

WLF4 Detailed Programme

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Monday, May 29, 2017

- BOR and ICL-GPC meeting at University of Ljubljana main building (Kongresni trg 12, Ljubljana) (10:00-17:00) (at invitation only)
- Forum registration at Forum venue (Cankarjev dom, Prešernova cesta 10) (16:00-19:00)

Tuesday, May 30, 2017

09:00-09:45

Room Linhart Hall: Opening Addresses/Speeches

- *Yueping Yin*, ICL President
- *Qunli Han*, UNESCO DG Representative
- *JH.E. Keiji Fukuda*, Ambassador of Japan in Slovenia
- *Matjaž Mikoš*, WLF4 Forum Chair

09:45-12:00

Room Linhart Hall: WLF4 Forum Lectures

Chair: *Peter Bobrowsky*, Geological Survey of Canada, ICL President-elect

Sálvano Briceño, Senior advisor of ICL, Former Director of UNISDR (2001-2011)

- Rupestrian world heritage sites: Instability investigation and sustainable mitigation by *Claudio Margottini* (Coordinator of the ICL successful thematic network, Italy)
- Rock fall occurrence and fragmentation by *Jordi Corominas* (2016 Varnes Medal Recipient, Spain)
- Glacial lake outburst floods by *Vít Vilimek* (Editor of 2016 thematic issue of Landslides, Czech Republic)
- Landslides and Society by *Irasema Alcántara-Ayala* (Convener of Session 1-3 Landslides and Society, Mexico)

Discussion for Understanding of Landslide Disaster Risk

12:00-13:30

Lunch

13:30-15:45

Room Linhart Hall: High-Level Panel Discussion

Video message from *Robert Glasser*, Special Representative of the Secretary-General for Disaster Risk Reduction and Head of The United Nations Office for Disaster Risk Reduction (UNISDR)

Chair: *Jakob Rhyner*, Vice rector of UNU

Moderator: *Kaoru Takara*, ICL Treasurer, Director of Disaster Prevention Research Institute, Kyoto University

Panelists:

Signatory organizations:

Kyoji Sassa, Executive Director of ICL: proposing and host organization

Qunli Han, Chair of IPL-Global Promotion Committee, Director of UNESCO Ecological and Earth Sciences

Andrey Kushlin, Deputy Director of the FAO Forestry Department

Alasdair Hainsworth, Chief of the WMO DRR Services Division

Irasema Alcantara-Ayala, on behalf of ICSU President, *Gordon McBean*

Roland Oberhänsli, Former President of IUGS

Alik Ismail-Zadeh, Secretary General of IUGG

Satoru Nishikawa, Former director, Disaster Preparedness and International Cooperation, Cabinet office of Japan

Paola Pagliara, Manager, National Centre for Forecasting and Surveillance for Hydrologic and Hydraulic Risk, Italian Civil Protection Department (DPC)

Walter Ammann, President of Global Risk Forum, Davos

Potential additional signatory organizations:

Miloš Bizjak, State Secretary, Ministry of Defence, Republic of Slovenia

Nguyen Linh Ngoc, Deputy Minister, Ministry of Natural Resources and Environment, Vietnam

Rudi Phadmanto, Deputy Minister, the Indonesian National Agency for Disaster Management

Shuaib Lwasa, Chair of the IRDR Science Committee

Luca Demicheli, Secretary General of EuroGeoSurveys

Experts/Advisers:

Sálvano Briceño, Senior advisor of ICL, Former Director of UNISDR (2001-2011)

Badaoui Rouhban, IPL Advisor, Former Director, Unit for Natural Disasters, UNESCO

15:45-16:00

Break

16:00-17:30

Room Linhart Hall: Recognition of ICL and IPL Activities

Chairs: *Qunli Han*, Chair of IPL-GPC, UNESCO; *Yueping Yin*, President of ICL

- Explanation of World Centers of Excellence (WCoEs), IPL Award for Success by IPL-GPC
- Recognition of WCoEs 2017-2020
- Certificates are awarded from by *Qunli Han*, Chair of IPL-GPC, UNESCO

Brief remarks by the head of each Centre and leader.

- Recognition of 2014-2017 IPL Award for Success (2 awards)
- Certificates are awarded by *Qunli Han*, Chair of IPL-GPC, UNESCO

Brief remarks by each of the recipients.

- Explanation of Varnes Medal and Best paper Award by BOR/ICL.
- Bestow the 2015 Varnes Medal to the recipient from ICL President.
- Bestow the 2016 Varnes Medal to the recipient from ICL President.
- Bestow the 2017 Varnes Medal to the recipient from ICL President.

A short talk by each recipient.

- Bestow the 2014 Best Paper Award to the recipient from ICL President.
- Bestow the 2015 Best paper Award to the recipient from ICL President.
- Bestow the 2016 Best paper Award to the recipient from ICL President.

A short talk by each recipient.

- Bestow the 2016 best reporter Award for the World Report on Landslides from ICL President.

18:00-20:00

Welcome Reception in Grand reception hall of Cankarjev dom

Welcome Address by Her Excellency Ms. *Irena Majcen*, the Minister of the Environment and Spatial Planning of the Republic of Slovenia

Wednesday, May 31, 2017

8:30-10:00

Session 1.1, Room Štih Hall, Convener(s): Qunli Han and Irasema Alcántara-Ayala

- 8:45-9:00 The Sendai Partnerships 2015-2025: Background and Content
Kyoji Sassa
- 9:00-9:15 International Consortium on Landslides (ICL)
Kyoji Sassa, Yueping Yin and Paolo Canuti
- 9:15-9:30 United Nations Educational, Scientific and Cultural Organization (UNESCO)
UNESCO's contribution to the implementation of UNISDR's global initiative and ICL
Giuseppe Arduino, Rouhban Badaoui, Soichiro Yasukawa, Alexandros Makarigakis, Irina Pavlo Shirai and Qunli Han
- 9:30-9:45 United Nations University (UNU)
United Nations University - Research and Policy Support for Environmental Risk Reduction
Jakob Rhyner
- 9:45-10:00 World Meteorological Organization (WMO)
Concerted International Efforts for Advancing Multi-Hazard Early Warning Systems
Jochen Luther, Alasdair Hainsworth, Xu Tang, John Harding, Jair Torres and Margherita Fanchiotti

Session 2.1, Room M1, Convener(s): Mateja Jemec Auflič and Binod Tiwari

- 8:30-8:45 Rock Avalanche Sedimentology—Recent Progress
Anja Dufresne
- 8:45-9:00 Determination of the Landslide Slip Surface Using Electrical Resistivity Tomography (ERT) Technique
A. Asriza, Supriyanto, T.H.W. Kristyanto, T.L. Indra, R. Syahputra and A.S. Tempessy
- 9:00-9:15 Rock Fall Characterization in Climbing Spots: The Case Study of the “Napoleonica” Tourist Route (Trieste, NE Italy)
Chiara Boccali, Sara Biolchi, Enrico Zavagno and Luca Zini
- 9:15-9:30 Combining Terrestrial and Waterborne Geophysical Surveys to Investigate the Internal Composition and Structure of a Very Slow-Moving Landslide Near Ashcroft, British Columbia, Canada
David Huntley, Peter Bobrowsky and Melvyn Best
- 9:30-9:45 Using Lidar DEM to Map Landslides: Škofjeloško Cerkljansko Hills, Slovenia
Erazem Dolžan and Mateja Jemec Auflič
- 9:45-10:00 Mapping Rapid-Moving Landslide with Satellite SAR Images: The Case of Montescaglioso (South Italy)
Federico Raspini, Andrea Ciampalini, Sara Del Conte, Luca Lombardi, Massimiliano Nocentini, Giovanni Gigli, Alessandro Ferretti and Nicola Casagli

Session 2.2, Room M3/4, Convener(s): Beena Ajmera and Ubydul Haque

- 8:30-8:45 *Increasing Fatal Landslides in Europe*
Ubydul Haque, Paula F. da Silva, Juneseok Lee, Susanne Benz, Mateja Jemec Auflič and Philipp

Blum

- 8:45-9:15 Landslides Triggered by Earthquakes from 1920 to 2015 (KEYNOTE LECTURE)
Binod Tiwari
- 9:15-9:30 The Application of ERT for the Geometrical Analysis of the Sebrango Landslide, (Cantabrian Range, Spain)
Alberto González-Díez, Mario Zarroca, Rogelio Linares, Viola Bruschi, Jaime Bonachea, José Ramón Díaz de Terán, Juan Remondo, Gema Fernández, Patricio Martínez, Javier Sánchez and S. Martin
- 9:30-9:45 Landslide Risk Analysis and Assessment for Urbanized Territories
Valentina Svalova
- 9:45-10:00 Slope Stability Hazard Assessment Using 3D Remote Sensing and Field Sketching Techniques Along Sohag-Red Sea-Cairo Highway, Egypt
Bosy A. El-Haddad, Ahmed M. Youssef, Abdel-Hamid El-Shater and Mohamed H. El-Khashab

Session 3.1, Room E1, Convener(s): Stefano Morelli and Timotej Verbovšek

- 8:30-8:45 Multisensor Landslide Monitoring as a Challenge for Early Warning: From Process Based to Statistic Based Approaches
Francesca Bozzano, Carlo Esposito, Andrea Fantini, Matteo Fiorucci, Salvatore Martino, Paolo Mazzanti, Alberto Prestininzi, Stefano Rivellino, Alfredo Rocca, and Gabriele Scarascia Mugnozza
- 8:45-9:00 Wireless Sensor Networks for Early Warning of Landslides: Experiences from a Decade Long Deployment
Maneesha Vinodini Ramesh, Divya Pullarkatt, T.H. Geethu, and P. Venkat Rangan
- 9:00-9:15 Design and Validation of Wireless Communication Architecture for Long Term Monitoring of Landslides
Sangeeth Kumar, P. Venkat Rangan, and Maneesha Vinodini Ramesh
- 9:15-9:30 Scalable, Secure, Fail Safe, and High Performance Architecture for Storage, Analysis, and Alerts in a Multi-site Landslide Monitoring System
Ramesh Guntha, Sangeeth Kumar, and Balaji Hariharan
- 9:30-9:45 A Self-adaptive Data Acquisition Technique and Its Application in Landslide Monitoring
Xing Zhu, Qiang Xu, Xing Qi, and Hanxiang Liu
- 9:45-10:00 Definition of a Fully Functional EWS Based on Rainfall Thresholds, the Case of Study of Tuscany Region
Ascanio Rosi, Samuele Segoni, Alessandro Battistini, Guglielmo Rossi, Filippo Catani, and Nicola Casagli

Session 4.1, Room E2, Convener(s): Francesca Bozzano and Wakai Akihiko

- 8:30-8:45 The Role of Simultaneous Impact of Exogenous and Endogenous Forces in Landslide Process Activation
Rustam Niyazov, and Bakhtiar Nurtaev
- 8:45-9:00 Local Terrain Relief: An Important Factor Influencing the Generation of Large Earthquake-Triggered Landslides
Xiaoli Chen, Hongliu Ran, Qing Zhou, and Bengang Zhou

- 9:00-9:15 Evaluation of Ground Shaking Characteristics in Residential Land Based on T/R Frequency Ratio of Microtremor
Yoshiya Hata, Fumihiro Minato, Takaaki Ikeda, Masayuki Yamada, Masaki Yamauchi, and Yutaro Okawa
- 9:15-9:30 Critical Displacement of Earthquake-Triggered Catastrophic Landslides
Che-Ming Yang, Chang-Hsuan Hsu, and Jia-Jyun Dong
- 9:30-9:45 Numerical Models of Unstable Slopes in Seismic Areas—Based on 3D Geomodels
Hans-Balder Havenith, Anne-Sophie Mreyen, Almaz Torgoev, and Mihai Micu
- 9:45-10:00 A Characteristic-Period Based Approach for Evaluating Earthquake-Induced Displacements of the Large Büyükcçekmece Landslide (Turkey)
Salvatore Martino, Luca Lenti, and Celine Bourdeau

Session 5.1, Room E3, Convener(s): Mike Winter and Janusz Wasowski

- 8:30-8:45 Landslide Risk Assessment for the Built Environment in Sub-Saharan Africa
Peter Redshaw, Tom Dijkstra, Matthew Free, Colm Jordan, Anna Morley and Stuart Fraser
- 8:45-9:00 Rainfall-Induced Debris Flow Risk Reduction: A Strategic Approach
Mike G. Winter
- 9:00-9:15 RUPOK: An Online Landslide Risk Tool for Road Networks
Michal Bíl, Richard Andrášik, Jan Kubeček, Zuzana Křivánková and Rostislav Vodák
- 9:15-9:30 The Impact (Blight) on House Value Caused by Urban Landslides in England and Wales
William Disberry, Andy Gibson, Rob Inkpen, Malcolm Whitworth, Claire Dashwood and Mike Winter
- 9:30-9:45 Landslide Monitoring and Counteraction Technologies in Polish Lignite Opencast Mines
Zbigniew Bednarczyk
- 9:45-10:00 New Perspectives on Landslide Assessment for Spatial Planning in Austria
Arben Kociu, Leonhard Schwarz, Karl Hagen and Florian Rudolf-Miklau

10:30-12:00

Session 1.1, Room Štíh Hall, Convener(s): Jakob Rhyner and Alik Ismail-Zadeh

- 10:30-10:45 International Council for Science (ICSU)
On the future challenges for the integration of science into international policy development for Landslide Disaster Risk Reduction
Irasema Alcántara-Ayala, Virginia Murray, Philip Daniels and Gordon McBean
- 10:45-11:00 International Union of Geological Sciences (IUGS)
Sendai – foreseeable but unpredictable geologic events – IUGS reactions
Roland Oberhänsli, Yujiro Ogawa and Marko Komac
- 11:00-11:15 International Union of Geodesy and Geophysics (IUGG)
Integrating Natural Hazard Science with Disaster Risk Reduction Policy
Alik Ismail-Zadeh
- 11:15-11:30 Cabinet Office, Government of Japan (CAO)
Sharing the Japanese Experience for International Cooperation-Mainstreaming Disaster

Reduction for Sustainable Development

Satoru Nishikawa on behalf of Setsuko Saya

11:30-11:45 Disaster Prevention Research Institute (DPRI), Kyoto University

Kaoru Takara

11:45-12:00 National Civil Protection Department, Italian Presidency of the Council of Ministers, Government of Italy

Understanding and Reducing Landslide Disaster Risk: Challenges and Opportunities for Italian Civil Protection

Pagliara Paola, Onori Roberta and Ambra Sorrenti

Session 2.1, Room M1, Convener(s): Mateja Jemec Aulič and Binod Tiwari

10:30-10:45 Multi-sensor a Priori PSI Visibility Map for Nationwide Landslide Detection in Austria

Filippo Vecchiotti, Dario Peduto and Tazio Strozzi

10:45-11:00 The Differential Slow Moving Dynamic of a Complex Landslide: Multi-sensor Monitoring

Gerardo Herrera, Juan Carlos García López-Davalillo, Jose Antonio Fernández-Merodo, Marta Béjar-Pizarro, Paolo Allasia, Piernicola Lollino, Giorgio Lollino, Fausto Guzzetti, Maria Inmaculada Álvarez-Fernández, Andrea Manconi, Javier Duro, Ciscu Sánchez and Rubén Iglesias

11:00-11:15 Erosion Processes and Mass Movements in Sinkholes Assessed by Terrestrial Structure from Motion Photogrammetry

Helene Petschko, Jason Goetz, Max Böttner, Maximilian Firla and Sven Schmidt

11:15-11:30 Detection and Monitoring of Slow Landslides Using Sentinel-1 Multi-temporal Interferometry Products

Janusz Wasowski, Fabio Bovenga, Raffaele Nutricato, Davide Oscar Nitti and Maria Teresa Chiaradia

11:30-11:45 Method of Estimating Slope Movement Area Using DInSAR Analysis

Joko Kamiyama, Masaru Kunitomo, Masayuki Sakagami, Ikushi Hirata, Kazuo Yoshikawa and Daisuke Nishikawa

11:45-12:00 Studying a Landslide in Its Paroxysmal Phase; the Reactivation of the Sebrango Landslide (Spain), June 2013

A. González-Díez, V.M. Bruschi, J. Sánchez, J. Bonachea, J.R. Díaz de Terán, J. Remondo, G. Fernández, P. Martínez, M. Zarroca, R. Linares, V. Rodríguez, E. San Millán, A. Cendrero, S. Hoyos and S. Martin

Session 2.2, Room M3/4, Convener(s): Beena Ajmera and Fawu Wang

10:30-10:45 Integrated Geological-Geophysical Models of Unstable Slopes in Seismic Areas

Mreyen Anne-Sophie, Micu Mihai, Onaca Alexandru, Cerfontaine Philippe and Havenith Hans-Balder

10:45-11:00 Experimental Study of the Premonitory Factors for Internal Erosion and Piping Failure of Landslide Dams

Austin Chukwueloka-Udechukwu Okeke, Fawu Wang, Yohei Kuwada and Yasuhiro Mitani

11:00-11:15 Effect of Wetting-Drying Cycles on Shear Strength of the Clayey Soils in the Three Gorges Area

Baoping Wen, Hui Li and Boxun Ji

11:15-11:30 Pechgraben Landslide: Evaluation of Geophysical/Geotechnical Methods in Terms of

Remediation Support

David Ottowitz, Birgit Jochum, Stefan Pfeiler, Stefanie Gruber, Robert Supper and Jung-Ho Kim

11:30-11:45 Geological Assessment and Physical Model of Complex Landslides: Integration of Different Techniques

Davide Brambilla, Vladislav Ivov Ivanov, Laura Longoni, Diego Arosio and Monica Papini

11:45-12:00 Groundwater Flow Characterization Using Different Hydraulic Methods in Large and Deep Earth-Slide Rich in Clay

Francesco Ronchetti, Leonardo Piccinini, Manuela Deiana, Paolo Fabbri and Alessandro Corsini

Session 3.1, Room E1, Convener(s): Federico Raspini and Timotej Verbovšek

10:30-10:45 Prediction of Displacement Rates at an Active Landslide Using Joint Inversion of Multiple Time Series

Clara Lévy, Scarlett Gendrey, Séverine Bernardie, Marie-Aurélié Chanut, Aurélien Vallet, Laurent Dubois, and Jean-Paul Duranthon

10:45-11:00 Time-Prediction Method of the Onset of a Rainfall-Induced Landslide Based on the Monitoring of Shear Strain and Pore Pressure

Katsuo Sasahara

11:00-11:15 Improvement of Fukuzono's Model for Time Prediction of an Onset of a Rainfall-Induced Landslide

Naoki Iwata, Katsuo Sasahara, and Satoshi Watanabe

11:15-11:30 A Full-Scale Model Test for Predicting Collapse Time Using Displacement of Slope Surface During Slope Cutting Work

Nobutaka Hiraoka, Naotaka Kikkawa, Katsuo Sasahara, Kazuya Itoh, and Satoshi Tamate

11:30-11:45 Classification of Microseismic Activity in an Unstable Rock Cliff

Diego Arosio, Mauro Boccolari, Laura Longoni, Monica Papini, and Luigi Zanzi

11:45-12:00 Prediction of the Process of a Slowly Moving Loess Landslide by Electrical Resistivity Tomography

Sándor Szalai, Ernő Prácser, Kitti Szokoli, and ádám Tóth

Session 4.1, Room E2, Convener(s): Francesca Bozzano and Wakai Akihiko

10:30-10:45 Finite Element Simulation for Seismic Ground Response in Mountainous Areas in Nepal

Akihiko Wakai, Daisuke Higaki, Hiroshi Yagi, Go Sato, and Masahiro Chigira

10:45-11:00 Geophysical Investigation of the Landslide-Prone Slope Downstream from the Rogun Dam Construction Site (Tajikistan)

Torgoev Isakbek, Havenith Hans-Balder, Torgoev Almaz, Cerfontaine Philippe, and Ischuk Anatoly

11:00-11:15 Seismic-Induced Landslides: Lessons Learned from Recent Earthquakes in Spain

José Delgado, Martín J. Rodríguez-Peces, Francisco J. García-Tortosa, Jesús Garrido, Iván Martín, and Pedro Alfaro

11:15-11:30 Landslides Triggered by the Ms6.5 Ludian, China Earthquake of August 3, 2014

Kai-heng Hu, Xing-zhang Chen, Yong-gang Ge, Xing-yuan Jiang, and Yang-chun Wang

11:30-11:45 Earthquake-Induced Rockfalls Caused by 1998 Mw5.6 Earthquake in Krn Mountains (NW

Slovenia) and ESI 2007 Intensity Scale

Andrej Gosar

- 11:45-12:00 True 3D Kinematic Analysis for Slope Instability Assessment in the Siq of Petra (Jordan), from High Resolution TLS
Claudio Margottini, Daniele Spizzichino, Giovanni Gigli, Heinz Ruther, and Nicola Casagli

Session 5.1, Room E3, Convener(s): Mike Winter and Tom Dijkstra

- 10:30-10:45 Characterisation of Recent Debris Flow Activity at the Rest and Be Thankful, Scotland
Bradley Sparkes, Stuart Dunning, Michael Lim and Mike G. Winter
- 10:45-11:00 The Use of Morpho-Structural Domains for the Characterization of Deep-Seated Gravitational Slope Deformations in Valle d'Aosta
Daniele Giordan, Martina Cignetti and Davide Bertolo
- 11:00-11:15 Gediminas's Castle Hill (in Vilnius) Case: Slopes Failure Through Historical Times Until Present
Vidas Milkulėnas, Vytautas Minkevičius and Jonas Satkūnas
- 11:15-11:30 Design Criteria and Risk Management of New Construction in Landslide Areas: The Case of the Djendjen–El Eulma Highway (Algeria)
Mirko Vendramini, Attilio Eusebio, Fabrizio Peruzzo, Patrizia Vitale, Alessandro Fassone and Francesca Guazzotti
- 11:30-11:45 Numerical Analysis of a Potential Debris Flow Event on the Irazú Volcano, Costa Rica
Marina Pirulli and Rolando Mora
- 11:45-12:00 Landslides Impact Analysis Along the National Road 73C of Romania
Andreea Andra-Topârceanu, Mihai Maftciu, Razvan Gheorghe, Mircea Andra-Topârceanu and Verga Mihaela

12:00-13:30

Lunch and Open Session I (12:30-13:30): Resilience of communities exposed to landslide risk (COST Initiative) (Room E1)

13:30-15:00

Round Table Discussion to promote the Sendai Partnerships

Room Club CD (13:30-15:30)

Objectives: The follow-up of the High-Level Panel Discussion and the implementation planning.

All participants will examine an action plan/road map/Addendum to the Partnerships to implement and further develop the Sendai Partnerships effectively contributing to SENDAI Framework for Disaster Risk Reduction. In the end of session, signing to the Sendai partnerships by new members may be organized.

Chairs: *Qunli Han, Kaoru Takara and Peter Bobrowsky*

Signatory organizations of the Sendai Partnerships and the additional Signatory organizations are invited to take part in this Round Table and discuss the promotion of SP 2015-2025.

Additional signatory organizations will be:

Branko Dervodel, Deputy Director General, Administration of the Republic of Slovenia for Civil Protection and Disaster Relief

Darko But, Director General of URSZR

Nguyen Linh Ngoc, Deputy Minister, Ministry of Natural Resources and Environment, Vietnam

Rudi Phadmanto, Deputy Minister, the Indonesian National Agency for Disaster Management

Shuaib Lwasa, Chair of the IRDR Science Committee

Luca Demicheli, Secretary General of EuroGeoSurveys

Session 2.1, Room M1, Convener(s): Limin Zhang and Tina Peternel

- 13:30-13:45 Landslide Diversity in the Rwenzori Mountains (Uganda)
Liesbet Jacobs, Olivier Dewitte, Clovis Kabaseke, François Kervyn, Jan Maes, Kewan Mertens, Adriano Nobile, John Sekajugo, Jean Poesen, Denis Samyn and Matthieu Kervyn
- 13:45-14:00 Multitemporal UAV Survey for Mass Movement Detection and Monitoring
Luca Tanteri, Guglielmo Rossi, Veronica Tofani, Pietro Vannocci, Sandro Moretti and Nicola Casagli
- 14:00-14:15 Landslide Inventory Map of Albania
Olgert Jaupaj, Mentor Lamaj, Hasan Kulici, Mimoza Jusufati, Edlira Plaku and Ilmi Gjeta
- 14:15-14:30 Comparing Landslide Mapping from DTM Satellite Derived Data and Field Based Studies of Loess Sediments in Western China
Philip Leopold, Wang Tao, Roland Perko, Gerhard Heiss, Martin Jung, Armin Oblin and Yongshuang Zhang
- 14:30-14:45 Multi-temporal Landslide Evaluation by Using UAV: Some Insights on Disaster Risk in Teziutlán, Puebla México
Ricardo J. Garnica-Peña and Irasema Alcántara-Ayala
- 14:45-15:00 Discussion

Session 2.2, Room M3/4, Convener(s): Beena Ajmera and Gen Furuya

- 13:30-13:45 Soil Characterization for Landslide Forecasting Models: A Case Study in the Northern Apennines (Central Italy)
Veronica Tofani, Gabriele Bicocchi, Guglielmo Rossi, Michele D'Ambrosio, Filippo Catani and Nicola Casagli
- 13:45-14:00 Groundwater Flow Behavior at Landslide Area in Crystalline Schist Mountains
Gen Furuya, Akira Suemine, Jun'ya Honda, Gonghui Wang and Mamoru Inoue
- 14:00-14:15 A Case Study of Deep-Seated Dukati Landslide, Vlore, Albania
Hasan Kulici, Mentor Lamaj, Zenel Hysa and Olgert Jaupaj
- 14:15-14:30 Kinematic Analysis of a Rock Slope at Strecno Castle (Slovakia) Based on the Processing of the Point Cloud Generated by UAV Photogrammetry
Vladimir Greif and Jan Vlcko
- 14:30-14:45 Influences of Rheometer Size and the Grain Size on Rheological Parameters of Debris Flow
Matej Maček, Jasna Smolar and Ana Petkovšek
- 14:45-15:00 Discussion

Session 3.1, Room E1, Convener(s): Željko Arbanas and Dario Peduto

- 13:30-13:45 The Pilot Construction of a Sensor-Based Landslide Early Warning System for Mitigating

Human Damages, Republic of Korea

Dongyeob Kim, Changwoo Lee, Choongshik Woo, Junpyo Seo, Minjeong Kang, and Hyunjung Kwon

13:45-14:00 An Early Warning System of Unstable Slopes by Multi-point MEMS Tilting Sensors and Water Contents

Wang Lin, Nishie Shunsaku, Uchimura Taro, Towhata Ikuo, Su Ling, and Tao Shangning

14:00-14:15 Early Warning of Long Channel and Post-controlled Debris-Flow Gully in Southwest China

Jian Huang

14:15-14:30 How Many Rainfall-Induced Landslides Are Detectable by a Regional Seismic Monitoring Network?

Andrea Manconi, Stefano Luigi Gariano, Velio Coviello, and Fausto Guzzetti

14:30-14:45 ANN Based Rainfall Prediction—A Tool for Developing a Landslide Early Warning System

S. Renuga Devi, P. Arulmozhivarman, and C. Venkatesh

14:45-15:00 Regional Landslide Early Warning Systems: Comparison of Warning Strategies by Means of a Case Study

Gaetano Pecoraro, Luca Piciullo, and Michele Calvello

Session 4.2, Room E2, Convener(s): Filippo Catani and Young-Suk Song

13:30-13:45 Analysis of the Predisposing Factors for Different Landslide Types Using the Generalized Additive Model

Carlotta Bartelletti, Roberto Giannecchini, Giacomo D'Amato Avanzi, Yuri Galanti, Michele Barsanti, Maria Giuseppina Persichillo, Massimiliano Bordoni, Claudia Meisina, Andrea Cevasco, and Jorge Pedro Galve Arnedo

13:45-14:00 Large-Scale Synoptic Weather Types and Precipitation Responsible for Landslides in Southern Norway

Graziella Devoli, Lisa Jørandli, Kolbjørn Engeland, and Lena M. Tallaksen

14:00-14:15 Definition of Rainfall Thresholds Triggering Landslides in Slovenia

Ascanio Rosi, Tina Peternel, Mateja Jemec-Auflič, Marko Komac, and Nicola Casagli

14:15-14:30 Analysis of the Impact of Precipitation on Landslide Activity Within the Erosive Slopes of River Valleys of the South of Ukraine

Galina Pedan, Olena Dragomyretska, and Oleksandr Dragomyretskyy

14:30-14:45 Drainage and Shear Velocity Dependent Shear Characteristics of Abandoned Imgi Mine Waste Materials in Ring Shear Tests

Sueng-Won Jeong, Sung-Sik Park, Hiroshi Fukuoka, Sang-Woo Ji, and Choon-Oh Lee

14:45-15:00 Landslide Monitoring and Management Challenge in Remote Papua New Guinea

Norbert Baczynski, and Neil Bar

Session 5.1, Room E3, Convener(s): Mike Winter and Janusz Wasowski

13:30-13:45 Evaluation of Building Damages Induced by Landslides in Volterra Area (Italy) Through Remote Sensing Techniques

Silvia Bianchini, Teresa Nolesini, Matteo Del Soldato and Nicola Casagli

13:45-14:00 The Resilience of Some Villages 36 Years After the Irpinia-Basilicata (Southern Italy) 1980 Earthquake

Sabina Porfido, Giuliana Alessio, Germana Gaudiosi, Rosa Nappi and Efsio Spiga

- 14:00-14:15 Urgent Need for Application of Integrated Landslide Risk Management Strategies for the Polog Region in R. of Macedonia
Igor Peshevski, Tina Peternel and Milorad Jovanovski
- 14:15-14:30 Comprehensive Overview of Historical and Actual Slope Movements in the Medieval Inhabited Citadel of Sighisoara
Andreea Andra-Topârceanu, Mihai Maftciu, Mircea Andra-Topârceanu and Mihaela Verga
- 14:30-14:45 Analyze the Occurrence of Rainfall-Induced Landslides in a Participatory Way for Mid-Hills of Nepal Himalayas
Hari Prasad Pandey
- 14:45-15:00 Discussion

15:30-17:00

Session 2.1, Room M1, Convener(s): Jernej Jež and Mateja Jemec Aulič

- 15:30-15:45 Spatiotemporal Landslide Mapper for Large Areas Using Optical Satellite Time Series Data
Behling Robert and Sigrid Roessner
- 15:45-16:00 Integration of Multi-sensor A-DInSAR Data for Landslide Inventory Update
Roberta Boni, Massimiliano Bordoni, Claudia Meisina, Alessio Colombo and Luca Lanteri
- 16:00-16:15 Sensor Data Integration for Landslide Monitoring—the LEMONADE Concept
Romy Schlögel, Benni Thiebes, Isabella Toschi, Thomas Zieher, Mehdi Darvishi and Christian Kofler
- 16:15-16:30 Mechanism of the Montescaglioso Landslide (Southern Italy) Inferred by Geological Survey and Remote Sensing
Francesca Bozzano, Paolo Caporossi, Carlo Esposito, Salvatore Martino, Paolo Mazzanti, Serena Moretto, Gabriele Scarascia Mugnozza and Antonio Michele Rizzo
- 16:30-16:45 Using the Intensity Values from Terrestrial Laser Scanner (TLS) for Determining Lithology of Flysch Rock Mass in Southwest Slovenia
Tina Živec, Andreja Anžur and Timotej Verbovšek
- 16:45-17:00 Combining Spectral and Morphometric Properties of Landslides for Separating Individual Landslides Based on Object-Oriented Method
Qigen Lin, Zhenhua Zou, Le Lin and Ying Wang

Session 2.2, Room M3/4, Convener(s): Beena Ajmera and Fawu Wang

- 15:30-15:45 Sediment Transport Along Earth Flows: Intermittent Cascade Effect Between Kinematic Zones
Luigi Guerriero, Lara Bertello, Nestor Cardozo, Matteo Berti, Gerardo Grelle and Paola Revellino
- 15:45-16:00 Landslide Investigation of a Residential Area in Göynüklü Village, Bursa (Turkey)
Tamer Topal; Muge Akin, Vedat Doyuran
- 16:00-16:15 High Performance Heterogeneous Data Storage System for High Frequency Sensor Data in a Landslide Laboratory
Guntha Ramesh, Hariharan Balaji and T. Hemalatha
- 16:15-16:30 Understanding Debris Flow Characteristics Using Flume Experiments

Sangjun Im, Song Eu and Dongyeob Kim

- 16:30-16:45 Slope Stability Investigation of Chandmari in Sikkim, Northeastern India
P. Thambidurai and Maneesha Vinodini Ramesh
- 16:45-17:00 H/V Technique for the Rapid Detection of Landslide Slip Surface(s): Assessment of the Optimized Measurements Spatial Distribution
Veronica Pazzi, Luca Tanteri, Gabriele Bicchichi, Andrea Caselli, Michele D'Ambrosio and Riccardo Fanti

Session 3.1, Room E1, Convener(s): Željko Arbanas and Dario Peduto

- 15:30-15:45 Hybrid Landslide Warning Model for Rainfall Triggered Shallow Landslides in Korean Mountain
Ananta Man Singh Pradhan, Hyo-Sub Kang, and Yun-Tae Kim
- 15:45-16:00 Sentinel-1 Data Analysis for Landslide Detection and Mapping: First Experiences in Italy and Spain
Anna Barra, Oriol Monserrat, Michele Crosetto, María Cuevas-Gonzalez, Núria Devanthéry, Guido Luzi, and Bruno Crippa
- 16:00-16:15 Testing Sentinel-1A Data in Landslide Monitoring: A Case Study from North-Eastern Italian Pre-Alps
Giulia Tessari; Mario Floris; Vladimiro Achilli; Massimo Fabris; Andrea Menin; Michele Monego
- 16:15-16:30 Innovative Landslide Change Detection Monitoring: Application of Space-Borne InSAR Techniques in the Thompson River Valley, British Columbia, Canada
David Huntley, Peter Bobrowsky, Francois Charbonneau, Jeffrey Journault, Renato Macciotta, and Michael Hendry
- 16:30-16:45 Remote Sensing Mapping and Monitoring of the Capriglio Landslide (Parma Province, Northern Italy)
Federica Bardi, Federico Raspini, William Frodella, Luca Lombardi, Massimiliano Nocentini, Giovanni Gigli, Stefano Morelli, Alessandro Corsini, and Nicola Casagli
- 16:45-17:00 Monitoring the Deep-Seated Landslides by Using ALOS/PALSAR Satellite Imagery in the Disaster Area of 2009 Typhoon Morakot, Taiwan
Rou-Fei Chen, Chen-Yang Lee, Hsiao-Yuan Yin, Hsiao-Yu Huang, Keng-Ping Cheng, and Ching-Weei Lin

Session 4.2, Room E2, Convener(s): Filippo Catani and Young-Suk Song

- 15:30-15:45 Deterministic and Probabilistic Rainfall Thresholds for Landslide Forecasting
Pasquale Versace, and Davide L. De Luca
- 15:45-16:00 Regional Rainfall Thresholds for Shallow and Deep-Seated Mass Movements Triggering in the South Eastern French Alps
Alexandre Remaitre, and Jean-Philippe Malet
- 16:00-16:15 Explore on Hydro-Mechanical Threshold for Early Warning of Rainfall Induced Shallow Landslides
Zong-ji Yang, Jian-ping Qiao, Taro Uchimura, Lin Wang, Dong Huang, Xiao-qin Lei, and Li-li Shi
- 16:15-16:30 Influences of Rainfall on Shallow Slope Failures

Taworn Teerametatiparat, Avirut Chinkulkijniwat, and Somjai Yubonchit

16:30-16:45 Modelling Shallow Landslides Triggered by Rainfall in Tropical and Mountainous Basins

Edier Aristizábal, Hernán Martínez-Carvajal, and Edwin García-Aristizábal

16:45-17:00 Probabilistic Analysis of Shallow Landslide Susceptibility Using Physically Based Model and Fuzzy Point Estimate Method

Jung-Hyun Lee, Hyuck-Jin Park, and Jung-Yoon Jang

Session 5.2, Room E3, Convener(s): Jan Klimeš and Ying Guo

15:30-15:45 Multi-methodological Studies on the Large El Capulín Landslide in the State of Veracruz (Mexico)

Martina Wilde, Wendy V. Morales Barrera, Daniel Schwindt, Matthias Bücker, Berenice Solis, Birgit Terhorst and Sergio R. Rodríguez Elizarrarás

15:45-16:00 Cut Slope Icing Formation Mechanism and Its Influence on Slope Stability in Periglacial Area

Ying Guo, Wei Shan, Zhaoguang Hu and Hua Jiang

16:00-16:15 Climate Change Driving Greater Slope Instability in the Central Andes

Stella Maris Moreiras and Ivan Pablo Vergara Dal Pont

16:15-16:30 Understanding the Chandmari Landslides

Nirmala Vasudevan, Kaushik Ramanathan and Aadityan Sridharan

16:30-16:45 Activation of Cryogenic Earth Flows and Formation of Thermocirques on Central Yamal as a Result of Climate Fluctuations

Artem Khomutov, Marina Leibman, Yury Dvornikov, Anatoly Gubarkov, Damir Mullanurov and Rustam Khairullin

16:45-17:00 Landslide Investigations in the Northwest Section of the Lesser Khingan Range in China Using Combined HDR and GPR Methods

Zhaoguang Hu, Ying Guo and Wei Shan

19:00-21:00

Forum Banquet at Ljubljana Castle for all WLF4 participants

Thursday, June 1, 2017

8:30-10:00

Session 1.2, Room Štih Hall, Convener(s): Giuseppe Arduino and Yueping Yin

- 8:30-8:45 International Programme on Landslides (IPL): Objectives, History and List of World Centres of Excellence and IPL Projects
Qunli Han, Kyoji Sassa, Feng Min Kan and Claudio Margottini
- 8:45-9:00 Landslide Dynamics: ISDR-ICL Landslide Interactive Teaching Tools (LITT)
Kyoji Sassa, Fausto Guzzetti, Hiromitsu Yamagishi, Zeljko Arbabas, Nicola Casagli, Binod Tiwari, KoFei Liu, Alexander Strom, Mauri McSaveney, Khang Dang and Hendy Setiawan
- 9:00-9:15 Progress of the World Report on Landslides
Biljana Abolmasov, Teuku Faisal Fathani, KoFei Liu and Kyoji Sassa
- 9:15-9:30 UNESCO-KU-ICL UNITWIN Cooperation Programme for Landslides and Water-Related Disaster Risk Management
Kaoru Takara and Kyoji Sassa
- 9:30-9:45 Landslides: Journal of the International Consortium on Landslides
Kyoji Sassa and Željko Arbanas

Session 2.3, Room M1, Convener(s): Beena Ajmera and A. A. Virajh Dias

- 8:30-9:00 Stress Testing Framework for Managing Landslide Risks under Extreme Storms (KEYNOTE LECTURE)
Limin Zhang
- 9:00-9:15 Back-Analysis of an Artificially Triggered Landslide: A Case Study in Northern Italy
Alex Sanzani, Tiziano Cancelli, Marco Peli, Stefano Barontini and Francesco Colleselli
- 9:15-9:30 Review on Types of Root Failures in Shallow Landslides
Ana Sofia Dias, Marianna Pirone and Gianfranco Urciuoli
- 9:30-9:45 Review on the Methods for Evaluation of Root Reinforcement in Shallow Landslides
Ana Sofia Dias, Marianna Pirone and Gianfranco Urciuoli
- 9:45-10:00 Factors Influencing Rainfall-Induced Slope Failures
Binod Tiwari, Beena Ajmera, Mohammed Khalid and Rosalie Chavez

Session 2.4, Room M3/4, Convener(s): Binod Tiwari and Snježana Mihalić Arbanas

- 8:30-8:45 An Overview of Recent Developments in Landslide Vulnerability Assessment-Presentation of a New Conceptual Framework
Aditi Singh, Shilpa Pal, Debi Prasanna Kanungo and Naveen Pareek
- 8:45-9:00 Distribution Characteristics of Mass Movements in the Upper Bhote Koshi Watershed Before and After the Gorkha Earthquake and Their Susceptibility Evaluation
Amar Deep Regmi, Cui Peng and Megh Raj Dhital
- 9:00-9:15 How to Improve the Accuracy of Landslide Susceptibility Maps Using PSInSAR Data
Andrea Ciampalini, Federico Raspini, Daniela Lagomarsino, Filippo Catani and Nicola Casagli
- 9:15-9:30 Comparing Patterns of Spatial Relationships for Susceptibility Prediction of Landslide

Occurrences

Andrea G. Fabbri, Angelo Cavallin, Antonio Patera, Laura Sangalli and Chang-Jo Chung

9:30-9:45 Integration of Geohazards into Urban and Land-Use Planning. Towards a Landslide Directive. The EuroGeoSurveys Questionnaire

Rosa María Mateos, Gerardo Herrera, Juan Carlos García-Davalillo, Gilles Grandjean, Eleftheria Poyiadji, Raluca Maftai, Tatiana-Constantina Filipciuc, Mateja Jemec Auflič, Jernej Jez, Laszlo Podolszki, Alessandro Trigila, Valerio Comerci, Hugo Raetzo, Arben Kociu, Maria Przyłucka, Marcin Kulak, Izabela Laskowicz, Michael Sheehy, Veronika Kopackova, Michaela Frei, Dirk Kuhn, John F. Dehls, Reginald L. Hermanns, Niki Koulermou, Colby A. Smith, Mats Engdahl, Pere Buxó Pagespetit, Marta González, Vanessa Banks, Claire Dashwood, Helen Reeves, Francesca Cigna, Pavel Liščák, Vidas Mikulėnas, Vedad Demir, Margus Raha, Lidia Quental, Daniel Oliveira, Ruben Dias and Cvjetko Sandić

9:45-10:00 A GIS-Based Landslide Hazard Mapping in the City of Constantine, Northeast Algeria

Hamid Bourenane, Mohamed Said Guetouche, Youcef Bouhadad and Massinissa Braham

Session 3.1, Room E1, Convener(s): Veronica Tofani and Martin Krkač

8:30-8:45 Study of an Active Landslide on A16 Highway (Italy): Modeling, Monitoring and Triggering Alarm

Andrea Carri, Clelia Grignaffini, Andrea Segalini, Giovanna Capparelli, Pasquale Versace, and Gennaro Spolverino

8:45-9:00 Experimental Landslide Monitoring Site of Poggio Baldi Landslide (Santa Sofia, N-Apennine, Italy)

Paolo Mazzanti, Francesca Bozzano, Alessandro Brunetti, Paolo Caporossi, Carlo Esposito, and Gabriele Scarascia Mugnozza

9:00-9:15 Prediction of the Kostanjek Landslide Movements Based on Monitoring Results Using Random Forests Technique

Martin Krkač, Snježana Mihalić Arbanas, Željko Arbanas, Sanja Bernat Gazibara, and Marin Sečanj

9:15-9:30 Remote 3D Mapping and GB-InSAR Monitoring of the Calatabiano Landslide (Southern Italy)

Teresa Nolesini, William Frodella, Luca Lombardi, Massimiliano Nocentini, Federica Bardi, Intrieri, Tommaso Carlà, Lorenzo Solari, Giulia Dotta, Federica Ferrigno, and Nicola Casagli

9:30-9:45 Monitoring Giant Landslide Detachment Planes in the Era of Big Data Analytics

Jan Blahůt, Matt Rowberry, Jan Balek, Jan Klimeš, Ivo Baroň, and Xavi Martí

9:45-10:00 Geophysical Model and Displacement of Active Landslide—An Example from Jastrzębia Góra Cliff (Northern Poland)

Mirosław Kamiński and Piotr Zientara

Session 4.2, Room E2, Convener(s): Pasquale Versace and Jean-Philippe Malet

8:30-8:45 Assessing Potential Effects of Climate Change on Rainfall-Induced Shallow Landslides in the Peloritani Mountains Area, Sicily

David J. Peres, and Antonino Cancelliere

8:45-9:00 Variations in Landslide Frequency Due to Climate Changes Through High Resolution Euro-CORDEX Ensemble

Guido Rianna, Alfredo Reder, Veronica Villani, and Paola Mercogliano

9:00-9:15 Potential Effects of Climate Changes on Landslide Activity in Different Geomorphological

Contexts

Guido Rianna, Luca Comegna, Stefano Luigi Gariano, Fausto Guzzetti, Paola Mercogliano, Luciano Picarelli, and Paolo Tommasi

9:15-9:30 Historical Patterns of Heavy Rainfall Event and Deep-Seated Rapid Landslide Occurrence in Japan: Insight for Effects of Climate Change on Landslide Occurrence

Taro Uchida, Wataru Sakurai, and Atsushi Okamoto

9:30-9:45 Geomorphologic and Structural Controls on Landslide Types in Nigeria

Ogbonnaya Igwe

9:45-10:00 Geomorphology and Susceptibility to Rainfall Triggered Landslides in Gudbrandsdalen Valley, Norway

Håkon Heyerdahl, and Øyvind A. Høydal

Session 5.3, Room E3, Convener(s): Vít Vilímek and Giovanna Capparelli

8:30-8:45 Quantifying the Performances of Simplified Physically Based Landslide Susceptibility Models: An Application Along the Salerno-Reggio Calabria Highway

Giuseppe Formetta, Giovanna Capparelli and Pasquale Versace

8:45-9:00 Assessing Landslide Dams Evolution: A Methodology Review

Carlo Tacconi Stefanelli, Samuele Segoni, Nicola Casagli and Filippo Catani

9:00-9:15 Inventory and Typology of Landslide-Dammed Lakes of the Cordillera Blanca (Peru)

Adam Emmer and Anna Juřicová

9:15-9:30 Recommending Rainfall Thresholds for Landslides in Sri Lanka

Udeni P. Nawagamuwā and Lasitha P. Perera

9:30-9:45 Downstream Geomorphic Response of the 2014 Mount Polley Tailings Dam Failure, British Columbia

Vanessa Cuervo, Leif Burge, Hawley Beaugrand, Megan Hendershot and Stephen G. Evans

9:45-10:00 Discussion

10:30-12:00

Session 1.2, Room Štíh Hall, Convener(s): Binod Tiwari and Daisuke Higaki

10:15-10:30 Advanced Technologies for Landslides (WCoE 2014-2017, IPL-196, IPL-198)

Nicola Casagli, Veronica Tofani, Filippo Catani, Sandro Moretti, Riccardo Fanti and Giovanni Gigli

10:30-10:45 Mechanisms of Landslides and Creep in Over Consolidated Clays and Flysch (WCoE 2014-2017)

Matjaž Mikoš, Janko Logar, Matej Maček, Jošt Sodnik and Ana Petkovšek

10:45-11:00 Researches on Heavy-Rainfall-Induced and Hydraulic-Driven Geological Hazards in China (WCoE 2014-2017)

Yueping Yin, Yongqiang Xu and Wenpei Wang

11:00-11:15 Landslide Risk Reduction in Croatia: Scientific research in the framework of the WCoE 2014-2017, IPL-173, IPL-184, ICL ABN

Snježana Mihalić Arbanas, Željko Arbanas, Martin Krkač, Sanja Bernat Gazibara, Martina Vivoda Prodan, Petra Đomlija, Vedran Jagodnik, Sanja Dugonjić Jovančević, Marin Sečanj and Josip Peranić

- 11:15-11:30 Shape and mechanism of large-scale landslides in Japan: forecasting analysis from an inventory (WCoE 2014-2017)
Ogita, S., Sagara, W., Higaki, D. and Research Committee on Elucidating Mechanisms of Large-Scale Landslides
- 11:30-11:45 Retrospect and Prospect of Cold Regions Landslide Research (2012-2016) (WCoE 2014-2017, IPL-132, IPL-167, IPL-203, CRLN)
Wei Shan and Ying Guo
- 11:45-12:00 Large-scale rockslide inventories - from Kokomeran River Basin to the entire Central Asia region (WCoE 2014-2017, IPL-106-2)
Alexander Strom and Kanatbek Abdrakhmatov

Session 2.3, Room M1, Convener(s): Katsuo Sasahara and Beena Ajmera

- 10:30-10:45 Stability of Red-Clay Slopes Subjected to Different Durations of Rainfall
Kaixi Xue, Binod Tiwari, Beena Ajmera and Yanxiang Hu
- 10:45-11:00 A Smoothed Particle Hydrodynamics Study of an Experimental Debris Flow
Caitlin Chalk, Manuel Pastor, Duncan Borman, Andrew Sleigh, Jeff Peakall, William Murphy and Raul Fuentes
- 11:00-11:15 Simulation Model to Predict Landslide Speed Using Velocity-Dependent Viscous Damping
Eisaku Hamasaki, Hideaki Marui and Gen Furuya
- 11:15-11:30 The Effect of the Front Inclination on the Impact Forces Transmitted by Granular Flows to Rigid Structures
Francesca Ceccato, Paolo Simonini, Claudio di Prisco and Irene Redaelli
- 11:30-11:45 Understanding and Modelling a Highly Ductile 25+ Years Old Active-Passive Landslide at Ok Tedi Mine in Papua New Guinea
Neil Bar and Norbert Baczynski
- 11:45-12:00 Analysis and Mapping the Landslide Hazard in Bulgaria
Plamen Ivanov, Boyko Berov, Nikolai Dobrev, Radoslav Varbanov, Miroslav Krastanov and Georgi Frangov

Session 2.4, Room M3/4, Convener(s): Binod Tiwari and Snježana Mihalić Arbanas

- 10:30-10:45 Landslide Susceptibility Analysis in Arandu Area Shigar Valley, CKNP (Gilgit-Baltistan-Pakistan)
Chiara Calligaris, Shahina Tariq, Hawas Khan and Giorgio Poretti
- 10:45-11:00 Deep-Seated Landslide Mapping and Geomorphic Characteristic Using High Resolution DTM in Northern Taiwan
Ching-Fang Lee, Wei-Kai Huang, Chuen-Ming Huang and Chung-Chi Chi
- 11:00-11:15 Common Patterns Among Different Landslide Susceptibility Models of the Same Region
Chyi-Tyi Lee and Chih-Chung Chung
- 11:15-11:30 Creation of a National Landslide Domain Map to Aid Susceptibility Mapping in Great Britain
Claire Dashwood, Catherine Pennington, Emma Bee, Katy Freeborough and Tom Dijkstra
- 11:30-11:45 A New Statistical Approach for Landslide Susceptibility Assessment in the Urban Area of Napoli (Italy)
Francesco Carotenuto, Anna Claudia Angrisani, Akram Bakthiari, Maria Teresa Carratù, Diego

Di Martire, Giovanni Francesco Finicelli, Pasquale Raia and Domenico Calcaterra

- 11:45-12:00 Multifractal Analysis of Spatial and Temporal Distributions of Landslides in Colombia
Estefanía Muñoz, Germán Poveda, Andrés Ochoa and Humberto Caballero

Session 3.1, Room E1, Convener(s): Veronica Tofani and Miloš Marjanović

- 10:30-10:45 Statistical Analysis of Displacement Rate for Definition of EW Thresholds Applied to Two Case Studies
Stefano Alberti, Giovanni Battista Crosta, and Carlo Rivolta
- 10:45-11:00 Ground Based Wireless Instrumentation and Real Time Monitoring of Pakhi Landslide, Garhwal Himalayas, Uttarakhand (India)
Debi Prasanna Kanungo, Anil Kumar Maletha, Manali Singh, and Neelu Sharma
- 11:00-11:15 Terrestrial Radar Interferometry Monitoring During a Landslide Emergency 2016, Ghirone, Switzerland
Caduff Rafael, and Strozzi Tazio
- 11:15-11:30 Monitoring of the Stogovce Landslide Slope Movements with GEASENSE GNSS Probes, SW Slovenia
Timotej Verbovšek, Marko Kočevar, Igor Benko, Matej Maček, and Ana Petkovšek
- 11:30-11:45 DFOS Technology-Based Landslide Monitoring: The Majiagou Landslide Case Study (China)
Bin Shi, Hongtao Jiang, and Yijie Sun
- 11:45-12:00 Seismic Noise Measurements on Unstable Rock Blocks: The Case of Bismantova Rock Cliff
Diego Arosio, Alessandro Corsini, Riccardo Giusti, and Luigi Zanzi

Session 4.2, Room E2, Convener(s): Pasquale Versace and Jean-Philippe Malet

- 10:30-10:45 Overview of Rainfall Induced Landslide Events and Importance of Geotechnical Investigations in Nilgiris District of Tamil Nadu, India
V. Senthilkumar, S.S. Chandrasekaran, and V.B. Maji
- 10:45-11:00 Physically-Based Models for Estimating Rainfall Triggering Debris Flows in Campania (Southern Italy)
Pantaleone De Vita, Francesco Fusco, Elisabetta Napolitano, and Rita Tufano
- 11:00-11:15 Physical Modelling of the Rainfall Infiltration Processes in Pyroclastic Soil Responsible of Landslide Trigger
Giovanna Capparelli, Pasquale Versace, and Gennaro Spolverino
- 11:15-11:30 Role of Land Use in Landslide Initiation on Terraced Slopes: Inferences from Numerical Modelling
Luca Schilirò, Andrea Cevasco, Carlo Esposito, and Gabriele Scarascia Mugnozza
- 11:30-11:45 Heavy Rains and Flash Floods at Rocky Coast. The Costiera Amalfitana (Southern Italy)
Crescenzo Violante, Eliana Esposito, Giuseppe Tranfaglia, and Giovanni Braca
- 11:45-12:00 RFID-Aided Sediment Transport Monitoring—Laboratory and Preliminary Field Test Results
Vladislav Ivov Ivanov, Davide Brambilla, Laura Longoni, Diego Arosio, and Monica Papini

Session 5.3 and 5.4, Room E3, Convener(s): Vít Vilímek and Bjoern Kalsnes

- 10:30-10:45 Brahmaputra River Bank Failures—Causes and Impact on River Dynamics

Archana Sarkar

- 10:45-11:00 The Sediment Production and Transportation in a Mountainous Reservoir Watershed, Southern Taiwan
Chih Ming Tseng, Kuo Jen Chang and Paolo Tarolli
- 11:00-11:15 Integration of Geometrical Root System Approximations in Hydromechanical Slope Stability Modelling
Elmar Schmaltz, Rens Van Beek, Thom Bogaard, Stefan Steger and Thomas Glade
- 11:15-11:30 Patterns of Development of Abrasion-Landslide Processes on the North-West Coast of the Black Sea
Olena Dragomyretska, Galina Pedan and Oleksandr Dragomyretskyy
- 11:30-11:45 Rock-Avalanche Activity in W and S Norway Peaks After the Retreat of the Scandinavian Ice Sheet
Reginald L. Hermanns, Markus Schleier, Martina Böhme, Lars Harald Blikra, John Gosse, Susan Ivy-Ochs and Paula Hilger
- 11:45-12:00 The Role of Rainfall and Land Use/Cover Changes in Landslide Occurrence in Calabria, Southern Italy, in the 20th Century
Stefano Luigi Gariano, Olga Petrucci and Fausto Guzzetti

12:00-13:30

Lunch and Open Session II (12:30-13:30): Strengthening resilience of rural communities exposed to landslides and other natural hazards (Room E1)

13:30-15:00

Session 1.2, Room Štíh Hall, Convener(s): Nicola Casagli and Faisal Fathani

- 13:30-13:45 Interventions for Promoting Knowledge, Innovations and landslide risk management practices within South and Southeast Asia (WCoE 2014-2017)
Peeranan Towashiraporn and N.M.S.I. Arambepola
- 13:45-14:00 Promoting a Global Standard for Community-based Landslide Early Warning System (WCoE 2014-2017, IPL-158, IPL-165)
Teuku Faisal Fathani, Dwikorita Karnawati and Wahyu Wilopo
- 14:00-14:15 Model Policy Frameworks, Standards and Guidelines on Landslide Disaster Reduction (WCoE 2014-2017)
A A Virajh Dias, Nimesha Katuwala, K L S Sahabandu and Nihal Rupasinghe
- 14:15-14:30 Landslide Hazard and Risk Management (WCoE 2014-2017)
Josef Stemberk, Vít Vilímeš, Jan Klimeš, Jan Blahůt, Filip Hartvich and Jan Balek
- 14:30-14:45 Mitigation of landslide hazards in Ukraine under the guidance of ICL: 2009–2016 (IPL-153, IPL-191)
Oleksander Trofymchuk, Iurii Kaliukh, Silchenko Konstantin, Viktoriia Berchun, Taras Kaliukh and Iaroslav Berchun
- 14:45-15:00 The Croatian-Japanese SATREPS Joint Research Project on Landslides (IPL-161)
Željko Arbanas, Snježana Mihalić Arbanas, Kyoji Sassa, Hideaki Marui, Hiroshi Fukuoka, Martin Krkač, Martina Vivoda Prodan, Sanja Bernat Gazibara and Petra Đomlija

Session 2.3, Room M1, Convener(s): Beena Ajmera and Veronica Tofani

- 13:30-13:45 Stochastic Investigation of the Feasibility of Using Remotely Sensed Moisture Data for Rainfall Induced Landslide Hazard Assessment
Thilanki Dahigamuwa and Manjriker Gunaratne
- 13:45-14:00 Process Chain Modelling with r.avaflow: Lessons Learned for Multi-hazard Analysis
Martin Mergili, Jan-Thomas Fischer and Shiva P. Pudasaini
- 14:00-14:15 Parametric Analysis of Weathering Effect on Possible Reactivation of the Valići Landslide, Croatia
Martina Vivoda Prodan and Željko Arbanas
- 14:15-14:30 Modeling Debris Flows in Anomalous Basin-Fan Systems
Erika de Finis, Paola Gattinoni, Lorenzo Marchi and Laura Scesi
- 14:30-14:45 Investigation on the Hydraulic Parameters Affecting Shallow Landslide Triggering in a Pyroclastic Slope
Roberto Greco, Luca Comegna, Emilia Damiano and Andrea Guida
- 14:45-15:00 Discussion

Session 2.4, Room M3/4, Convener(s): Vladimir Greif and Binod Tiwari

- 13:30-13:45 Landslides Induced by the 2015 Gorkha Earthquake
Binod Tiwari, Beena Ajmera, Smriti Dhital and Nagendra Raj Sitoula
- 13:45-14:00 Analysis of Building Vulnerability to Slow-Moving Landslides via a-DInSAR and Damage Survey Data
Gianfranco Nicodemo, Dario Peduto, Settimio Ferlisi, Giovanni Gullà, Luigi Borrelli, Gianfranco Fornaro and Diego Reale
- 14:00-14:15 The SAMCO Web-Platform for Resilience Assessment in Mountainous Valleys Impacted by Landslide Risks
Gilles Grandjean, Loïc Thomas and Séverine Bernardie
- 14:15-14:30 Landslide Risk Analysis Incorporated to the Land-Use Legislation in Colombia
Guillermo ávila and María del Pilar Guzmán
- 14:30-14:45 Landslide Risk Evaluation in Central Provinces of Vietnam
Le Hong Luong, Toyohiko Miyagi, Phan Van Tien, Doan Huy Loi, Hamasaki Eisaku and Shinro Abe
- 14:45-15:00 Mechanisms for Secondary Slope Failure in Slope Having Failed
Kiminori Araiba and Shoji Doshida

Session 3.1, Room E1, Convener(s): Biljana Abolmasov and Michele Calvello

- 13:30-14:00 Remote Sensing Techniques in Landslide Mapping and Monitoring (KEYNOTE LECTURE)
Nicola Casagli
- 14:00-14:15 Hydrological Monitoring of Ash-Fall Pyroclastic Soil Mantled Slopes in Campania (Southern Italy)
Francesco Fusco and Pantaleone De Vita
- 14:15-14:30 Analysis of Hydro-meteorological Monitoring Data Collected in Different Contexts Prone to Shallow Landslides of the Oltrepò Pavese (Northern Italy)

Massimiliano Bordonì, Claudia Meisina, Roberto Valentino, Marco Bittelli, Silvia Chersich, Marco Musetti

- 14:30-14:45 Field Monitoring to Measure Deformation of a Mine Waste-Dump Slope
Young-Suk Song and Yong-Chan Cho
- 14:45-15:00 Monitoring Soil Movement Characteristics of an Area Subject to Land Creeping in the Republic of Korea
Min-Jeng Kang, Chang-Woo Lee, Choong-shik Woo, Dong-Yeob Kim, Jun-pyo Seo, Hyun-Jung Kwon, Jae-Hyeon Park, and Ki-Dae Kim
- 15:00-15:15 A New Landslide Early Warning Technology—Escorting for Life
Hui Yu, Nianzhi Yu, Yan Wang, Lei Yu, and Zhengsheng Yu

Session 4.3 and 4.4, Room E2, Convener(s): Paolo Frattini and Mauri McSaveney

- 13:30-13:45 Characterization and Modeling of a Debris Flow in a Dolomitic Basin: Results and Issues
Chiara Boccali, Romano Lapasin, Luca Zini, Chiara Calligaris, and Franco Cucchi
- 13:45-14:00 Debris Flow Hazard Assessment (Cave del Predil—NE Italy)
Chiara Calligaris, Glenda Nicola, Giacomo Casagrande, Luca Zini, and Franco Cucchi
- 14:00-14:15 Susceptibility to Sea Cliff Failures at Cala Rossa Bay in Favignana Island (Italy)
Roberto Iannucci, Salvatore Martino, Fabio Martorelli, Luca Falconi, and Vladimiro Verrubbi
- 14:15-14:30 Characteristics, Causes and Hazards of Large-Scale Debris Flows on June 23 at Haitong Watershed, Tibet, China
Ge Yonggang, Zou Qiang, Zhang Jianqiang, and Guo Xiaojun
- 14:30-14:45 Large-Scale Rockslope Deformations in Sogn Og Fjordane County (Norway)
Ivanna M. Penna, Martina Böhme, Reginald Hermanns, Trond Eiken, and John Dehls
- 14:45-15:00 Landslide Zoning Using the Principal Component Analysis on Monitoring Data: The Sauna Earth Slide—Earth Flow (Parma, Italy)
Marco Mulas, Francesco Bonacini, Marcello Petitta, Francesco Ronchetti, Giovanni Truffelli, Michela Diena, and Alessandro Corsini
- 15:00-15:15 Development of a Rockfall Risk Mitigation Plan in the Montserrat Massif (Central Catalonia, Spain)
Marc Janeras, Guillem Domènech, Judit Pons, Elisabet Prat, Ferran López, and Pere Buxó

Session 5.4, Room E3, Convener(s): Vít Vilímek and Mario Parise

- 13:30-13:45 Geomorphology and Age of Large Rock Avalanches in Trentino (Italy): Castelpietra
Susan Ivy-Ochs, Silvana Martin, Paolo Campedel, Kristina Hippe, Christof Vockenhuber, Gabriele Carugati, Manuel Rigo, Daria Pasqual and Alfio Viganò
- 13:45-14:00 Coupled Slope Collapse—Cryogenic Processes in Deglaciated Valleys of the Aconcagua Region, Central Andes
Stella Maris Moreiras
- 14:00-14:15 Rock Avalanches in a Changing Landscape Following the Melt Down of the Scandinavian Ice Sheet, Norway
Markus Schleier, Reginald L. Hermanns and Joachim Rohn
- 14:15-14:30 Multi-Temporal Landslide Susceptibility Maps and Future Scenarios for Expected Land Cover Changes (Southern Apennines, Italy)

Luca Pisano, Veronica Zumpano, Žiga Malek, Mihai Micu, Carmen Maria Roskopf and Mario Parise

14:30-15:00 Discussion

15:30-17:00

Session 1.2, Room Štih Hall, Convener(s): Alexander Strom and Matjaž Mikoš

15:30-15:45 Development of a Hazard Evaluation Technique for Earthquake-Induced Landslides Based on an Analytic Hierarchy Process (AHP) (IPL-154)

Daisuke Higaki, Eisaku Hamasaki and Kazunori Hayashi

15:45-16:00 Technical Cooperation Project to Develop Landslide Risk Assessment Technology along Transport Arteries in Vietnam (IPL-175)

Dinh Van Tien, Nguyen Xuan Khang, Kyoji Sassa, Toyohiko Miyagi, Hirotaka Ochiai, Huynh Dang Vinh, Lam Huu Quang, Khang Dang and Shiho Asano

16:00-16:15 Study of slow moving landslide Umka near Belgrade, Serbia (IPL-181)

Biljana Abolmasov, Miloš Marjanović, Svetozar Milenković, Uroš Đurić, Branko Jelisavac and Marko Pejić

16:15-16:30 Influence of Post-Earthquake Rainfall on the Stability of Clay Slopes (IPL-192)

Binod Tiwari, Beena Ajmera and Duc Tran

16:30-16:45 Public Awareness and Education Programme for Landslides Management and Evaluation on Social Research Approach in Determining “Acceptable Risk” and “Tolerable Risk” in Landslide Risk Areas in Malaysia (IPL-194, IPL-207)

Ab. Rashid Ahmad, Ir. Zainal Arsad Md Amin, Ir. Dr. Che Hassandi Abdullah and Siti Zarina Ngajam

16:45-17:00 Geotechnical Site Characterization of Mud Eruption Disaster Area using CPTu for Risk Assessment and Mitigation Program (IPL-195)

Paulus P. Rahardjo, Adityaputera Wirawan and Andy Sugianto

17:00-17:15 Massive landsliding in Serbia following Cyclone Tamara in May 2014 (IPL-210)

Biljana Abolmasov, Miloš Marjanović, Uroš Đurić, Jelka Krušić and Katarina Andrejević

17:15-17:30 Geohazard prevention in China

Guan Fengjun, presented by Yueping Yin

17:30-17:45 International Research Plan of Disaster Risk Reduction in Belt & Road Countries

Cui Peng, presented by Lijun Su

Session 2.3, Room M1, Convener(s): Kiminori Araiba and Beena Ajmera

15:30-15:45 Propagation Modeling and Inverse Analysis of a Landslide in Hong Kong

Sabatino Cuomo, Michele Calvello and Pooyan Ghasemi

15:45-16:00 Insights from LS-RAPID Modeling of Montaguto Earthflow (Italy)

Sabatino Cuomo, Vincenzo de Chiara, Sanja Dugonjić Jovančević, Martina Vivoda Prodan and Željko Arbanas

16:00-16:15 Numerical Modelling of Hydrological Parameters for an Enhanced Interpretation of ERT Monitoring Data

Stefan Hoyer, David Ottowitz, Birgit Jochum, Stefan Pfeiler, Robert Supper and Jung-Ho Kim

- 16:15-16:30 Preliminary Investigations and Numerical Simulations of a Landslide Reactivation
Željko Arbanas, Snježana Mihalić Arbanas, Martina Vivoda Prodan, Josip Peranić, Marin Sećanj, Sanja Bernat Gazibara and Martin Krkač
- 16:30-16:45 Analysis of Failure Mechanism of Slopes with a Horizontal Weak Intercalation Under Earthquakes
Zhenlin Chen and Nanqi Huang
- 16:45-17:00 Influence of Ice Content on the Run-Out of Rock-Ice Avalanches
Qingqing Yang, Zhiman Su, Zhihao Li and Hongwei Liu

Session 2.4, Room M3/4, Convener(s): Igor Peshevski and Snježana Mihalić Arbanas

- 15:30-15:45 Selecting the Most Appropriate Route for Tehran-Shomal Freeway (Northern Iran) Based on Landslide Susceptibility Mapping
Mohammad Madankan, Jafar Hassanpour and Akbar Cheshomi
- 15:45-16:00 Reservoir Landslides and Its Hazard Effects for the Hydropower Station: A Case Study
Jia-wen Zhou, Peng-yuan Lu and Yu-chuan Yang
- 16:00-16:15 Risk Assessment of Earthquake-Induced Landslides in Urban Zones
Johnny Alexander Vega and Cesar Augusto Hidalgo
- 16:15-16:30 The Role of ICGC on Urban and Territorial Planning: The Geological Hazard in Catalonia
Jordi Marturià, Marta Gonzalez, Jordi Pinyol, Marcel Barbera and Pere Buxó
- 16:30-16:45 Deterministic and Probabilistic Slope Stability Models Forecast Performance at 1:5000-Scale
Jorge P. Galve, Carlotta Bartelletti, Davide Notti, Francisca Fernández-Chacón, Michele Barsanti, José Miguel Azañón, Vicente Pérez-Peña, Roberto Giannecchini, Giacomo D'Amato Avanzi, Yuri Galanti, Francisco J. Lamas and Rosa María Mateos
- 16:45-17:00 Identification of Landslides as Debris Flow Sources Using a Multi-model Approach Based on a Field Survey—Koroška Bela, Slovenia
Jošt Sodnik, Špela Kumelj, Tina Peternel, Jernej Jež and Matej Maček
- 17:00-17:15 Rainfall-Induced Large-Scale Landslide Hazard Zonation in Taiwan
Yuan-Jung Tsai, Wen-Chi Lai, Teng-Chieh Hsu, Chjeng-Lun Shieh and Hsiao-Yu Huang

Session 3.2, Room E1, Convener(s): Biljana Abolmasov and Teuku Faisal Fathani

- 15:30-15:45 Landslide Disaster and Relief Activities: A Case Study of Urban Area of Dobo City
Cvijetko Sandić, Biljana Abolmasov, Miloš Marjanović, Petar Begović, and Boban Jolović
- 15:45-16:00 Landslide Risk Management in Uganda: A Multi-level Policy Approach
Jan Maes, Jean Poesen, Constanza Parra, Clovis Kabaseke, Bosco Bwambale, Kewan Mertens, Liesbet Jacobs, Olivier Dewitte, Liesbet Vranken, Astrid de Hontheim, and Matthieu Kervyn
- 16:00-16:15 RECALL Project: Toward Resilient European Communities Against Local Landslides
Mateja Jemec Auplič, Tina Peternel, Špela Kumelj, Jernej Jež, Blaž Milanič, Erazem Dolžan, and Giovanna Brunelli
- 16:15-16:30 Project BEWARE—Landslide Post-disaster Relief Activities for Local Communities in Serbia
Biljana Abolmasov, Dobrica Damjanović, Miloš Marjanović, Ranka Stanković, Velizar Nikolić, Sandra Nedeljković, and Žarko Petrović
- 16:30-16:45 BEWARE Multi-Device Web GIS Application for Landslides

Nikola Vulović, Olivera Kitanović, Ranka Stanković, Dalibor Vorkapić, and Ana Vulović

16:45-17:00 A Web-based Landslide Risk Mitigation Portal
Marco Uzielli, Jung Chan Choi, and Bjørn G. Kalsnes

Session 4.3, Room E2, Convener(s): Paolo Frattini and Mauri McSaveney

15:30-15:45 Impact Forces of a Supercritical Flow of a Shear Thinning Slurry Against an Obstacle
Michele Iervolino, Claudia Carotenuto, Corrado Gisomni, Mario Minale, and Andrea Vacca

15:45-16:00 Observation and Numerical Simulation of Debris Flow Induced by Deep-Seated Rapid Landslide
Taro Uchida, Yuki Nishiguchi, Naoki Matsumoto, Wataru Sakurai, and Atsushi Okamoto

16:00-16:15 Analysis on Debris Flow Non-rectilinear Motion—From Case Study to Hazard Zone Delimitation Discussion
Tingyeh Wu, and Su-Chin Chen

16:15-16:30 Frequency Difference of Debris Flows in Moxi Basin, Southwestern China
Yongbo Tie, Jintao Jiang, Zhi Song, Alena V. Kadetova, and Artem A. Rybchenko

16:30-16:45 Debris Flow Activity in Permafrost Regions in Austria During the 20th Century
Roland Kaitna, and Thomas Huber

16:45-17:00 Discussion

Sessions 4.4 and 4.5, Room E3, Convener(s): Mario Parise and Fawu Wang

15:30-15:45 A New Calculation Method to Flexural Toppling Failure of Anti-dipped Rock Slope
Su Lijun, Qu Xin, and Zhang Chonglei

15:45-16:00 Joint Modelling and Monitoring on Case Pennetta and Case Costa Active Landslides System Using Electrical Resistivity Tomography and Geotechnical Data
Andrea Quagliariini, Andrea Segalini, Alessandro Chelli, Roberto Francese, Massimo Giorgi, and Laura Spaggiari

16:00-16:15 Structural and Climatic Control of Mass Movements Along the Karakoram Highway
Sajid Ali, Sascha Schneiderwind, and Klaus Reicherter

16:15-16:30 The Influence of the Geological Model in the Stress-Strain Analysis of the 1963 Vajont Landslide
Paolo Paronuzzi, and Alberto Bolla

16:30-16:45 Numerical Simulation on Gentle Dip Slope Deformation Caused by River Erosion
Tien-Chien Chen, Feng-Long Chou, and Cheng Meng Hsieh

16:45-17:00 Mass Movement Processes of Quaternary Deposits in the Vipava Valley, SW Slovenia
Tomislav Popit, Jernej Jež, and Timotej Verbovšek

17:00-17:30 Debris Flow Generation in Burned Catchments (KEYNOTE LECTURE)
Mario Parise, and Susan H. Cannon

17:15-18:30

Session 3.3, Room E1, Convener(s): Sabatino Cuomo and Janko Logar

17:15-17:30 Collapse and Remediation of Vrhole Landslide

Saša Galuf and Vojkan Jovičić

- 17:30-17:45 Landslide Remediation Between Kvaternikova and Divoselska Street in Zagreb
Katarina Ravnjak, Goran Grget, Leo Matešić, and Marko Kaić
- 17:45-18:00 Landslide Stabilization in Building Practice: Methodology and Case Study from Autonomic Republic of Crimea
Oleksander Trofymchuk, Iurii Kaliukh, and Viktoriia Berchun
- 18:00-18:15 Monitoring and Assessment of Remedial Measures in Closed Open Cast Mine
Jan Zalesky and Kristyna Capova
- 18:15-18:30 DEM simulations of punch tests for the mechanical characterization of cortical meshes
Fabio Gabrieli, Antonio Pol, Klaus Thoeni, and Nicola Mazzon

Student Session, Room M1, Convener(s): Johannes Hübl and Paolo Frattini

- 17:15-17:30 Slope Mass Assessment of Road Cut Rock Slopes Along Karnprayag to Narainbagarh Highway in Garhwal Himalayas, India
Saroj Kumar Lenka, Soumya Darshan Panda, Debi Prasanna Kanungo and R. Anbalagan
- 17:30-17:45 Automatic Landslides Mapping in the Principal Component Domain
Kamila Pawłuszek and Andrzej Borkowski
- 17:45-18:00 A Check-Dam to Measure Debris Flow-Structure Interactions in the Gatria Torrent
Georgl Nagl and Johannes Hübl
- 18:00-18:15 Simulating the Formation Process of the Akatani Landslide Dam Induced by Rainfall in Kii Penins
Pham Van Tien, Kyoji Sassa, Kaoru Takara, Khang Dang, Le Hong Luong and Nguyen Duc Ha
- 18:15-18:30 Flat-slab subduction and crustal models for the seismically active Sierras Pampeanas region of Argentina
Sebastián Junquera Torrado, Stella Maris Moreiras and Sergio A. Sepúlveda

Friday, June 2, 2017

08:30-10:00

Session 1.3, Room E3, Convener(s): Irasema Alcántara-Ayala

- 8:30-8:45 Landslides and Society—A Foreword
Irasema Alcántara-Ayala
- 8:45-9:00 Landslide Societal Risk in Portugal in the Last 155 Years
Susana Pereira, José Luís Zêzere, and Ivânia Quaresma
- 9:00-9:15 Landslide Inventory Mapping in the Fourteen Northern Provinces of Vietnam: Achievements and Difficulties
Le Quoc Hung, Nguyen Thi Hai Van, Pham Van Son, Nguyen Hoang Ninh, Nguyen Tam, and Nguyen Thi Huyen
- 9:15-9:30 Geological Conservation Through Risk Mitigation and Public Awareness at the Siq of Petra, Jordan
Giorgia Cesaro, Giuseppe Delmonaco, Bilal Khrisat, and Sabrina Salis
- 9:30-9:45 Case Histories for the Investigation of Landslide Repair and Mitigation Measures in NW Germany
Annika Wohlers, Thomas Kreuzer and Bodo Damm
- 9:45-10:00 Surveying Perception of Landslide Risk Management Performance, a Case Study in Norway
Jessica Chiu and Unni Eidsvig

Session 2.4, Room M1, Convener(s): Binod Tiwari and Beena Ajmera

- 8:30-8:45 Landslide Hazard Scenarios Based on Both Past Landslides and Precipitation
Juan Remondo, Jaime Bonachea, Victoria Rivas, Javier Sánchez-Espeso, Viola Bruschi, Antonio Cendrero, José Ramón Díaz de Terán, Gema Fernández-Maroto, José Gómez-Arozamena, Alberto González-Díez and Carlos Sainz
- 8:45-9:00 Observation and Mapping of Complex Landslides Using Field Investigation and Remote Sensed Data
Kuo-Lung Wang, Yo-Ming Hsieh, Meei-Ling Lin, Jun-Tin Lin and Yi-Hsuan Lee
- 9:00-9:15 Generating Application-Orientated Susceptibility Maps for Shallow Landslides Understandable to the General Public
Leonhard Schwarz and Nils Tilch
- 9:15-9:30 Landslide Hazard and Risk Assessment Lanzhou, Province Gansu, China—Project Introduction and Outlook
Tingshan Tian, Dirk Balzer, Lichao Wang, Jewgenij Torizin, Liqin Wan, Xianglong Li, Liang, Ch. Dirk Kuhn, Michael Fuchs, Thomas Lege and Bin Tong
- AND
- Landslide Susceptibility Assessment in rapidly developing area - Use Lanzhou as an example
Bin Tong
- 9:30-9:45 Built-Up Area Exposure to Landslides and Related Social Impacts in Molise (Italy)
Luca Pisano, Veronica Zumpano, Vittoria Dragone and Mario Parise
- 9:45-10:00 Remarks on the Role of Landslide Inventories in the Statistical Methods Used for the Landslide Susceptibility Assessment
Maria Giuseppina Persichillo, Massimiliano Bordoni, Claudia Meisina, Carlotta Bartelletti,

Session 2.4, Room M3/4, Convener(s): Snježana Mihalić Arbanas and Stefan Steger

- 8:30-8:45 Landslide Susceptibility Mapping at National Scale: A First Attempt for Austria
Pedro Lima, Stefan Steger, Thomas Glade, Nils Tilch, Leonhard Schwarz and Arben Kociu
- 8:45-9:00 Natural Hazards and Disaster Risk in One Belt One Road Corridors
Cui Peng, Amar Deep Regmi, Zou Qiang, Lei Yu, Chen Xiaoqing and Cheng Deqiang
- 9:00-9:15 Delineation of Endangered Areas in a Slowly Moving Landslide by the Pressure Probe Method
Sándor Szalai, Viktor Wesztergom and Kitti Szokoli
- 9:15-9:30 Identification and Mapping of Shallow Landslides in the City of Zagreb (Croatia) Using the LiL Terrain Model
Sanja Bernat Gazibara, Martin Krkač, Marin Sečanj and Snježana Mihalić Arbanas
- 9:30-9:45 Estimation of Landslides Activities Evolution Due to Land–Use and Climate Change in a Pyrenean Valley
Séverine Bernardie, Rosalie Vandromme, Apolline Mariotti, Thomas Houet, Marine Grémont, Gilles Grandjean and Yannick Thiery
- 9:45-10:00 The Difference in the Landslide Information by the Difference Between Geographical Features and Geological Conditions
Shoji Doshidan

Session 3.3, Room E1, Convener(s): Sabatino Cuomo and Janko Logar

- 8:30-8:45 Reliability of Shear Strength Parameters for a Safe Slope Design in Highly Jointed Rock Mass
Mutluhan Akin
- 8:45-9:00 A Subgrade Reaction Solution for Anchored Dowel Piles to Stabilize Landslides
Fei Cai
- 9:00-9:15 Modelling the Performance of a Reinforced Natural Slope in Niscemi (Italy)
Sabatino Cuomo, Lorenzo Frigo, and Lorenzo Ciorciari
- 9:15-9:30 Modelling the Propagation of Debris Avalanches in Presence of Obstacles
Sabatino Cuomo, Leonardo Cascini, Manuel Pastor, and Stefano Petrosino
- 9:30-9:45 High Geogrid-Reinforced Slopes as Flexible Solution for Problematic Steep Terrain: Trieben-Sunk Project, Austria
Oliver Detert and Pierpaolo Fantini
- 9:45-10:00 Inadvertent Engineered Activation of Utiku Landslide, New Zealand
Mauri J. McSaveney and Christopher I. Massey

Session 4.3, Room E2, Convener(s): Domenica Calcaterra and Oldrich Hungr

- 8:30-8:45 Statistical Methods for the Assessment of Rainfall Thresholds for Triggering Shallow Landslides: A Case Study
Yuri Galanti, Michele Barsanti, Roberto Giannecchini, Giacomo D'Amato Avanzi, and Gianni Benvenuto
- 8:45-9:00 Using Weather Radar Data (Rainfall and Lightning Flashes) for the Analysis of Debris Flows

Occurrence in Emilia-Romagna Apennines (Italy)

Giuseppe Ciccacese, *Alessandro Corsini, Pier Paolo Alberoni, Miria Celano, and Anna Fornasiero*

9:00-9:15 Monitoring of Debris Flows with an Improved System Setup at the Lattenbach Catchment, Austria

Johannes Hübl, *Andreas Schimmel, and Richard Koschuch*

9:15-9:30 Natural Hazard Analysis for a Small Alpine Catchment in the Nepalese Himalayas

Klaus Schraml, Christian Uhlir, and *Johannes Hübl*

9:30-9:45 Experimental Study of Fluidized Landslide

Hu Wei, *Hicher Pierre-Yves, Qiang Xu, van Asch Theo, and Wang Gonghui*

9:45-10:00 Discussion

Student Session, Room: Club CD, Convener(s): Matjaž Mikoš and Paolo Frattini

8:30-8:45 Stress-Strain Modelling to Investigate the Internal Damage of Rock Slopes with a Bi-Planar Failure

Alberto Bolla and *Paolo Paronuzzi*

8:45-9:00 Towards Decentralized Landslide Disaster Risk Governance in Uganda

Sowedi Masaba, *N. David Mungai, Moses Isabirye and Haroonah Nsubuga*

9:00-9:15 Geological Aspects of Landslides in Volcanic Rocks in a Geothermal Area (Kamojang Indonesia)

I. Putu Krishna Wijaya, *Christian Zangel, Wolfgang Straka and Franz Ottner*

9:15-9:30 Adaptive Learning Techniques for Landslide Forecasting and the Validation in a Real World Deplc

T. Hemalatha, *Maneesha Vinodini Ramesh and Venkat P. Rangan*

9:30-9:45 Influence of Mixture Composition in the Collapse of Soil Columns

Lorenzo Brezzi, *Fabio Gabrieli, Simonetta Cola and Isabella Onofrio*

9:45-10:00 New Thoughts for Impact Force Estimation on Flexible Barriers

Daoyuan Tan, *Jianhua Yin, Jieqiong Qin and Zhuohui Zhu*

10:30-12:00

Session 1.3, Room E3, Convener(s): Irasema Alcántara-Ayala

10:30-10:45 Landslide Hazards and Climate Change Adaptation of Transport Infrastructures in Germany

Martin Klose, *Markus Auerbach, Carina Herrmann, Christine Kumerics, and Annegret Gratzki*

10:45-11:00 Integration of Landslide Susceptibility Maps for Land Use Planning and Civil Protection Emergency Management

Sérgio C. Oliveira, *José L. Zêzere, Clémence Guillard-Gonçalves, Ricardo A.C. Garcia, and Susana Pereira*

11:00-11:15 Participatory Approach to Natural Hazard Education for Hydrological Risk Reduction

Giovanna Lucia Piangiamore, and *Gemma Musacchio*

11:15-11:30 More Room for Landslides

Klaudija Sapač, *Nina Humar, Mitja Brilly and Andrej Kryžanowski*

11:30-12:00 Discussion

Session 2.4, Room M1, Convener(s): Mario Parise and Snježana Mihalić Arbanas

- 10:30-10:45 Investigation and Assessment Plan at the Xinzhuang Potential Large-Scale Landslide in Southern Taiwan
Ming-Chien Chung, Chien-Hsin Chen, Chih-Hao Tan, Ching-Fang Lee and Wei-Kai Huang
- 10:45-11:00 Forecasting the Hydrogeological Hazard in the Anomalous Basin-Fan System of Sernio (Northern Italy)
De Finis Erika, Gattinoni Paola and Scesi Laur
- 11:00-11:15 Regional Landslide Susceptibility Analysis Following the 2015 Nepal Earthquake
Andrea Valagussa, Paolo Frattini, Giovanni B. Crosta, Elena Valbuzzi and Stefano Gambini
- 11:15-11:30 A Web-Based Inventory of Landslides Occurred in Italy in the Period 2012–2015
Elena Innocenzi, Luca Greggio, Paolo Frattini and Mattia de Amicis
- 11:30-11:45 Comparing the Performance of a Logistic Regression and a Random Forest Model in Landslide Susceptibility Assessments. the Case of Wuyuan Area
Haoyuan Hong, Paraskevas Tsangaratos, Ioanna Ilia, Wei Chen and Chong Xu
- 11:45-12:00 Landslide Susceptibility Mapping and Comparison Using Frequency Ratio and Analytical Hierarchy Process in Part of NH-58, Uttarakhand, India
Ramesh Veerappan, Ankur Negi and Anbazhagan Siddan

Session 2.4, Room M3/4, Convener(s): Biljana Abolmasov and Binod Tiwari

- 10:30-10:45 The Challenge of “Trivial Areas” in Statistical Landslide Susceptibility Modelling
Stefan Steger and Thomas Glade
- 10:45-11:00 A New Approach to Assess the Stability of Rock Slopes and Identify Impending Failure Conditions
Tommaso Carlà, Emanuele Intriari, Paolo Farina and Nicola Casagli
- 11:00-11:15 Modern Map of Landslide Hazard for Sulukta Town and Its Agglomeration Area, South-West Mountainous Margins of the Fergana Basin
Abdybachaev Ulan, Moldobekov Bolot and Ormukov Cholponbek
- 11:15-11:30 Landslide Susceptibility Assessment by EPBM (Expert Physically Based Model): Strategy of Calibration in Complex Environment
Yannick Thiery, Rosalie Vandromme, Olivier Maquaire and Séverine Bernardie
- 11:30-11:45 Management of Landslides in Small Settlements in Slovenia
Bojana Božiček and Eva Koren
- 11:45-12:00 Tailings Dam Stability
Bjørn Kalsnes, Hans Petter Jostad, Farrokh Nadim, Audun Hauge, Angèle Dutra and Arnaldo Muxfeldt

Session 3.3, Room E1, Convener(s): Sabatino Cuomo and Janko Logar

- 10:30-10:45 Implementation of a Flexible Wire Net Dam for Controlling Debris Flow in a Small Mountain Torrent
Sangjun Im, Seungyoub Yi, and Song Eu
- 10:45-11:00 Synthetic Water Repellent Soils for Slope Stabilization
Shuang Zheng, Sérgio D.N. Lourenço, Peter J. Cleall, Stuart W. Millis, Angel K.Y. Ng, and Ting

Fong May Chui

- 11:00-11:15 Destructive Influence of Technogenic Factors and Precipitations on Landslide Support Structure
Georgi Frangov, Hristina Zayakova, and Stefan Frangov
- 11:15-11:30 Interaction of Landslide with Critical Infrastructure
Daniel Jirásko, Ivan Vaniček, and Martin Vaniček
- 11:30-11:45 The 10-Mile Slide and Response of a Retaining Wall to Its Continuous Deformation
Renato Macciotta, Tommaso Carlà, Michael Hendry, Trevor Evans, Tom Edwards, Paolo Farina, and Nicola Casagli
- 11:45-12:00 Flexible Barriers Composed of High-Strength Steel Nets, as a Solution to the Near Surface Slides
Corinna Wendeler, Volker Leonhardt, and Roberto Luis

Session 4.5, Room E2, Convener(s): Peter Bobrowsky and Silvia Bianchini

- 10:30-10:45 Insights into Deep-Seated Rockslides in Metamorphic Rock Masses: Lessons Learned from Field Surveys, In Situ Investigations and Numerical Modelling
Christian Zangerl, Thomas Strauhal, Christine Fey, Michael Holzmann, and Sebastian Perzmaier
- 10:45-11:00 Flash Floods in the Rwenzori Mountains—Focus on the May 2013 Multi-Hazard Kilembe Event
Liesbet Jacobs, Jan Maes, Kewan Mertens, John Sekajugo, Wim Thiery, Nicole van Lipzig, Jean Poesen, Matthieu Kervyn, and Olivier Dewitte
- 11:00-11:15 Residual Slope Stability in Low Order Streams of Anganguero Mining Area (Michoacán, Mexico) After the 2010 Debris Flows
Stefano Morelli, Veronica Pazzi, Victor Hugo Garduño Monroy, and Nicola Casagli
- 11:15-11:30 Monitoring Eruption-Induced Mass-Wasting at Active Volcanoes: The Stromboli Case
Federico Di Traglia, Teresa Nolesini, and Nicola Casagli
- 11:30-11:45 Assessment of Rockslide Dam Scenarios at Catchment Scale in the Context of Cascading Hazards
Christian Kofler, Francesco Comiti, Bernhard Gems, Benni Thiebes, Stefan Schneiderbauer, and Romy Schlögel
- 11:45-12:00 Discussion

Student Session, Room Club CD, Convener(s): Matjaž Mikoš and Paolo Frattini

- 10:30-10:45 Detail Study of the Aratozawa Large-scale Landslide in Miyagi Prefecture, Japan
Hendy Setiawan, Kyoji Sassa, Kaoru Takara and Hiroshi Fukuoka
- 10:45-11:00 Identification of Rock Fall Prone Areas on the Steep Slopes Above the Town of Omiš, Croatia
Marin Sečanj, Snježana Mihalić Arbanas, Branko Kordić, Martin Krkač and Sanja Bernat Gazibara
- 11:00-11:15 Automatic Detection of Sediment-Related Disasters Based on Seismic and Infrasound Signals
Andreas Schimmel and Johannes Hübl
- 11:15-11:30 Diversity of Materials in Landslide Bodies in the Vinodol Valley, Croatia
Sara Pajalić, Petra Domlija, Vedran Jagodnik and Željko Arbanas
- 11:30-11:45 Small Flume Experiment on the Influence of Inflow Angle and Stream Gradient on Landslide-

Triggered Debris Flow Sediment Movement

Hefryan Sukma Kharismalatri, Yoshiharu Ishikawa, Takashi Gomi, Katsushige Shiraki and Taeko Wakahara

11:45-12:00 Relative Landslide Risk Assessment for the City of Valjevo

Katarina Andrejev, Jelka Krušić, Uroš Đurić, Miloš Marjanović and Biljana Abolmasov

12:00-13:30

Lunch and Open Session III (12:30-13:30): Landslide risk management, an integrated approach in time (Club CD)

13:30-15:00

Room Club CD: Round Table Discussion: Review of WLF4 and Forum development towards WLF5

Chairs: *Giuseppe Arduino and Peter Bobrowsky*

Panelists:

Matjaž Mikoš, Forum Chair

Kyoji Sassa, Coordinator for Theme 1 Sendai Partnerships 2015-2025

Binod Tiwari, Coordinator for Theme 2 Advances in Landslide Science

Željko Arbanas, Coordinator for Theme 3 Advances in Landslide Technology

Nicola Casagli, Coordinator for Theme 4 Diversity of Landslide Forms

Vít Vilímek, Coordinator for Theme 5 Landslides in Different Environments

Participants from SP Signatory organizations

Concluding remarks:

Qunli Han, Chair of IPL Global Promotion Committee

Yueping Yin, President of the International Consortium on Landslides

15:30-16:30

Room Club CD: WLF4 Closing Ceremony

- Speech by the new President of ICL (2018.1.1-2020.12.31), *Peter Bobrowsky*
- Announcement of the ICL-WLF4 Distinguished Student Award and awarded by ICL President *Yueping Yin*
- Announcement of the best photo in each category awarded by Forum Chair *Matjaž Mikoš*
- Introduction of new ICL officers by the New President (2018.1.1-2020.12.31), *Peter Bobrowsky*
- Certificates to leaders of New IPL Projects by *Qunli Han* of UNESCO, chair of IPL-GPC
- Certificates to new ICL members (2014-2017) by ICL President *Yueping Yin*
- Welcome to 5th WLF by *Kyoji Sassa*, WLF5 Forum Chair

WLF 4 side events

WLF5 Kyoto 2020 Organizing Committee Meeting 16:00-18:00 on 31 May 2017, Room: Club CD

Chairs: *Kyoji Sassa, Peter Bobrowsky and Kaoru Takara*

All landslide researchers from the WLF4 participants who are willing to join the WLF5 organizing committee and organize sessions in WLF5 are invited. We may discuss the process of organization of WLF5 required from May 2017 till November 2020.

MOP delavnica "Obvladovanje naravnih nesreč večjega obsega v Sloveniji" 08:30-12:30 on 31 May, 2017, Room: E4

IGS Workshop "Geosynthetics for slope stabilization" 13:30-17:00 on 1 June, 2017, Room: E4

IAEG Commission 37 on Landslide Nomenclature 17:15-19:00 on 1 June, 2017, Room: E4