

# CONFERENCE PROGRAMME

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4th International Conference on Monitoring,  
Simulation, Prevention and Remediation of  
Dense and Debris Flow



## Debris Flow 2012

### ***NOTES TO CHAIRMEN AND PRESENTERS***

- *Chairmen must be in their respective rooms 10 minutes before the start of their session to meet with the presenting authors.*
- *Authors must meet with the Chairman of their session 10 minutes before the start of the session.*
- *Authors must keep strictly to the time allocated for their presentation to ensure the smooth running of the programme.*
- *This programme is subject to last-minute alterations, please refer to the conference noticeboard for the most up-to-date information.*

**29 - 31 May 2012**  
**Dubrovnik, Croatia**

**Organised by:**  
Wessex Institute of Technology, UK  
University of Milano, Italy

**Sponsored by:**  
WIT Transactions on Engineering Sciences  
WIT Transactions on Ecology and the Environment

**Supported by:**  
International Journal of Safety and Security Engineering

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Debris Flow 2012  
29 - 31 May, Dubrovnik



Tuesday 29 May 2012

Page number  
in proceedings

09.00 Opening address

## Session 1

Chairman: C. Brebbia

- 09.20 **Invited:**  
Two methods for measuring internal velocity of debris flows in the laboratory  
*F. Wei, H Yang, K. Hu, Y. Hong & X. Li* DF61
- 10.00 A review on acoustic monitoring of debris flow  
*J. Hubl, A Kogelnig, E. Surinach, I Vilajosana & B W McArdell* DF 73
- 10.25 Risk Assessment method of debris flow occurrence utilizing digital terrain model  
*O. Nunokawa, T. Sugiyama, N. Ota, K. Okada & T. Fujii* DF 85

### **REFRESHMENT BREAK**

## Session 2

Chairman: F. Wei

- 11.20 Protection against debris flows with 13 flexible barriers in the Milibach River (Canton Berne, Switzerland) and first event analysis  
*C. Wendeler & B. Vjekoslav* DF 187
- 11.45 Examination regarding the design method of a protective barrier for a debris flow  
*R. Sawada* DF 195
- 12.10 VIDEO "Rio Cordon: the '94 event" presented by F. Bettella

### **LUNCH BREAK**

**Tuesday 29 May 2012**

**Session 3**

**Chairman: S. Mambretti**

15.00 **Invited:**  
Modelling of soil erosion and sediment transport under different  
land management options in a southern-Italy watershed  
*I. Abuiziah, T. Bisantino, F. Gentile & G. Trisorio Liuzzi* DF 113

15.40 **Invited:**  
Bedload transport as an indicator of present transformation of  
arctic fluvial systems  
*W. Kociuba, G. Kanicki, K. Siwek & A. Gluza* DF 125

**REFRESHMENT BREAK**

**Session 4**

**Chairman: F. Gentile**

16.50 **Invited:**  
Empirical methods for the estimation of debris flow deposition areas  
*C. Achille, D. De Wrachien, F. Fassi & S. Mambretti* DF 3

17.30 Field investigation and finite element modelling of a progressive debris  
slide in the Indian Himalayas  
*D.P. Kanungo, A. Pain, S. Sarker, S.Sharma, S.K. Jain & Z. Ahmad* DF 15

17.55 Debris-flow run out distance: Laboratory experiments on the role  
Bagnold, savage and friction numbers  
*F. Bettella, T. Bisantino, V. D'Agostino & F. Gentile* DF 27

**END OF DAY 1**

Wednesday 30 May 2012

**Session 5**

**Chairman: C. Brebbia**

- 09.00 **Keynote address by D. Proverbs**  
Reducing the impact of flooding by better understanding of vulnerability and responses in the built environment Oral
- 09.40 Cooperation between NGOs and State in the matter of flood risk management in the Czech Republic  
*J. Dostal* FR 15
- 10.05 Geophysical study and structural modelling of a mass movement in upper Austria  
*M.G. Schreilechner, C.G. Eichkitz & J. Amtmann* DF 37
- 10.30 Estimation of spatial soil distribution changed by debris flow using the topography restoration method  
*H J Youn, K H Kim, C S Woo, C W Lee, K S Won* Oral

**REFRESHMENT BREAK**

**Session 6**

**Chairman: W. Kociuba**

- 11.25 Riparian forest structure, vegetation cover, floods and sediment transport in the Piave River  
*L. Picco, L. Mao, E. Rigon, J. Moretto, D. Ravazzoo, F. Delai & M.A. Lenzi* DF 137
- 11.50 Assessing short term erosion-deposition processes of the Brenta River using LiDAR surveys  
*J. Moretto, F. Delai, E. Rigon, L. Picco, L. Mao & M.A. Lenzi* DF 149
- 12.15 Medium term fluvial island evolution in relation with floods events in the Piava River  
*L. Picco, L. Mao, E. Rigon, J. Moretto, D. Ravazzolo, F. Delai & M.A. Lenzi* DF 161
- 12.40 **Keynote address by R. Bloch:**  
Cities and Flooding: Integrated Urban Flood Risk Management for the 21st Century Oral

**Guided city tour around Dubrovnik followed by Conference Dinner  
END OF DAY 2**

Thursday 31 May 2012

**Session 7**

**Chairman: D. Proverbs**

- 09.00 **Invited:**  
Flood-risk assessment of the dense downtown in Fukuoka City  
*H. Hashimoto & Y. Nonaka* FR 41
- 09.40 Damage and loss prediction model considering inundation level,  
flow velocity and vulnerability of building types  
*H. Maiwald & J. Schwarz* FR 53
- 10.05 On-line early warnign system for evacuation of socially vulnerable  
population during flooding  
D. Mioc, K.K. Moreri, J.N. Nkhwanana, F. Anton, B. Nikerson,  
E. McGillivray, A. Morton & P. Tang FR 67

**REFRESHMENT BREAK**

**Session 8**

**Chairman: C. Brebbia**

- 11.00 **Invited:**  
Ontology for flood management: A proposal  
*D. De Wrachien, J. Garrido, S. Mambretti & I. Requena* DF 3
- 11.40 Debris Flow rainfall thresholds in Val Canale Valley: First steps into  
their redefinition  
C. Calligari, L. Zini & F. Cucchi FR 49
- 12.00 Structural strategies and measures reducing flood action on architectural  
heritage  
M Drdacky & Z Slizkova Oral
- 12.25 Coastal risk communication complementary components in theory  
and practice: information and education, participation and behavior  
*R. Ernsteins, S. Muceniece, M. Lubuze, S. Abelniece, A. Sturma  
& I Zilniece* Oral

**END OF DEBRIS FLOW 2012**

We hope you have enjoyed the conference and look forward to seeing you at the next meeting in the series, have a safe and pleasant journey home.