bedload-surrogate monitoring technologies, U.S. Geological Survey Scientific Investigations Report 2010-5091, 253-265 (available online from http://pubs.usgs.gov/sir/2010/5091/papers/listofpapers.html).