



FREIE UNIVERSITÄT BOZEN  
LIBERA UNIVERSITÀ DI BOLZANO  
FREE UNIVERSITY OF BOZEN · BOLZANO

Fakultät für Naturwissenschaften  
und Technik

Facoltà di Scienze  
e Tecnologie

Faculty of Science  
and Technology



Provincia Autonoma di Bolzano  
Ripartizione Opere Idrauliche

## Organization:

- Francesco Comiti

*Faculty of Science and Technology  
Free University of Bozen-Bolzano  
E-mail: francesco.comiti@unibz.it*

- Pierpaolo Macconi

*Dept. Hydraulic Engineering  
Autonomous Province of Bozen-Bolzano  
E-mail: pierpaolo.macconi@provinz.bz.it*

Please contact the organizers for further information  
about the workshop.

Under the aegis of:



Italian Society of  
Agricultural Engineering



International Association of  
Engineering Geology  
Italian National Group



**INTERPRAEVENT**  
International  
Research Society



**ISPRA**  
Istituto Superiore per la Protezione  
e la Ricerca Ambientale

Quantification of sediment transfer in mountain streams – both as bedload transport and as debris flows – has experienced significant advances over the last two decades. However, the relevance of these processes for the comprehension of morphological and ecological dynamics of river systems, for hazard assessment, and for the design of control structures urges further refinements in monitoring techniques. Field observations in mountain channels are subjected to severe technical challenges, and these have hitherto hindered the development of a widespread network of monitoring sites.

This international workshop will bring together scientists actively studying bedload and debris-flow monitoring in mountain environments, as well as technicians, professionals and public agencies interested in learning the state-of-the-art on the topic and discussing further developments. The main objectives of the workshop can be summarized as follows:

- Disseminate the state-of-the-art on sediment transport dynamics and its monitoring in mountain basins;
- Share research experience and achievements in bedload and debris-flow monitoring;
- Highlight pros and cons of different methods and instruments deployed (including maintenance and cost issues);
- Identify the needs and directions for further technological development.

The workshop (entirely in English) will consist of two sessions, one for bedload transport and one for debris flows. Each session includes invited talks (30 min plus 15 min of discussion), posters presentation and a concluding round table. A field trip is offered on the third day visiting a recently completed debris-flow monitoring station near Bolzano.

Scientific committee:

- Massimo Arattano (CNR IRPI Torino, Italy)
- Francesco Comiti (Free University of Bozen-Bolzano, Italy)
- Christoph Graf (WSL Birmensdorf, Switzerland)
- Jonathan Laronne (Ben Gurion University of the Negev, Israel)
- Lorenzo Marchi (CNR IRPI Padova, Italy)
- Christian Scheidl (BOKU University Wien, Austria)



# INTERNATIONAL WORKSHOP MONITORING BEDLOAD AND DEBRIS FLOWS IN MOUNTAIN BASINS

## FINAL ANNOUNCEMENT

**Bozen-Bolzano (Italy)  
10-12 October 2012**



## PROGRAMME

### October 10

8:30 – 9:00 Registration

9:00 Welcome (Free University of Bozen-Bolzano and Autonomous Province of Bozen-Bolzano)

9:15 Introduction to the workshop (F. Comiti)

#### **Session I - Bedload monitoring** (Chairman: F. Comiti)

J. Laronne (09:30 – 10:15): Novel surrogate techniques for bedload monitoring: the calibration issue

K. Bunte (10:15 – 11:00): Why bedload traps? Range of employment conditions and what we learned from results

*Coffee break* (11:00 – 11:30)

T. Mizuyama (11:30 – 12:15): Bedload monitoring in Japan

D. Rickenmann (12:15 – 13:00): Bedload monitoring in Switzerland

*Lunch* (13:00 – 14:30)

H. Habersack (14:30 – 15:15): Bedload monitoring in Austria

F. Liebault (15:15 – 16:00): Bedload transport monitoring at Draix (Southern French Prealps)

L. Mao (16:00 – 16:45): Bedload monitoring in Italy

**Coffee break and POSTER SESSION I** (16:45 – 17:45)

**Round table on future developments for bedload monitoring** (17:45 – 18:45) (Moderator: J. Laronne)

**Social dinner** (included in the registration fee)

### October 11

#### **Session II – Debris-flow monitoring and warning** (Chairman: C. Graf)

O. Navratil (8.30 – 9.15): Debris-flow monitoring in France

B. McArdell (9:15 – 10:00): Debris-flow monitoring in Switzerland

M. Hürlimann (10:00 – 10:45): Debris-flow monitoring in the Catalan Pyrenees. Lessons learnt applying wired and wireless sensor networks

*Coffee break* (10:45 – 11:15)

J. Hübl (11:15 – 12:00): Debris-flow monitoring in Austria

L. Marchi (12:00 – 12:45): Debris-flow monitoring in Italy

*Lunch* (12:45 – 14:00)

J. Coe (14:00 – 14:45): Monitoring the sediment cascade at Chalk Cliffs, Colorado, USA: from headwater rockfall to debris-fan aggradation

H. Suwa (14:45 – 15:30): Debris-flow monitoring in Japan

H.Y. Yin (15:30 – 16:15): Debris-flow monitoring and warning in Taiwan

**Coffee break and POSTER SESSION II** (16:15 – 17:15)

**Round table on future developments for debris-flow monitoring and warning** (17:15 – 18:15) (Moderator: M. Arattano)

### October 12

**Field trip** (led by P. Macconi) to the debris-flow monitoring station of the Gadria basin. The basin is near the village of Laas/Lasa, in the Vinschgau/Venosta valley, about 1 hour drive from Bozen/Bolzano. **IMPORTANT:** packed lunch will be not provided by the organization. It has to be arranged by each participant on the previous days (stops to buy food on the way to the Gadria will be not possible due to time constraints).

After a common overview of the monitoring system, there will be the possibility to either visit the debris-flow triggering areas in the upper part of the basin (hiking shoes needed), or to participate to a technical discussion regarding debris-flow and bedload monitoring (moderation by C. Scheidl).

The field trip will finish at around 4.30 pm at the Gadria. Participants having their own car could drive up to the station (unpaved road but in good conditions for normal vehicles) if they desire to leave directly from the Gadria for their return home.

#### **REGISTRATION**

The cost of registration is 90€ and includes the organization of the workshop, of the field trip, and the social dinner. Coffee breaks and buffets will be offered by the Rip. Opere Idrauliche, Aut. Prov. of Bolzano.

The maximum number of participants is 130 to keep the size of the room ideal for a workshop with active discussion. Priority will be given to people presenting posters, but attendees only are also welcome provided seats will be available.

For registering please send an email to [eventsfast@unibz.it](mailto:eventsfast@unibz.it) by July 20<sup>th</sup>, 2012. The webpage for fee payment (by credit card) will be then communicated to admitted participants.

When you finalize the registration in the payment webpage please indicate whether you intend to take part at the field trip. Please also indicate in the comments if you are planning to join the field trip using your own car.

#### **TRAVEL AND LODGING**

Information on how to reach Bozen/Bolzano can be found at: [www.unibz.it/en/sciencetechnology/welcome/reachus/default.html](http://www.unibz.it/en/sciencetechnology/welcome/reachus/default.html). A list of hotels with rooms at reduced price will be made available for the registered participants.