

| No | Authors | Organization | Country/Region | Title | Pub.Type | Presentation |
|--|--|--|----------------------|--|----------|--------------|
| Forum Lectures and Forum Speeches, Room A | | | | | | |
| P1 | <u>Fausto Guzzetti</u> | CNR | Italy | On the prediction of landslides and their consequence | FCB | |
| P2 | <u>Charles Wang Wai Ng</u> , Clarence Edward Choi, Haiming Liu, Sunil Poudyal, Julian Shun Hang Kwan | Hong Kong University of Science and Technology | Hong Kong SAR, China | Design recommendations for single and dual rigid debris flow barriers with and without basal clearance | FCB | Onsite |
| P5 | <u>Michel Jaboyedoff</u> , Mariam Ben Hammouda, Marc-Henri Derron, Antoine Guérin, Didier Hantz, François Noel | ISTE-University of Lausanne | Switzerland | The rockfall failure hazard assessment: summary and new advances | FCB | Onsite |
| P6 | <u>Brian D. Collins</u> , Mark E. Reid, Jeffrey A. Coe, Jason W. Kean, Rex L. Baum, Randall W. Jibson, Jonathan W. Godt, Stephen L. Slaughter, Greg M. Stock | U.S. Geological Survey | USA | Progress and lessons learned from responses to landslide disasters | FCB | Onsite |
| P7 | <u>Claudio Margottini</u> | Embassy of Italy in Egypt | Egypt | Fukuoka IPL Award lecture: Behind-the-scenes in mitigation of landslides and other geohazards in low income countries - in memory of Hiroshi Fukuoka | FCB | Onsite |
| P8 | <u>Beena Ajmera</u> and Binod Tiwari | North Dakota State University | USA | Oldrich Hungr Award lecture: Recent Advances in the Methods of Slope Stability and Deformation Analyses | FCB | Onsite |
| Theme 1 Sendai Landslide Partnerships and Kyoto Landslide Commitment Contact: ICL secretariat <secretariat@iclhq.org> | | | | | | |
| Session 1.1 Sendai Landslide Partnerships, Kyoto Landslide Commitment, and International Programme on Landslides | | | | | | |
| 1-1 | <u>Kyoji Sassa</u> , Peter Bobrowsky, Kaoru Takara, Badaoui Rouhban | ICL | Japan | Kyoto 2020 Commitment for Global Promotion of Understanding and Reducing Landslide Disaster Risk | FCB | Onsite |
| 1-2 | <u>Kyoji Sassa</u> , Peter Bobrowsky, Kaoru Takara | ICL | Japan | International Consortium on Landslides, IPL, UNITWIN-UNESCO/KU/ICL Programme | FCB | Onsite |
| 1-3 | <u>Matjaž Mikoš</u> , Kyoji Sassa, Željko Arbanas | University of Ljubljana, Faculty of Civil and Geodetic Engineering | Slovenia | The ICL journal Landslides - 16 years of capacity development for landslide risk reduction | FCB | Onsite |
| 1-4 | <u>Kazuo Konagai</u> , Asiri Karunawardena and Kyoji Sassa | ICL | Japan | SATREPS project for Sri Lanka with regard to “Development of early warning technology of Rain-induced Rapid and Long-travelling Landslides” | FCB | Onsite |
| 1-5 | <u>Alexander Strom</u> and Kanatbek Abdrakhmatov | Geodynamics Research Center | Russia | Central Asia – rockslides' and rock avalanches' treasury and workbook | FCB | Onsite |
| 1-6 | <u>Biljana Abolmasov</u> , Uroš Đurić, Jovan Popović, Marko Pejić, Mileva Samardžić Petrović, Nenad Brodić | University of Belgrade, Faculty of Mining and Geology | Serbia | Results of recent monitoring activities on landslide Umka, Belgrade, Serbia - IPL 181 | FCB | Onsite |

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| 1-7 | <u>Matjaž Mikoš</u> , Nejc Bezak, Janko Logar, Matej Maček, Ana Petkovšek, Dušan Petrovič, Jošt Sodnik | University of Ljubljana, Faculty of Civil and Geodetic Engineering | Slovenia | Landslides in Weathered Flysch: From Activation to Deposition (WCoE 2017-2020) | FCB | Onsite |
| 1-8 | <u>Snježana Mihalić Arbanas</u> , Sanja Bernat Gazibara, Petra Jagodnik, Marin Sečan, Vedran Jagodnik, Martin Krkač, Željko Arbanas | University of Zagreb, Faculty of Mining, Geology and Petroleum Engineering | Croatia | Report of the Croatian WCoE 2017-2020: From landslide mapping to risk assessment | FCB | Onsite |
| 1-9 | <u>Leonardo Cascini</u> , Michele Calvello and Sabatino Cuomo | University of Salerno | Italy | LARAM School: an ongoing experience | FCB | Onsite |
| 1-10 | <u>Nicola Casagli</u> , Veronica Tofani, Filippo Catani, Sandro Moretti, Riccardo Fanti, Giovanni Gigli, Silvia Bianchini, Federico Raspini | University of Florence | Italy | Advanced technologies for Landslides (WCoE 2017-2020) | FCB | Onsite |
| 1-11 | <u>Biljana Abolmasov</u> , Mileva Samardžić Petrović, Ranka Stanković, Miloš Marjanović, Jelka Krušić, Uroš Đurić | University of Belgrade, Faculty of Mining and Geology | Serbia | Extreme rainfall event and its aftermath analysis - IPL 210 project progress report | FCB | Onsite |
| 1-12 | <u>Vít Vilímek</u> , Jan Klimeš, Josef Stemberk, Jan Burda, Petr Kycl, Jan Blahůt | Charles University | Czech Republic | Complex geomorphological and engineering geological research of landslides with adverse societal impacts | FCB | Onsite |
| 1-13 | <u>Željko Arbanas</u> , Josip Peranić, Martin Krkač, Vedran Jagodnik, Petra Jagodnik, Snježana Mihalić Arbanas | University of Rijeka | Croatia | Report of the IPL-219, IPL-220 and Croatian WCoE 2017-2020: From landslide investigation to landslide prediction and stabilization | FCB | |

Session 1.2 Landslide-induced Tsunamis

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| 1-14 | Yu-xiang Hua, Zhi-you Yub, <u>Jiawen Zhou</u> | Sichuan University | China | Numerical simulation of landslide-generated waves during the 11 October 2018 Baige landslide at the Jinsha River | TMI | |
| 1-15 | <u>Do Minh Duc</u> , Dang Quang Khang, Dao Minh Duc, Do Minh Ngoc, Dinh Thi Quynh, Dang Thi Thuy, Nguyen Khac Hoang Giang, Pham Van Tien, Nguyen Huu Ha | Hanoi University of Science | Vietnam | Analysis and modeling of a landslide-induced tsunami-like wave across the Truong river in Quang Nam province, Vietnam | TMI | Onsite |
| 1-16 | <u>Jan Blahůt</u> , Byron Quan Luna | Czech Academy of Sciences, IRSM | Czech Republic | Tsunami from the San Andrés Landslide on El Hierro, Canary Islands: first attempt using simple scenario | FCB | Onsite |
| 1-17 | <u>Kiichiro Kawamura</u> | Yamaguchi University | Japan | A sedimentological study of turbidite layers on a deep-sea terrace in the Japan Trench | FCB | No |
| 1-18 | <u>Pi-Chun Huang</u> , Shu-Kun Hsu, Song-Chuen Chen and Ching-Hui Tsai | National Central University | Chinese Taipei | Flank failure of the volcanic Turtle Island and the submarine landslide in the southernmost Okinawa Trough | FCB | Online Virtual |
| 1-19 | <u>Taro Kakinuma</u> | Kagoshima University | Japan | Numerical simulation for tsunami generation due to a landslide | FCB | Pre-recorded |
| 1-20 | <u>Federico Di Traglia</u> , Teresa Nolesini, and Nicola Casagli | Dipartimento di Scienze della Terra - Università di Firenze | Italy | Dealing with mass flow-induced tsunamis at Stromboli volcano: monitoring strategies | FCB | Online Virtual |

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| 1-21 | <u>Kiichiro Kawamura</u> , Ayaka Wada, Miriam Römer, Michael Strasser, Hiske G Fink, Yoshihiro Ito, Ryota Hino | Yamaguchi University | Japan | Detailed seafloor observation on a deep-sea terrace along the Japan Trench after the 2011 Tohoku Earthquake | FCB | No |
| Invited and accepted speakers without full papers in books and journal, and e-proceedings in Part 2 Landslide induced tsunami | | | | | | |
| 1-23 | <u>Wahyu Widiyanto</u> | National Cheng Kung University | Chinese Taipei | Post-event field surveys of 2018 tsunami in Palu Bay and Sunda Strait | 1PA | Pre-recorded |
| 1-24 | <u>Francesco Bregoli</u> | IHE Delft Institute for Water Education, Water Science and Engineering Department | Netherlands | On the energy transfer from 3D granular landslide to water body explained by an experimentally-based numerical model | 1PA | |
| 1-26 | <u>Tso-Ren Wu</u> | National Central University | Chinese Taipei | Three-Dimensional Simulation on the Rockslide and Mudslide Generated Tsunamis | 1PA | Online Virtual |
| 1-27 | <u>Valentin Heller</u> | University of Nottingham | UK | Landslide-tsunami propagation in different water body geometries | 1PA | Pre-recorded |
| Session 1.3 Landslides at UNESCO designates sites and contribution from WMO, FAO, IRDR | | | | | | |
| 1-29 | Irina Pavlova, Soichiro Yasukawa, Aurélien Dousseron, Vincent Jomelli | UNESCO | France | Landslides at UNESCO-designated sites | FCB | |
| 1-30 | Claudio Margottini, <u>Daniele Spizzichino</u> | ISPRA | Italy | Traditional knowledge and local expertise in landslide risk mitigation of world heritages | FCB | Onsite |
| 1-31 | <u>Stefano Morelli</u> , Veronica Pazzi, Veronica Tofani, Federico Raspini, Silvia Bianchini, Nicola Casagli | Department of Earth Sciences | Italy | Reconstruction of the slope instability conditions before the 2016 failure in an urbanized district of Florence (Italy), a UNESCO World Heritage Site | FCB | Online Virtual |
| 1-32 | <u>William Frodella</u> , Daniele Spizzichino, Giovanni Gigli, Mikheil Elashvili, Claudio Margottini, Alberto Villa, Paolo Frattini, Giovanni Crosta, Nicola Casagli | University of Florence | Italy | Integrating Kinematic analysis and Infrared Thermography for instability processes assessment in the rupestrian monastery complex of David Gareja (Georgia) | FCB | Online Virtual |
| 1-33 | <u>William Frodella</u> , Daniele Spizzichino, Andrea Ciampalini, Rosi Ascanio, Claudio Margottini, Nicola Casagli | University of Florence | Italy | Shallow landslide susceptibility assessment in the High City of Antananarivo (Madagascar) | FCB | Online Virtual |
| 1-34 | <u>Rodrigo Alcaíno-Olivares</u> , Matthew A. Perras, Martin Ziegler and Kerry Leith | York University | Canada | Thermo-mechanical cliff stability at tomb KV42 in the Valley of the Kings, Egypt | FCB | Onsite |
| 1-35 | <u>Xu Tang</u> , Kyoji Sassa, Guy Brousseau, Johannes Cullmann, Zheqing Fang | Fudan Integrated Research on Disaster Risk, International Center of Excellence | China | Collaboration in MHEWS through an Integrated Way: The Great Efforts Contributed by Multi-stakeholder Partnership at National, Regional and International Levels | FCB | Onsite |
| 1-36 | <u>Yuka Makino</u> , Thomas Hofer, Mustapha Azdad, Faizul Bari | FAO | Italy | Resilient Watershed Management: Landscape Approach to Climate Change and Disaster Risk Reduction | FCB | Online virtual or Pre-recorded |
| 1-37 | Qunli Han, <u>Fang Lian</u> | Integrated Research on Disaster Risk | China | Integrating DRR into the conservation and management mechanisms of the internationally designated sites – view of IRDR | FCB | Onsite or Online Virtual |

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| 1-38 | <u>Giuseppe Esposito</u> , Olga Petrucci | CNR-IRPI | Italy | Landslide hazard and risk assessment for civil protection early response | FCB | Online Virtual |
| 1-39 | Irasema Alcántara-Ayala | Institute of Geography, National Autonomous University of Mexico | Mexico | Size matters: the impact of small, medium and large landslide disasters | FCB | Onsite or Online Virtual |
| 1-40 | <u>Shengnan WU</u> , Yu LEI, Pihua Yin, Peng CUI, Zhengtao ZHANG | Institute of Geographic Sciences and Natural Resources Research, CAS | China | Practices of Public Participation Early Warning System for Geological Hazards in China | FCB | Onsite or Online Virtual |

Session 1.4 Education and Capacity Development for Risk Management and Risk Governance

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| 1-41 | <u>Emanuele Invernizzi</u> , Grana Donna, Federico Raspini, Ascanio Rosi, Samuele Segoni and Nicola Cecchi | University of Studies of Florence | Italy | Early warning systems in Italy: state-of-the-art and future trends | FCB | Online Virtual |
| 1-42 | <u>Jan Klimeš</u> , Ping Lu | IRSM CAS | Czech Republic | Community-based landslide risk management in contrasting social environments, cases from the Czech Republic | FCB | Onsite |
| 1-43 | Wen-I Wu, Tsai-Ming Yu, Chia-Yun Wei, <u>Lee-Ping Shi</u> , San-shyan Lin and Jen Cheng Liao | Taiwan Construction Research Institute | Chinese Taipei | Refinement Progresses on Freeway Slope Maintenance after a Huge Landslide Disaster | FCB | Onsite |
| 1-44 | <u>Ricardo J. Garnica-Peña</u> , Gerardo Cardón-Idelfonso and Irasema Alcántara-Ayala | Institute of Geography, National Autonomous University of Mexico | Mexico | Landslide exposure community-based mapping: a first encounter in a small rural locality of Mexico | FCB | Onsite or Online Virtual |
| 1-45 | <u>Elizabeth A. Holcombe</u> , Rose Hen-Jones, Paul J. Vardanega, Mair E.W. Beesley, Charlotte E. L. Gilder, Elisa Bozzolan | University of Bristol | UK | Co-producing data and decision support tools to reduce landslide risk in the humid tropics | FCB | Pre-recorded |
| 1-46 | A A Virajh Dias, N N Katuwala and S S I Kodagoda | Central Engineering Consultancy Bureau | Sri Lanka | Effective global communication on disaster mitigation of Landslides through E-Conferencing | FCB | |
| 1-47 | <u>Mohamad Fazli Sardi</u> , Ahmad Fairuz Mohd Yusof, Khamarrul Azahari Razak, Rudzidatul Akmam Dziauddin, Siti Hajar Othman and Munirah Zulkaple | UNIVERSITI TEKNOLOGI MALAYSIA (UTM) KUALA LUMPUR | Malaysia | ICT-based landslide disaster simulation drill: Road to achieve 2030 global commitment | FCB | Pre-recorded |
| 1-48 | <u>Sao-Jeng Chao</u> , Chia-Yun Wei, Han-Sheng Liu, Chien-Hua Kao, Hao Yang and Cheng-Yu Huang | National Ilan University | Chinese Taipei | A Preliminary Work of Safety Potential Analysis Model for Anchors Used on Freeway Slopes | FCB | Onsite |
| 1-49 | <u>Tamara Breuninger</u> , Carolina Garcia-Londoño, Moritz Gamperl, Kuroschi Thuro | Technical University of Munich | Germany | Initial Experiences of Community Involvement in an Early Warning System in Informal Settlements in Medellín, Colombia | FCB | Pre-recorded |
| 1-50 | <u>Hendy Setiawan</u> , Endah Retnaningrum, Thema Arrisaldi, and Wahyu Wilopo | Gadjah Mada University | Indonesia | Capacity Building and Community Preparedness towards Landslide Disaster in Pagerharjo Village, Kulon Progo Regency of Yogyakarta, Indonesia | FCB | Onsite |
| 1-51 | <u>Josip Peranić</u> , Mariama Vrvoda Prodan, Marin Sećanj, Sanja Bernat Gazibara, Snježana Mihalić Arbanas, Željko Arbanas | University of Rijeka, Faculty of Civil Engineering | Croatia | Protection of a cultural heritage site in Croatia from rockfall occurrences | FCB | Onsite |
| 1-52 | <u>Alexandra Urgilez</u> , Jessica Robles, Mark Bakker, Pablo Guzman, Thom Bogaard | Delft University of Technology | Netherlands | Characterization and hydrological analysis of the Guarumales deep-seated landslide in the tropical Ecuadorian Andes | EPR | Onsite |

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| 1-53 | <u>Kazuki Murata</u> , Shinji Sassa, Tomohiro Takagawa | Port and Airport Research Institute, National Institute of Maritime, Port, and Aviation Technology | Japan | Tsunami Disaster caused by the 1923 Great Kanto Earthquake and the Importance of Submarine Landslides | EPR | Onsite |
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Session 1.5 SATREPS-Rain-induced Rapid and Long Travelling Landslides

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| 1-55 | Kazuo Konagai , ASIRI Karunawardena, Kyoji Sassa, Naoya Orita, Kazuo Anazawa and Takeshi Asaeda | ICL | Japan | Overview of the Project RRL | 1PA | Onsite |
| 1-56 | <u>Asiri Karunawardena</u> and Kithsiri N. Bandara | NBRO | Sri Lanka | Overview of the challenges currently ongoing at NBRO | 1PA | |
| 1-57 | <u>Virajh Dias</u> | Central Engineering Consultancy Bureau | Sri Lanka | The role of CECB, as a fully owned State Enterprise by the Government of Sri Lanka, in mitigating landslide risk nationwide in Sri Lanka | 1PA | |
| 1-59 | <u>Toru Koike</u> | | | Overview of the Project SABO | 1PA | |
| 1-60 | <u>Ryo Onishi</u> | | | Plan/ policy for developing the technology of precise weather forecast in mountain regions of Sri Lanka | 1PA | Onsite |
| 1-61 | <u>Shiho Asano</u> | Forestry and Forest Products Research Institute | Japan | Strategy for monitoring creeping movements of unstable soil masses triggered by heavy rain at pilot sites in tropical forested mountain | 1PA | Onsite |
| 1-62 | <u>Ryosuke Uzuoka</u> | Kyoto University | Japan | Predicting groundwater pressure build-up, and identifying locations of RRLs and their | 1PA | Onsite |
| 1-63 | <u>Katsuo Sasahara</u> , Go Sato and Munenari INOBUCHI | Kochi University | Japan | Strategy for implementing the RRL early warning system | 1PA | Onsite |

One-page abstract papers for Theme 1

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| 1-64 | Lili Xiao | Chang'an University | China | The theory, validation and application of Tsunami Squares simulation approach to landslide generated waves | 1PA | Online virtual |
| 1-65 | Bihong Fu | Aerospace Information Research Institute, Chinese Academy of Sciences | China | Monitoring and Assessment of Landslides related to 2017 Large Earthquake and Their Influences on Heritage Sites in Jiuzhaigou UNESCO Heritage Using the Remote Sensing Technology | 1PA | |
| 1-66 | Hai Tan | Changjiang Institute of Survey, Planning, Design and Research | China | Numerical modeling of landslide-tsunamis based on a coupled DEM-SPH model | 1PA | |
| 1-67 | Andres Felipe Alonso Rodriguez | State Key Laboratory for Geohazard Prevention and Geoenvironment Protection | China | Role of Near Fault Ground motion pulse traits in Landslide Hazards | 1PA | |
| 1-69 | Lorenzo Solari | Centre Tecnològic de Telecomunicacions de Catalunya | Spain | Regional scale landslide monitoring based on Sentinel-1 data | 1PA | Online Virtual or Pre-recorded |
| 1-70 | Satoru Nishikawa | Nagoya University, Disaster Mitigation Research Center | Japan | Ichi-Nichi-Mae (The Day before the Disaster) Project for Landslide Awareness and Risk Communication | 1PA | Onsite |
| 1-71 | Junji Miyamoto | Toyo Construction | Japan | Submarine landslide study in a drum centrifuge | 1PA | Onsite |
| 1-72 | Akira Doi | Japan Bosai Platform | Japan | "Challenging the disaster prevention business with the policy ""Investment before disaster will save your community and economy""" | 1PA | |

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| 1-73 | Bastian van den Bout | Twente University | Netherlands | Impact of multi-hazard interactions on risk assessment | 1PA | Onsite |
| 1-74 | Denis Gorobtsov | RSGPU | Russia | Landslides threatening russian culture heritage objects | 1PA | |
| 1-75 | Oswaldo Luiz Leal de Moraes | CEMADEN | Brazil | Monitoring and issuing landslides early warning in Brazil: CEMADEN and its Innovative Methodology | 1PA | |
| 1-76 | Francisco Dourado | UERJ | Brazil | Landslides disasters in Brazil | 1PA | |
| 1-77 | Aline Silva | Rio de Janeiro Geological Survey | Brazil | Rio de Janeiro State Landslide Risk Management: Experience of the Rio de Janeiro Geological Survey | 1PA | |
| 1-78 | Marcos Mendonca | Federal University of Rio de Janeiro | Brazil | Population vulnerability assessment and its effect in landslide risk mapping – The case of Angra dos Reis, Rio de Janeiro, Brazil | 1PA | Online Virtual |
| 1-79 | Raymond Cheung | Geotechnical Engineering Office | China | Landslide Risk Management in Hong Kong | TMI | Onsite |
| 1-80 | Dongxu Yang | Institute of Mountain Hazards and Environment, CAS | China | Characteristics of sediment transportation and abrasion behavior of glacial debris-flow in Southeast Tibet, China | 1PA | Onsite |
| 1-81 | Louis Ge | National Taiwan University | Chinese Taipei | International Training Course on Slope Land Disaster Reduction | 1PA | |
| 1-82 | Chia-Yun Wei | Freeway Bureau, Ministry of Transportation and Communications | Chinese Taipei | Refinement Progress on Freeway Slope Maintenance after a Huge Landslide Disaster | 1PA | |
| 1-83 | Tsai-Ming Yu | Freeway Bureau, Ministry of Transportation and Communications | Chinese Taipei | Refinement Progress on Freeway Slope Maintenance after a Huge Landslide Disaster | 1PA | |
| 1-84 | Wen-I Wu | Freeway Bureau, Ministry of Transportation and Communications | Chinese Taipei | Refinement Progress on Freeway Slope Maintenance after a Huge Landslide Disaster | 1PA | |
| 1-85 | San-Shyan Lin | Dept. of Harbor and River Engineering, National Taiwan Ocean University | Chinese Taipei | Refinement Progress on Freeway Slope Maintenance after a Huge Landslide Disaster | 1PA | |
| 1-86 | Jen-Cheng Liao | Taiwan Construction Research Institute | Chinese Taipei | Refinement Progress on Freeway Slope Maintenance after a Huge Landslide Disaster | 1PA | |
| 1-87 | Gianvito Scaringi | Charles University | Czech Republic | Landslide risk education at university | 1PA | Onsite |
| 1-88 | Pascal Iacroux | IRD | France | Risk management over the Maca slow-moving landslide, Peru | 1PA | |
| 1-89 | Eleftheria Poyiadji | Institute of Geology and Mineral Exploration | Greece | Landslides in Greece and related legislation: difficulties and potential improvements | 1PA | Onsite |
| 1-90 | Bhagwati Joshi | Government Post Graduate College, Rudrapur, Uttarakhand, India | India | Empowering Women in Landslide Risk Management in Himalaya | 1PA | |
| 1-91 | Hemalatha Thirugnanam | Amrita Vishwa Vidyapeetham | India | Challenges and opportunities in landslide early warning system | 1PA | Online Virtual |
| 1-92 | Surya Parkash | National Institute of Disaster Management | India | Emerging Issues and Innovative Strategies for Landslides Risk Management | 1PA | Online Virtual |
| 1-93 | Ngadisih Ngadisih | Universitas Gadjah Mada | Indonesia | Community-based Landslide Risk Reduction in Merawu Watershed, Central Java | 1PA | |
| 1-94 | Hatma Suryatmojo | Universitas Gadjah Mada | Indonesia | Landslide Risk Reduction for Human Survivability and Environmental Sustainability | 1PA | |

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| 1-95 | Gulsan Ara Parvin | Kyoto University | Japan | An overview of the Nature and Characteristics of Landslides in Bangladesh, Bhutan, India and Japan | 1PA | |
| 1-96 | Hiroshi Ogawa | NIPPON KOEI co.jp | Japan | Landslide mechanism and technical transfer at Coalfield area - Case of central Asia Kyrgyz | 1PA | Online Virtual |
| 1-97 | Mohd Khairudin Muhamed | Ampang Jaya Municipal Council | Malaysia | Using Slope Inventories In Managing Landslide Risk Area | 1PA | |
| 1-99 | Mateja Jemec Aulfic | Geological Survey of Slovenia | Slovenia | On the importance of geological data for landslide risk reduction in Slovenia | 1PA | |
| 1-100 | Athauda Arachchige Virajh Dias | Central Engineering Consultancy Bureau | Sri Lanka | Effective Global Communication through E-Conferencing | 1PA | |
| 1-101 | Sowedi Masaba | Busitema University | Uganda | Preparedness for landslide disaster risks in Mount Elgon region, Uganda | 1PA | |
| 1-102 | Ellen Robson | Newcastle University | UK | Cost-effective road slope stabilisation for low-income countries | 1PA | Online Virtual |
| 1-103 | Gopi Basyal | Durham University | UK | Local perceptions and response to changing landslide risk following the 2015 Gorkha Earthquake: Implications for effective risk reduction | 1PA | |
| 1-104 | Dave Petley | University of Sheffield | UK | Creating a rapid understanding of landslide disasters through pooling and crowd-sourcing multiple data sources | 1PA | |
| 1-105 | Bayes Ahmed | University College London (UCL) | UK | The impact of culture in landslide disaster risk reduction | 1PA | Onsite or Online Virtual |

Theme 2 From Mapping to Hazard and Risk Zonation

Contact: Paola Reichenbach <paola.reichenbach@irpi.cnr.it>

Session 2.1 Landslide recognition and mapping

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| 2-1 | <u>Toyohiko Miyagi</u> | Advantech Co., Ltd | Japan | Landslide Recognition and Mapping for Slope Disaster Risk Reduction and Management | FCB | Onsite |
| 2-3 | <u>Rafał Sikora</u> , Tomasz Wojciechowski | Polish Geological Institute - National Research Institute | Poland | New Landslide Inventory Map of the Sudetes Mountains (South-Western Poland) | FCB | Onsite |
| 2-4 | <u>Petra Jagodnik</u> , Vedran Jagodnik, Željko Arbanas and Snježana Mihalić Arbanas | Faculty of Civil Engineering, University of Rijeka | Croatia | Gullies as landforms for landslide initiation – examples from the Dubračina River Basin (Croatia) | FCB | Pre-recorded |
| 2-5 | <u>Kamila Pawluszek-Filipiak</u> , Andrzej Borkowski | Wrocław University of Environmental and Life Sciences | Poland | Opportunities and challenges of the object-oriented automatic landslide detection from the high resolution Digital Elevation Model | FCB | Onsite |
| 2-6 | <u>Mio Kasai</u> | Hokkaido University | Japan | Can Repeat LiDAR Surveys Locate Future Massive Landslides? | FCB | Onsite |
| 2-8 | <u>Vedran Damjanović</u> , Snježana Mihalić Arbanas, Sanja Bernat Gazibara, Josip Peranić, Marin Sećanj, Martin Krkač, Željko Arbanas | RGNF Zagreb | Croatia | Landslide mapping based on UAV photogrammetry using SfM – The Prnjavor Čuntički landslide case study, Croatia | FCB | Onsite |
| 2-9 | <u>Nguyen Kim Thanh</u> , Toyohiko Miyagi, Shinobu Isurugi, Dinh Van Tien, Le Hong Luong, Do Ngoc Ha | Institute of Transport Science and Technology, Vietnam | Vietnam | Developing recognition and simple mapping by UAV/SfM for local resident in mountainous area in Vietnam – A case study in Po Xi Ngai Community, Laocai province | FCB | Onsite |
| 2-10 | <u>Vladimir Greif</u> , Jaroslav Busa and Martin Mala | Comenius University in Bratislava | Slovakia | Landslide activity classification based on Sentinel-1 satellite radar interferometry data | FCB | Onsite |
| 2-11 | <u>Kamila Pawluszek-Filipiak</u> , Andrzej Borkowski | Wrocław University of Environmental and Life Sciences | Poland | Updating Landslide Activity State and Intensity by Means of Persistent Scatterer Interferometry | FCB | Onsite |

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| 2-12 | <u>Carlo Tacconi Stefanelli</u> , Nicola Casagli, Filippo Catani | University of Florence | Italy | Damming predisposition of river networks: a mapping methodology | FCB | Pre-recorded |
| 2-13 | <u>Pham Van Tien</u> , Le Hong Luong, Le Minh Nhat, Nguyen Kim Thanh, and Phuong Van Cuong | Institute of Transport Science and Technology | Vietnam | Landslides along Halong-Vandon Expressway in Quang Ninh province, Vietnam | FCB | Onsite |
| Session 2.2 Landslide hazard assessment and zonation – susceptibility modelling | | | | | | |
| 2-14 | <u>Hiroshi Yagi</u> , Kazunori HAYASHI and Go Sato | Yamagata University | Japan | Landslide susceptibility mapping by interpretation of aerial photographs, AHP and precise DEM | FCB | Onsite |
| 2-15 | <u>Olga Barykina</u> , Oleg Zerkal, Igor Averin, Eugene Samarin | Lomonosov Moscow State University | Russia | New data on geological conditions of landslide activity on Vorobyovy Gory (Moscow, Russia) | FCB | Onsite |
| 2-16 | Massimiliano Bordoni, Alberto Vercesi, Michael Maerker, Valerio Vivaldi and <u>Claudia Meisina</u> | University of Pavia | Italy | Impact of agricultural management in vineyards to landslides susceptibility in Italian Apennines | FCB | Onsite |
| 2-17 | Sandra García Reyes, <u>Gabriel Legorreta Paulin</u> , Rutilio Castro Miguel, and Fernando Aceves Quesada | Universidad Nacional Autonoma de Mexico | Mexico | Landslide susceptibility in two secondary rivers of La Ciénega watershed, Nevado de Toluca volcano, Mexico | FCB | Onsite |
| 2-18 | Naorem Sarju Singh, <u>Sharad Kumar Gupta</u> , Chandra Shekhar Dubey, Dericks P. Shukla | Indian Institute of Technology Mandi | India | An Ordinal Scale Weighting Approach for Susceptibility Mapping Around Tehri Dam, Uttarakhand, India | FCB | Pre-recorded or Online Virtual |
| 2-19 | <u>Meei-Ling Lin</u> , Jian-Fang Wang, Yen-Cheng Chen, and Te-Wei Chen | National Taiwan University | Chinese Taipei | Potential Analysis of Deep-seated Landslides Caused by Typhoon Morakot Using Slope Unit | FCB | Onsite |
| 2-20 | <u>Dymphna Nolasco-Javier</u> , Lalit Kumar | University of the Philippines Baguio | Philippines | Landslide susceptibility assessment using binary logistic regression in northern Philippines | FCB | Pre-recorded |
| 2-21 | Ilyas A Huqqani, <u>Lea Tien Tay</u> and Junita Mohamad-Saleh | Universiti Sains Malaysia | Malaysia | Landslide Hazard Mapping of Penang Island Malaysia based on Multilayer Perceptron Approach | FCB | Online Virtual |
| 2-22 | Weidong Wang, Zhuolei He, <u>Zheng Han</u> and Yange Li | Central South University | China | Landslide Susceptibility Mapping Based on the Deep Belief Network: A Case Study in Sichuan Province, China | FCB | Onsite |
| 2-23 | <u>Jie Dou</u> , Ali P. Yunus, Abdelaziz Merghadi, Xie-kang Wang, Hiromitsu Yamagishi | The University of Tokyo | Japan | A Comparative study of deep learning and conventional neural network for evaluating landslide susceptibility using landslide initiation zones | FCB | Onsite |
| 2-24 | <u>Mariano Di Napoli</u> , Giuseppe Bausilio, Andrea Cevasco, Pierluigi Confuorto, Andrea Mandarino, <u>Domenico Celestano</u> | Federico II University of Napoli, Italy | Italy | Landslide susceptibility assessment by ensemble-based Machine Learning models | FCB | Onsite |
| 2-25 | <u>Bahareh Kalantar</u> , Naonori Ueda, Vahideh Saeidi, Parisa Ahmadi | RIKEN Center for Advanced Intelligence Project | Japan | Application of Machine Learning Algorithms and Their Ensemble for Landslide Susceptibility Mapping | FCB | Onsite |
| 2-26 | <u>Anika Braun</u> , Katrin Dohmen, Hans-Balder Havenith and Tomas FernandezSteeger | Institute of Applied Geosciences, Technical University Berlin | Germany | Overcoming data scarcity related issues for landslide susceptibility modeling with machine learning | FCB | Onsite or Online Virtual |
| 2-27 | <u>Jewgenij Torizin</u> , Michael Fuchs, Dirk Kuhn, Dirk Balzer, Lichao Wang | Institute for Geosciences and Natural Resources (BGR) | Germany | Practical accounting for uncertainties in data-driven landslide susceptibility models. Examples from the Lanzhou case study | FCB | Onsite |

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| 2-28 | <u>Victor Carvalho Cabral</u> , Fábio Augusto Gomes Vieira Reis | Universidade Estadual Paulista | Brazil | Assessment of shallow landslides susceptibility using SHALSTAB and SINMAP at Serra do Mar, Brazil | FCB | Onsite or Pre-recorded |
| 2-29 | Miloš Marjanović, <u>Biljana Abolmasov</u> , Igor Peshevski, James Reeves and Irena Georgievska | University of Belgrade, Faculty of Mining and Geology | Serbia | Regional slope stability analysis in landslide hazard assessment context, North Macedonia example | FCB | Onsite |
| 2-31 | <u>Shoji Doshida</u> | National Research Institute of Fire and Disaster, Japan | Japan | Evaluation of secondary landslide susceptibility for the rescue activity using LiDAR UAV data | FCB | Onsite |
| 2-32 | <u>Johnny Alexander Vega</u> , César Augusto Hidalgo | Universidad de Medellin | Colombia | Methodology for landslides assessment causing river channel obstructions and the consequent water shortage in rural communities | FCB | Onsite |

Session 2.3 Landslide hazard assessment and zonation – temporal and size modelling

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| 2-33 | <u>Aykut Akgun</u> , Tolga Gorum, Hakan A. Nefeslioglu | Karadeniz Technical University | Turkey | Landslide Size Distribution Characteristics of Cretaceous and Eocene Flysch Assemblages in the Western Black Sea Region of Turkey | FCB | Online Virtual |
| 2-34 | <u>Stefan Steger</u> , Volkmann Mar, Christian Kofler, Massimiliano Pittore, Marc Zebisch, Stefan Schneiderbauer | Eurac Research | Italy | A statistical exploratory analysis of inventoried slide-type movements for South Tyrol (Italy) | FCB | Onsite |
| 2-35 | <u>Gabriel Legorreta Paulin</u> , Lilia Arana-Salinas, Rutilio Castro Miguel, JeanFrançois Yves Pierre Parrot, and Trevor Contreras | Universidad Nacional Autonoma de Mexico | Mexico | Assessing landslide volume for landform hazard zoning purposes | FCB | Onsite |
| 2-36 | Marc-André Brideau, Saskia de Vilder, <u>Chris Massey</u> , Andrew Mitchell, Scott McDougall, and Jordan Aaron | GNS Science | New Zealand | Empirical relationships to estimate the probability of runout exceedance for various landslide types | FCB | |
| 2-37 | <u>Rex L Baum</u> | U. S. Geological Survey | USA | Rapid sensitivity analysis for reducing uncertainty in landslide hazard assessment | FCB | Onsite |
| 2-38 | <u>Kana Nakatani</u> , Yuji Hasegawa, Yoshifumi Satofuka | Kyoto University, Graduate School of Agriculture | Japan | Applying debris flow simulation for detailed hazard and risk mapping | FCB | Onsite |
| 2-39 | Xudong Hu, <u>Kaiheng Hu</u> , Jinbo Tang, Xiaopeng Zhang, Yanji Li, Chaohua Wu | Institute of Mountain Hazards and Environment, CAS | China | Debris-Flow Peak Discharge Calculation Model Based on Erosion Zoning | FCB | Online Virtual |
| 2-41 | <u>Takashi Koi</u> , Yasuhiro Fujisawa and Nobuo Anyoji | Hokkaido University | Japan | Rainfall-induced lahar occurrences shortly after eruptions and its initiation processes in Japan | FCB | Onsite |
| 2-42 | <u>Jiaying Li</u> , Weidong Wang | Central South University | China | Spatiotemporal Assessment of Geological Hazard Safety along Railway Engineering using a Novel Method: A Case Study of the Sichuan-Tibet Railway, China | FCB | Online Virtual |
| 2-43 | <u>Mohamed Rouai</u> , Abdelilah Dekayir and Khaoula Qarqori | Moulay Ismail University of Meknes | Morocco | Slope Stability and Landslide Hazard in Volubilis Archaeological Site (Morocco) | FCB | Onsite |

Session 2.4 Landslide data and information for disaster mitigation

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|------|--|---|----------|--|-----|--------|
| 2-44 | Zamri Ramli, <u>Ferdaus Ahmad</u> | Department of Mineral and Geoscience Malaysia | Malaysia | Slope Hazard and Risk Mapping Project (PBRC) – An Overview of Disaster Risk Reduction Initiative | FCB | Onsite |
| 2-45 | <u>Mohd Farid Abdul Kadir</u> , Khamarrul Azahari Razak, Ferdaus Ahmad, Dzul Khaimi Khailani | Department of Mineral and Geoscience Malaysia | Malaysia | Risk-informed Land Use Planning for Landslide Disaster Risk Reduction: A Case Study of Cameron Highlands, Pahang, Malaysia | FCB | Onsite |

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| 2-46 | <u>Paolo Tarolli</u> , Anton Pijl, Sara Cucchiaro | University of Padova | Italy | Landslides in steep-slope agricultural landscapes | FCB | Online Virtual |
| 2-47 | <u>Matteo Del Soldato</u> , Lorenzo Solari, Davide Festa, Pierluigi Confuorto, Silvia Bianchini & Nicola Casagli | University of Firenze | Italy | From satellite images to field survey: a complete scheme of landslide InSAR monitoring | FCB | Online Virtual or Pre-recorded |
| 2-48 | <u>Toyohiko MIYAGI</u> , Nguyen Kim Thanh, Dinh Van Tien, Le Hong Luong, and Quang Van Viet | Advantech Co., Ltd | Japan | Slope disaster risk reduction map as a communication tool for community based DRR in Japan & Vietnam | FCB | Onsite |
| Session 2.5 Landslide vulnerability of people, communities and the built environment | | | | | | |
| 2-49 | <u>Paola Salvati</u> , Mauro Rossi, Cinzia Bianchi and Fausto Guzzetti | CNR-IRPI | Italy | People vulnerability to landslide: risky behaviours and dangerous conditions by gender and age | FCB | Onsite |
| 2-50 | <u>Erica Akemi Goto</u> , Summer Gray, Edward Keller, Keith C. Clarke | UCSB | USA | Using mixed-methods to understand community vulnerability to debris flows in Montecito, CA | FCB | Onsite |
| 2-51 | <u>Dario Peduto</u> , Gianfranco Nicodemo, Nicoletta Nappo and Giovanni Gullà | University of Salerno | Italy | Innovation in analysis and forecasting of vulnerability to slow-moving landslides | FCB | Onsite or Online Virtual |
| 2-52 | <u>Silvia Bianchini</u> , Lorenzo Solari, Anna Barra, Oriol Monserrat, Michele Crosetto, Filippo Catani | University of Firenze | Italy | Sentinel-1 PSI data for the evaluation of landslide geohazard and impact | FCB | Online Virtual |
| 2-53 | <u>Ricardo Garnica-Peña</u> , Galdino Garcia-Marroquin and Irasema AlcántaraAyala | Institute of Geography, National Autonomous University of Mexico | Mexico | On the use of UAVs for landslide exposure of households: La Gloria neighbourhood, Teziutlán, Puebla | FCB | Onsite or Online Virtual |
| 2-54 | <u>Erica Akemi Goto</u> , Keith C. Clarke | UCSB | USA | Ordinal Logistic Regression to automatically classify shallow landslide risk level in Sao Paulo city, Brazil | FCB | Onsite |
| 2-55 | <u>Aditi Singh</u> , Debi P. Kanungo and Pravin Kr. Singh | Gautam Buddha University | India | Site-specific risk assessment of buildings exposed to rock fall in India- A case study | FCB | Pre-recorded or Online Virtual |
| E-proceedings papers for Theme 2 | | | | | | |
| 2-56 | <u>Timotej Verbovšek</u> , Tomislav Popit | University of Ljubljana, Faculty of Natural Sciences and Engineering | Slovenia | Maximum Likelihood Classification method for detection of litho-geomorphological units in the Vipava Valley, SW Slovenia | EPR | Onsite |
| 2-57 | <u>Hiromitsu Yamagishi</u> , Junko Iwahashi, and Fumaki Yamazaki | Hokkaido Research Center of Geology | Japan | Landslides Triggered by the September 6th 2018 Hokkaido Eastern Iwate Earthquake - Topographic and Geologic GIS-LP Analyses | EPR | Onsite |
| 2-58 | <u>Christian Arnhardt</u> , Nikhil Nedumpallile Vasu, Ng Tham Fatt, Elanni Affandi, Vanessa Banks, Andrew Marchant, Joy Jacqueline Pereira, Helen Reeves | British Geological Survey | UK | An expert-based Landslide susceptibility assessment on city scale level with limited data - an example from Kuala Lumpur City | EPR | Onsite |
| 2-59 | <u>Michio Ishigaki</u> | OYO Corporation | Japan | The Advanced Method for Detecting Geotechnical Risks of Landslide Failures by Surveying Historical Surface Deformation and Underground Water | EPR | Onsite |
| One-page abstract papers for Theme 2 | | | | | | |
| 2-60 | Merghadi Abdelaziz | Larbi Tebessi University | Algeria | A practical Guide Towards Automating Landslide Susceptibility Mapping using Machine Learning: Case Study of Mila Basin | IPA | |

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|------|-----------------------|--|----------------|---|-----|--------------------------------|
| 2-61 | Farida Boulaghmen | University of Amar Telidji Laghouat | Algeria | Identification and multidisciplinary Diagnostic of Flood Risk Management in Algeria case of two Wilayas | 1PA | Online Virtual or Pre-recorded |
| 2-62 | Abdelaziz Merghadi | Larbi Tebessi University | Algeria | A practical Guide Towards Automating Landslide Susceptibility Mapping using Machine Learning: Case Study of Mila Bassin. | 1PA | |
| 2-63 | Shahram Nasiri | The University of Queensland | Australia | Concerns over reliable earthquake-induced landslide hazard assessment: Developing sophisticated geotechnical databases and 3D landslide inventories | 1PA | Onsite |
| 2-65 | Biswajeet Pradhan | University of Technology Sydney | Australia | Some technical misconceptions in spatial landslide hazard modelling | 1PA | |
| 2-66 | Thomas Glade | University of Vienna | Austria | A national landslide susceptibility assessment in Austria | 1PA | |
| 2-68 | Maria Papathoma-Kohle | University of Natural Resources and Life Sciences, Institute for Mountain Risk Engineering | Austria | Physical vulnerability of buildings to debris flow-state of the art and future challenges | 1PA | |
| 2-69 | Rajib Kumar Saha | Geological Survey of Bangladesh | Bangladesh | Landslide hazards of Thanchi-Alikadam Upazila, Bandarban Hill District, Bangladesh | 1PA | Online Virtual |
| 2-70 | Younus Ahmed Khan | University of Rajshahi | Bangladesh | Landslide hazard and risk map of Chottogram hill Districts | 1PA | |
| 2-71 | Olivier Dewitte | Royal Museum for Central Africa | Belgium | Landslide timing in a data-scarce tropical environment: from recent to very old processes in the Kivu Rift | 1PA | Onsite |
| 2-72 | Ursula Guerra | Fundacao GEO-RIO | Brazil | PhD Student | 1PA | |
| 2-73 | Richard Guthrie | Stantec | Canada | Refining Landslide Runout Threats Using a New, Agent-Based, Landslide Runout Model | 1PA | |
| 2-74 | Vanessa Cuervo | BGC Engineering Inc., University of Waterloo | Canada | Tailings Dam Failure Hazard Assessment | 1PA | |
| 2-77 | Sergio Sepulveda | Universidad de OHiggins | Chile | Landslide vulnerability changes and migration in Antofagasta, Northern Chile | 1PA | Onsite or Online Virtual |
| 2-79 | Wentao Yang | Beijing Forestry University | China | Landslide surface recovery after major earthquakes around the globe | 1PA | |
| 2-80 | Shou Hao Chiang | National Central University | Chinese Taipei | Applying Multi-temporal Synthetic Aperture Radar Imagery for Event Landslides Detection | 1PA | |
| 2-81 | Paulo Silva | Universidad Nacional de Colombia | Colombia | Zonificacion Susceptibilidad cuenca Bogota | 1PA | |
| 2-82 | Edier Aristizabal | National University of Colombia | Colombia | rainfall-induced snow landslide susceptibility assessment in mountainous and tropical scarce-data region of the Colombian Andes | 1PA | Onsite |
| 2-83 | Petra Domlija | University of Rijeka, Faculty of Civil Engineering | Croatia | Identification and mapping of shallow landslides in gullied topography | 1PA | No |

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| 2-84 | Sanja Bernat Gazibara | Faculty of Mining, Geology and Petroleum Engineering | Croatia | Automated landslide mapping using LiDAR for landslide susceptibility assessment | 1PA | |
| 2-86 | Yasser ELSHAYEB | Cairo University | Egypt | Zone Risk Maps in greater Cairo region and areas of high cultural value | 1PA | |
| 2-87 | Mario Reyes | Ministerio de Medio Ambiente y Recursos Naturales | El Salvador | Landslide susceptibility mapping in the Apaneca Range, El Salvador | 1PA | Pre-recorded |
| 2-88 | Azemeraw Wubalem | University of Gondar | Ethiopia | Modeling of landslide susceptibility in a part of Abay Basin, northwestern Ethiopia | 1PA | Onsite |
| 2-89 | Kifle Woldearegay Woldemariam | Mekelle University | Ethiopia | Landslides in developing countries; the case of Ethiopia | 1PA | |
| 2-90 | George Gaprindashvili | National Environmental Agency, Department of Geology | Georgia | Geological Hazard (Landslide, Debris/Mudflow, Rockfall et. al) zoning map of Tbilisi city (Georgia) | 1PA | |
| 2-91 | Stratis KARANTANELIS | Aristotle University of Thessaloniki School of Geology | Greece | Object-based landslide hazard detection using machine learning | 1PA | Onsite or Online Virtual |
| 2-92 | Oscar Rolando Elvir Ferman | Instituto Hondureno De Ciencias De La Tierra-Universidad Nacional Autonoma De Honduras | Honduras | The importance of understanding landslides in Honduras a case of study: Analisis of susceptibility to landslides in municipality of Ajuterique, Honduras | 1PA | |
| 2-93 | Kuntala Bhusan | North Eastern Space Applications Centre | India | Landslide scenario in North East India and associated challenges | 1PA | Online Virtual |
| 2-94 | Praveen Kumar Rai | Amity University, Noida | India | Remote Sensing and GIS based study of Landslide Mapping and Monitoring in Garwal Himalaya, India | 1PA | |
| 2-95 | Tapas Martha | National Remote Sensing Centre | India | Geospatial landslide inventory database of India for decision makers | 1PA | Online Virtual |
| 2-96 | Vishal Mishra | Indian Institute of Technology, Roorkee | India | Monitoring of Reservoir Induced Landslides in Uttarakhand Himalayas using Radar Remote Sensing | 1PA | |
| 2-97 | Droupti Yadav | CSJM University Kanpur, U.P., India | India | Landslide Hazard Zonation Mapping of the Himalayan Region: A case study of Uttarakhand Himalaya, India | 1PA | |
| 2-98 | Piyooosh Rautela | Disaster Mitigation and Management Centre | India | Landslides in the Himalayan state of Uttarakhand and development challenges | 1PA | |
| 2-99 | Vikram Gupta | Wadia Institute of Himalayan Geology | India | Active tectonics and the distribution of landslides along the Indian Himalayan river valleys | 1PA | |
| 2-100 | SUNIL KUMAR DE | NORTH-EASTERN HILL UNIVERSITY | India | Landslide Hazard Zonation of North Sikkim Himalayas, India | 1PA | |
| 2-101 | Munawar Munawar | BMKG | Indonesia | Rainfall Induced Landslide Threshold Distribution in West Java Province | 1PA | |
| 2-102 | Zefanya Putra | Pertamina University | Indonesia | Landslide Hazard Identification through Remote Sensing | 1PA | |
| 2-103 | Jafar Hassanpour | University of Tehran | Iran | Rainfall induced landslide in Mazandaran province, Iran | 1PA | |
| 2-104 | Ali Uromeihy | Tarbiat Modares University | Iran | The use of LR, MLP and RBF methods in predicting rockfalls occurrence induced by earthquake | 1PA | |
| 2-105 | Laurie Kurilla | University of Torino, Dept. of Earth Sciences | Italy | Global susceptibility of debris flows and spatial accuracy | 1PA | Onsite |
| 2-106 | Paola Reichenbach | CNR-IRPI | Italy | A review of statistically-based landslide susceptibility models | 1PA | Onsite |

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| 2-107 | Pasquale Versace | University of Calabria | Italy | EVIL model: a method for vulnerability and risk assesment of the people | 1PA | |
| 2-109 | Settimio Ferlisi | Department of Civil Engineering, University of Salerno | Italy | Quantitative analysis of the consequences induced by slow-moving landslides to a road network in southern Italy | 1PA | Online Virtual |
| 2-110 | Jung-Hsuan (Rosana) Lin | University of Tsukuba | Japan | Weathering of Serpentinite in Relation to Landslide Types in Yahata Landslide, Japan | 1PA | |
| 2-111 | Yuji HASEGAWA | Hiroshima University | Japan | Debris flows occurred in Hiroshima due to 2018 July heavy rain and proposing detail hazard mapping | 1PA | |
| 2-112 | Jong Kim | Nazarbayev University | Kazakhstan | Detection and characterization of landslides using satellite remote sensing technologies: A case study for Kazakhstan | 1PA | |
| 2-114 | Zuhairi Abd Hamid | Construction Research Institute of Malaysia | Malaysia | Landslide Vulnerability Assessment and Risk Analysis for Critical Infrastructure in Malaysia | 1PA | |
| 2-115 | Mohd Khairolden Ghani | Construction Research Institute of Malaysia | Malaysia | Landslide Vulnerability Assessment and Risk Analysis for Critical Infrastructure in Malaysia | 1PA | |
| 2-116 | Yusrin Faiz Abd Wahab | Construction Research Institute of Malaysia | Malaysia | Landslide Vulnerability Assessment and Risk Analysis for Critical Infrastructure in Malaysia | 1PA | |
| 2-117 | Suhaimi Jamaludin | Public Work Department | Malaysia | Slope Inventories Data Collection: Recent Advance | 1PA | |
| 2-118 | Jorge Antonio Paz Tenorio | Facultad de Ingeniería, Universidad de Ciencias y Artes de Chiapas | Mexico | Cartography of susceptibility to landslides and analysis of vulnerabilities | 1PA | Online Virtual |
| 2-120 | Luis Angel Jimenez Lopez | CIEMAD IPN | Mexico | Study of the geological hazard due to landslides in the Motozintla basin, Chiapas, Mexico | 1PA | |
| 2-121 | Perla Rodriguez Contreras | CIEMAD IPN | Mexico | Characterization of the Geological Hazard in Volcanic Domes (Colli and Tajo) Located in the West of the Metropolitan Area of Guadalajara, Jalisco, Mexico | 1PA | |
| 2-122 | Basanta Raj Adhikari | Institute of Engineering, Tribhuvan University | Nepal | Landslide hazards in the Sino-Nepal road corridors | 1PA | |
| 2-124 | Phil Mourot | Waikato Regional Council / GEO-ID | New Zealand | Geological hazards in geothermal areas: Impact on Maori cultural heritage | 1PA | |
| 2-125 | John Dehls | Geological Survey of Norway | Norway | Mapping landslides at a nationwide scale using InSAR: the Norwegian Ground Motion Service | 1PA | Onsite |
| 2-126 | Farrokh Nadim | NGI | Norway | Theoretical framework for estimating the annual probability of occurrence of landslides | 1PA | Online Virtual |
| 2-127 | Dieu Tien Bui | University of South-Eastern Norway | Norway | Advanced Machine Learning and Deep Learning for spatial prediction of landslide hazards | 1PA | |
| 2-128 | Menal Zaheer | National Engineering Services Pakistan | Pakistan | Landslide Susceptibility Mapping and Zonation of Murree Area, Pakistan | 1PA | |
| 2-129 | Tomislav Popit | University of Ljubljana, Faculty of Natural Sciences and Engineering, Department of Geology | Slovenia | Roughness analysis of fossil landslide surfaces in the Vipava Valley, SW Slovenia | 1PA | Pre-recorded |
| 2-131 | Abdikani mohamed Jeylani | Minister of humanitarian and disaster management | Somalia | Hazard Mapping and assessment | 1PA | |
| 2-132 | Txomin Bornaetxea | University of the Basque Country | Spain | The Effective Surveyed Area. Uncertainty reduction in field work based landslide inventories. | 1PA | Online Virtual |
| 2-133 | Gerardo Herrera | The Geological Surveys of Europe | Spain | Landslide impact in Europe. A review by the Geological Surveys. | 1PA | |

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| 2-134 | Adolfo Quesada-Roman | University of Geneva/University of Costa Rica | Switzerland | Landslide hazard and dynamics in Costa Rica | 1PA | |
| 2-135 | Anatoly Ischuk | Institute of Geology, Earthquake Engineering and Seismology, Academy of Sciences, Republic of Tajikistan | Tajikistan | Landslide Susceptibility Under Strong Earthquakes in the Mountainous Areas of Tajikistan | 1PA | |
| 2-136 | Senem Tekin | Cukurova University | Turkey | Landslide Hazard Assessments In Goksu River Watershed (Southern Turkey) | 1PA | Online Virtual |
| 2-137 | Cigdem Tetik Bicer | Turkey Ministry Of Interior Disaster And Emergency Management Presidency | Turkey | Landslide Hazard and Risk Assessment | 1PA | |
| 2-140 | Nick Rosser | Durham University | UK | Assessing the evolution of post-earthquake landslide hazard: the legacy of the 2015 Gorkha earthquake, Nepal | 1PA | |
| 2-141 | Antonio Abellan | Rock Mechanics, Engineering Geology and Hydrogeology. Institute of Applied Geosciences, University of Leeds | UK | Spatial aspects of the long-term evolution of rock slopes: using ice calving as proxy for investigating rock slope failures. | 1PA | |
| 2-142 | Bruce Malamud | Kings College London | UK | Spatial and Temporal modelling of triggered landslide event populations: Review of where we are at | 1PA | |
| 2-143 | Mike Winter | TRL | UK | Quantitative Risk Assessment of Potential Fatalities Amongst Road Users from Debris Flow Events | 1PA | |
| 2-144 | Dalia Kirschbaum | NASA Goddard Space Flight Center | USA | Multi-scale landslide hazard assessment using remote sensing data | 1PA | Onsite or Online Virtual |
| 2-145 | William Schulz | United States Geological Survey | USA | Use of InSAR at multiple spatial and temporal scales to reveal landsliding mechanisms | 1PA | Onsite |

Theme 3 Monitoring and Early Warning Contact: Veronica Tofani <veronica.tofani@unifi.it>

Session 3.1 Landslide monitoring and geophysical surveys

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| 3-1 | Paola Revellino, Luigi Guerriero, Giuseppe Ruzza and Francesco M. Guadagno | Department of Sciences and Technologies, University of Salerno | Italy | Defining kinematic and evolutive features of earth flows using integrated monitoring and low-cost sensors | FCB | Onsite |
| 3-2 | Ondřej Racek, Jan Blahůt, Filip Hartvich | Czech Academy of Sciences, IRSM | Czech Republic | Monitoring of thermoelastic wave within a rock mass coupling information from IR camera and crack meters: a 24-hour experiment on “Branická skála” Rock in Prague, Czechia | FCB | Onsite |
| 3-3 | Paolo Anania, Marco Bardo, Francesco Faccini, Danilo Godone, Davide Notti, Flavio Poggi | CNR IRPI | Italy | The role of measure of deep-seated displacements in the monitoring networks on large-scale landslide | FCB | Pre-recorded |
| 3-4 | Rustam Niyazov, Bakhtiar Nurtaev, Gani Bimurzaev and Mansur Tashpulatov | Institute of geology and geophysics | UZBEKISTAN | Flow slides in Uzbekistan: overview and case studies | FCB | |
| 3-5 | Tomofumi Koyama, Seiji Kondo, Taizo Kobayashi, Shinichi Akutagawa, Takeshi Sato, Katsuyuki Nakata and Kazuyuki Shimojima | Kansai University | Japan | Development of resident participation-type slope measurement/monitoring system in mountain region | FCB | Onsite |

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| 3-6 | <u>JONGMANS Denis</u> , FIOLEAU Sylvain, BIÈVRE Gregory | Universite Grenoble Alpes | France | Geophysical monitoring of landslides: state-of- the art and recent advances | FCB | Onsite |
| 3-7 | <u>Jonathan Chambers</u> , Pimp Meldrum, Paul Wilkinson, Jessica Holmes, David Huntley, Peter Bobrowsky, David Gunn, <u>Sebastian Uhlmann</u> , Nick Slater | British Geological Survey | UK | Long-term geophysical imaging of moisture driven landslide processes | FCB | Pre- recorded |
| 3-8 | <u>Sebastian Uhlmann</u> , Jonathan Chambers, Philip Meldrum, Patrick McClure, and Baptiste Dafflon | Lawrence Berkeley National Lab | USA | Geophysical monitoring of landslides – A step closer towards predictive understanding? | FCB | Onsite |
| 3-9 | <u>Jim Whiteley</u> , Arnaud Watlet, Sebastian Uhlmann, Philip Meldrum, Paul Wilkinson and Jonathan | University of Bristol/British Geological Survey | UK | Recent advances in high spatial resolution geophysical monitoring of moisture-induced landslides | FCB | Onsite |
| 3-10 | <u>Hao Luo</u> , Aiguo Xing, Kaiping Jin, Shimin Xu, Yu Zhuang | Shanghai Jiao Tong University | China | Characteristic analysis of the Nayong rock avalanche based on the seismic signal | FCB | Pre- recorded |
| 3-11 | <u>Yu Zhuang</u> , Aiguo Xing | Shanghai Jiao Tong University | China | Electrical resistivity tomography (ERT) based investigation of two landslides in Guizhou, China | FCB | Pre- recorded |
| 3-12 | <u>Kiminori Araiba</u> and Shoji Doshida | National Research Institute of Fire and Disaster | Japan | Vibration of Piled Rocks - Which rock can be removed ? | FCB | Onsite |

Session 3.2 Remote sensing for landslide risk management

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|------|---|--|-------------------|--|-----|--------------------------------|
| 3-13 | <u>Ko-Fei Liu</u> , Ting-Iu Kuo, and Shih-Chao Wei | National Taiwan University | Chinese Taipei | Debris flow detection with video camera | FCB | Online Virtual |
| 3-14 | <u>Federico Raspini</u> , Emanuele Intrieri, Davide Festa and Nicola Casagli | Earth Sciences Department of the University of Firenze | Italy | Landslide mapping and monitoring with satellite interferometry | FCB | Online Virtual |
| 3-15 | Xue Chen, <u>Giulia Tessari</u> , Massimo Fabris, Vladimiro Achilli and Mario Floris | Sarmap SA | Switzerland | Comparison between PS and SBAS InSAR techniques in monitoring shallow landslides | FCB | Onsite or Online Virtual |
| 3-16 | <u>Giulia Tessari</u> , Loris Copa, Giaime Origgi, Almazbek Torgoev, Lars Uhlig and Francesco Holecz | Sarmap SA | Switzerland | Analyses of Koitash landslide, affecting Mailuu Suu valley, Kyrgyzstan, through integrated remote sensing techniques | FCB | Onsite or Online Virtual |
| 3-17 | <u>Giulia Tessari</u> , Divya Kashyap and Francesco Holecz | Sarmap SA | Switzerland | Landslide monitoring in the main municipalities of Sikkim Himalaya, India, through Sentinel-1 SAR data | FCB | Onsite or Online Virtual |

Session 3.3 Landslide early warning systems

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|------|--|--|-------------|--|-----|-------------------|
| 3-18 | <u>Gaetano Pecoraro</u> , Michele Calvello | University of Salerno | Italy | Definition and first application of a probabilistic warning model for rainfall- induced landslides | FCB | Onsite |
| 3-19 | <u>Nikolaos Depountis</u> , Nikolaos Sabatakakis, <u>Katerina Kavoura</u> , Konstantinos Nikolakopoulos, Panagiotis Elias, George Drekotas | University of Patras | Greece | Establishment of an integrated landslide early warning and monitoring system in populated areas | FCB | Pre- recorded |
| 3-20 | <u>Nguyen Duc Ha</u> , Le Quoc Hung, Takahiro Sayama, Kyoji Sassa, Kaoru Takara, Khang Dang | Vietnam Institute of Geosciences and Mineral Resources | Vietnam | An Integrated WebGIS System for Shallow Landslide Hazard Early Warning | FCB | Onsite |
| 3-21 | Manfred Stähli and <u>Adrian Wicki</u> | Federal Swiss Federal Research Institute WSL | Switzerland | The value of soil wetness measurements for regional landslide Early Warning Systems | FCB | Onsite |
| 3-22 | <u>John Singer</u> , Kurosch Thuro, Moritz Gamperl, Tamara Breuninger and Bettina Menschik | AlpGeorisk | Germany | Technical concepts for an early warning system for rainfall induced landslides in informal settlements | FCB | Online Virtual |

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|------|---|--|----------------|--|---------|----------------|
| 3-23 | <u>An Lu</u> , Wei-Kai Haung, Ching-Fang Lee, Lun-Wei Wei, Hsi-Hung Lin and Chun-Chi Chi | Sinotech Engineering Consultants | Chinese Taipei | Combination of rainfall thresholds and susceptibility maps for early warning purposes for shallow landslides at regional scale in Taiwan | FCB | |
| 3-24 | <u>Agus Setyo Muntohar</u> , Olga Mavrouli, Victor G. Jetten, Cees J. van Westen, Rokhmat Hidayat | Univeritas Muhammadiyah Yogyakarta | Indonesia | Development of Landslide Early Warning System based on the Satellite-Derived Rainfall Threshold in Indonesia | FCB | Pre-recorded |
| 3-25 | <u>Agie Wandala Putra</u> , Nn. Ummul Choir OS, Imaduddin Salma Faalih | Agency for Meteorology Climatology and Geophysics of Republic of Indonesia (BMKG) | Indonesia | The Efficient Early Warning with South East-Asia Oceania Flash Flood Guidance System (SAOFFGS) | FCB+EPR | Online Virtual |
| 3-26 | <u>Qiang Xu</u> , Dalei Peng, Xuanmei Fan, Xing Zhu, Chaoyang He | State Key Laboratory of Geo-hazard Prevention and Geo-environment Protection, Chengdu University of Technology | China | Presenting Some Successful Cases of Regional Landslides Early Warning Systems in China | FCB+EPR | Onsite |
| 3-27 | <u>Klaus-Peter Keilig</u> , Markus Bauer, Peter Neumann and Kuroschi Thuro | Technical University of Munich | Germany | Towards an early warning system for instable slopes in Gorgia The large Tskneti Akhaldaba landslide | FCB | Onsite |
| 3-28 | <u>Lin Wang</u> , Makoto Fukuhara, Taro Uchimura, Gallage Chaminda and Tharindu Abeykoon | Chuo Kaihatsu Corporation | Japan | An EWS of landslide and slope failure by MEMS tilting sensor array | FCB | Onsite |

Session 3.4 Forecasting models and time predictions of landslides

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|------|---|---|-------------|---|-----|--------------------------|
| 3-29 | <u>Maria Teresa Brunetti</u> , Massimo Melillo, Stefano Luigi Gariano, Luca Ciabatta, Luca Brocca, Silvia Peruccacci | CNR IRPI | Italy | Regional approaches in forecasting rainfall-induced landslides | FCB | Onsite |
| 3-30 | <u>Shobhana Lakhera</u> , P.K. Champati ray, Michel Jaboyedoff, Harshita Tiwari | Indian Institute of Remote Sensing (IIRS), India | India | Establishing Soil Moisture and Rainfall Intensity-duration based thresholds for initiation of mass movements along the National Highway-58 in the Chamoli district of Uttarakhand | FCB | Onsite or Online Virtual |
| 3-31 | <u>Graziella Devoli</u> , Hervé Colleuille, Monica Sund, Jaran Wasrud | Norwegian Water Resources and Energy Directorate | Norway | Seven years of landslide forecasting in Norway – strengths and limitations | FCB | Onsite or Online Virtual |
| 3-32 | <u>Veronica Tofani</u> , Gabriele Bicocchi, Elena Benedetta Masi, Carlo Tacconi Stefanelli, Guglielmo Rossi, Filippo Catani | University of Florence - Department of Earth Sciences | Italy | Characterization of hillslope deposits for physically-based landslide forecasting models | FCB | Onsite |
| 3-33 | <u>Brenda Rosser</u> , Chris Massey, Biljana Lukovic, Sally Dellow, Matt Hill | GNS Science | New Zealand | Development of a Rainfall-induced Landslide Forecast Tool for New Zealand | FCB | Onsite |
| 3-34 | <u>Naoki Iwata</u> , Katsuo Sasahara | Chuden Engineering Consultants Co.,Ltd | Japan | Influence of intervals measuring surface displacement on time prediction of slope failure using Fukuzono Method | FCB | Onsite |
| 3-35 | <u>Katsuo Sasahara</u> | Kochi University | Japan | Velocity and acceleration of surface displacement in sandy model slope with various slope conditions | FCB | Onsite |
| 3-36 | <u>Praveen Kumar</u> , Priyanka Sihag, Ankush Pathania, Pratik Chaturvedi, K. V. Uday and Varun Dutt | Indian Institute of Technology Mandi | India | Comparison of Moving-average, Lazy, and Information Gain Methods for Predicting Weekly Slope-movements: A Case-study in Chamoli, India | FCB | Pre-recorded |
| 3-37 | <u>Antoinette Tordesillas</u> , Shuo Zhou, Federico Di Traglia and Emanuele Intriari | University of Melbourne | Australia | New insights into the spatiotemporal precursory failure dynamics of the 2017 Xinmo landslide and its surrounds | FCB | Onsite |

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|------|-----------------------------|--|-------------|--|-----|----------------|
| 3-57 | Jean-Philippe Malet | CNRS - Ecole et Observatoire des Sciences de la Terre | France | Massive processing of satellite image time series for landslide forecasting | 1PA | |
| 3-58 | Kuroschi Thuro | Technical University of Munich | Germany | Development of an early warning system for shallow landslides in the tropical Andes (Medellin; Colombia) | 1PA | |
| 3-59 | Nikolaos Depountis | University of Patras | Greece | Establishment of an integrated landslide early warning and monitoring system in populated areas | 1PA | No |
| 3-60 | Soumya Darshan Panda | Indian Institute of Technology (IIT), Roorkee | India | Regional Rainfall Intensity Threshold for Landslides in Uttarakhand Himalaya, India | 1PA | |
| 3-61 | Prodip Mandal | Cooch behar Panchanan Barma University | India | Rainfall thresholds for the prediction of rainfall-induced landslides along NH-10 in Darjeeling Himalayas, India | 1PA | |
| 3-62 | Manojit Samanta | CSIR-Central Building Research Institute | India | A review of rainfall threshold for landslide initiation, limitations and way forward | 1PA | |
| 3-63 | Uday K V | IIT Mandi | India | Landslide debris-flow Prediction using Ensemble and Non-Ensemble Machine-Learning Methods | 1PA | |
| 3-64 | Sangeetha kumar Chinnadurai | Amrita Vishwa Vidyapeetham | India | Comparison of Data Networking Architectures for Remote Landslide Warning System:Pros and Cons | 1PA | |
| 3-65 | Prakash Chandra Tiwari | Kumaun University, Nainital | India | Community Based Early Warning System for Climate Change Induced Landslide Risk Reduction in Himalaya | 1PA | |
| 3-66 | Maneesha Ramesh | Amrita Vishwa Vidyapeetham | India | Enhancing the reliability of IoT System for landslide monitoring by integrating learning models | 1PA | Online Virtual |
| 3-67 | Weniza Weniza | Indonesian Agency for Meteorology, Climatology and Geophysics BMKG | Indonesia | Indonesian Tsunami Hazard Early Warning System; the Challenge and Innovations | 1PA | |
| 3-68 | Teuku Faisal Fathani | Universitas Gadjah Mada | Indonesia | Landslide Monitoring and Early Warning System | 1PA | |
| 3-69 | Liang Feng | University of Florence | Italy | Rockfall detection and early warning using micro-seismic monitoring | 1PA | Online Virtual |
| 3-71 | Andrea Segalini | Universita di Parma | Italy | Definition and application of a new multi-criteria algorithm to identify the landslide acceleration phase | 1PA | |
| 3-73 | Mario Parise | University Aldo Moro, Dept. Earth and Environmental Sciences | Italy | Do we really use landslide susceptibility maps? | 1PA | |
| 3-74 | Paolo Mazzanti | Sapienza University of Rome | Italy | Recent developments in photomonitoring | 1PA | |
| 3-75 | Andrea Carri | ASE S.r.l. | Italy | Remote geotechnical monitoring in the IoT era | 1PA | |
| 3-78 | Deepak KC | CDRMP/United Nations Development Programme | Nepal | Community Based Early Warning System for Floods and Landslides in Policies and Practices | 1PA | |
| 3-79 | Thom Bogaard | Delft University of Technology | Netherlands | What hydrological information should we include in landslide hazard assessment and Early Warning Systems? | 1PA | Onsite |
| 3-80 | Bapon Fakhrudin | Tonkin and Taylor | New Zealand | Multi-hazards impact based early warning system | 1PA | |
| 3-81 | Jose Cepeda | Norwegian Geotechnical Institute - NGI | Norway | A generalized form of the power law function for precipitation thresholds | 1PA | |

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|------|-----------------------|--|-------------------|--|-----|--------------|
| 3-82 | Vikas Thakur | Norwegian University of Science and Technology | Norway | Need for an integrated landslide and cybersecurity management framework | 1PA | |
| 3-83 | Ray Andrew Buensuceso | Philippine Institute of Volcanology and Seismology | Philippines | Monitoring and Early Warning System for Shallow and Deep-seated Landslides: A preliminary study in the Philippines | 1PA | Onsite |
| 3-84 | Roy Anthony Luna | AMH Philippines, Inc | Philippines | Development of Landslide Monitoring and Early Warning System for Philippine Infrastructures | 1PA | |
| 3-85 | Hyuck-Jin Park | Sejong University | Republic of Korea | Probabilistic modelling of uncertainties in physically based landslide susceptibility assessment | 1PA | Pre-recorded |
| 3-86 | Mihai Nicolita | Alexandru Ioan Cuza University of Iasi | Romania | LiDAR and UAV SfM for landslide monitoring | 1PA | Onsite |
| 3-87 | Sergey Matsiy | Kuban State Agrarian University | Russia | Landslide Risk-Assessment | 1PA | |
| 3-88 | Anna Barra | CTTC/CERCA | Spain | Sentinel-1 landslides detection: the Granada coast | 1PA | Onsite |
| 3-89 | Oriol Monserrat | CTTC | Spain | Sentinel-1 as a tool to support early warning systems | 1PA | Onsite |
| 3-90 | Anna Scolobig | University of Geneva | Switzerland | Landslide warning communication: challenges and prospects | 1PA | |
| 3-94 | Catherine Pennington | British Geological Survey | UK | Preliminary results from data-driven IoT landslide monitoring systems in the UK | 1PA | |
| 3-96 | George Adamson | King's College London | UK | The institutional structure of disaster risk reduction in India and its relation to landslides | 1PA | |
| 3-97 | Anshu Ogra | King's College London | UK | Institutional Structure for Landslide Early Warning System in India | 1PA | |

Theme 4 Testing, Modeling and Risk Assessment

Binod Tiwari <btiwari@fullerton.edu>

Session 4.1 Recent Development in Physical Modeling of Landslides

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|------|--|---|-------------|---|-----|----------------|
| 4-1 | <u>Timothy D. Stark</u> and Zhengdan Xu | University of Illinois at Urbana-Champaign | USA | Oso Landslide: Failure Mechanism and Runout Analyses | FCB | Online Virtual |
| 4-2 | Xiaoyu Chen, <u>Rolando P Orense</u> | University of Auckland | New Zealand | Application of magnetic tracking system in laboratory-scale rock avalanche model tests | FCB | Online Virtual |
| 4-3 | <u>Yanto</u> , Sumiyanto, and Arwan Apriyono | Jenderal Soedirman University | Indonesia | A simple physically-based distributed translational landslide model | FCB | Onsite |
| 4-4 | <u>Mastura Azmi</u> , <u>Arund Harris</u> , Ramlil, Mohd Azril Hezmi, Siti Aimi Nadia Mohd Yusoff and <u>Harwan Zeki</u> | Universiti Sains Malaysia | Malaysia | Behaviour of Slope Instability using Physical and Computational Modelling | FCB | Online Virtual |
| 4-5 | <u>Nobutaka Hiraoka</u> , Naotaka Kikkawa and Kazuya Itoh | National Institute of Occupational Safety and Health, Japan | Japan | Centrifuge Modelling of Slope Failure due to Groundwater during Excavation | FCB | Pre-recorded |
| 4-6 | <u>Wei HU</u> , Xiaoyan ZHANG, and Huawei HU | Chengdu University of Technology | China | Effects of Relative Density in Progressive Sliding of Tailing | FCB | |
| 4-7 | <u>Binod Tiwari</u> | California State University, Fullerton | USA | Experimental Studies on the Effect of Vegetation Density to Change Underground Seepage Rate and Stability of Slopes | FCB | Onsite |
| 4-8 | <u>Jonathan M Carey</u> , Josnu J Mountjoy, Gareth J Crutchley, Barbara Lyndsell and David N Petley | GNS Science | New Zealand | Laboratory simulations of submarine landslide failure mechanisms | FCB | Online Virtual |
| 4-9 | Gennaro Spolverino, <u>Giovanna Capparelli</u> and Pasquale Versace | University of Calabria | Italy | Laboratory tests to simulate the rainfall infiltration process of pyroclastic soils subject to instability | FCB | Onsite |
| 4-10 | Irene Manzella | University of Plymouth | UK | Granular flow experiments and mobility of large mass flows | EPR | Onsite |

Session 4.2 Recent Development in Numerical Modeling of Landslides

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|------|--|---|-------------------|---|-----|--------------------------------|
| 4-11 | Daniel Pradel | Ohio State University Columbus | USA | Numerical Modelling for Slope Stabilizations in Modern Geotechnical Practice | FCB | Onsite |
| 4-12 | <u>Roger Ruiz-Carulla</u> , Gerard Matas, Jordi Corominas, Nieves Lantada | Technical University of Catalonia | Spain | 3D analysis of a fragmental rockfall | FCB | Online Virtual |
| 4-13 | <u>Hans-Balder Havenith</u> | University of Liege | Belgium | 3D landslide models in VR | FCB | Onsite or Online Virtual |
| 4-14 | Xiaoli Su, Xilin Xia and <u>Qiuhua Liang</u> | Loughborough University | UK | A coupled discrete element and depth-averaged model for flow-like landslide simulations | FCB | Onsite |
| 4-15 | <u>Martin Mergili</u> and Shiva P. Pudasaini | University of Graz, Institute of Geography and Regional Science | Austria | Advanced methods for simulating complex landslides | FCB | Onsite |
| 4-16 | <u>Guan-Yu Chen</u> , Chin-Chih Liu and Yi-Fung Wang | National Sun Yat-sen University | Chinese Taipei | Application of Reciprocal Green's Functions on the Forecast of Submarine Landslide Tsunamis | FCB | Onsite |
| 4-17 | <u>Kuo-Hsin Yang</u> , Thanh Son Nguyen, Harianto Rahardjo, and Der-Guey Lin | Department of Civil Engineering, National Taiwan University | Chinese Taipei | Deformation characteristics with porewater pressure development of shallow landslide triggered by rainfall infiltration | FCB | Onsite |
| 4-18 | <u>Kana Nakatani</u> , Ken'ichirou Kosugi and Yoshifumi Satofuka | Kyoto University, Graduate School of Agriculture | Japan | Debris flow simulations due to landslide dam outburst and considering effective countermeasures | FCB | Onsite |
| 4-19 | Federico Gatti, Luca Bonaventura, Alessandra Menafoglio, Monica Papini and <u>Laura Longoni</u> | Politecnico di Milano - Milano Leonardo | Italy | First test results from the SMART-SED simulation tool basin scale sediment yield model | FCB | Onsite |
| 4-20 | <u>Khang Dang</u> , Doan Huy Loi, Kyoji Sassa, Do Minh Duc, Nguyen Duc Ha | ICL | Japan | Hazard assessment of a rainfall-induced deep- seated landslide in Hakha city, Myanmar | FCB | Onsite |
| 4-21 | <u>Doan Huy Loi</u> , Kyoji Sassa, Khang Dang, Le Hong Luong | International Consortium on Landslides/ Institute of Transport Science and Technology | Japan | Landslide hazard zoning based on the integrated simulation model (LS-Rapid) | FCB | Onsite |
| 4-22 | Jelka Krušić, <u>Biljana Abolmasov</u> and Miloš Marjanović | University of Belgrade, Faculty of Mining and Geology | Serbia | Numerical models of debris flows with entrainment analysis-case studies from the Republic of Serbia | FCB | |
| 4-23 | <u>Akihiko Wakai</u> , Deepak Raj Bhat, Kenta Kotani and Soichiro Osawa | Gunma University | Japan | Numerical simulation of a creeping landslide case in Japan | FCB | Pre- recorded |
| 4-24 | <u>Takashi Kitazume</u> , Takahiro Abe and Satoshi Goto | Tokyo Electric Power Services Co., Ltd. | JAPAN | Numerical simulation of debris flows after ash fall at Mt. Fuji | FCB | Onsite |
| 4-25 | <u>Thirapong Pipatpongsa</u> , Krit Aroonwattanaskul and Kun Fang | Kyoto University | Japan | On the progression of slope failures using inverse velocity of surface movements in an undercut slope model | FCB | Onsite |
| 4-26 | <u>Mario Martinelli</u> , Wei-Lin Lee, Chjeng-Lun Shieh and Sabatino Cuomo | Deltares | Netherlands | Rainfall boundary condition in a multiphase Material Point Method | FCB | Onsite |
| 4-28 | <u>Hitoshi Nakase</u> , Yukio Nakata | TEPSCO | Japan | Reproduction of Sedimentation State during Rock Slope Failure Using the Simplified DEM Model | FCB | Onsite |

Session 4.3 Recent Development in Soil and Rock Testing Techniques, Application and Analysis Methods

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|------|--|---|-----------|---|-----|--------------|
| 4-29 | <u>Binod Tiwari</u> and Beena Ajmera | California State University, Fullerton | USA | Recent Developments in the Evaluation and Application of Residual and Fully Softened Shear Strengths for the Stability Analyses of Landslides | FCB | Onsite |
| 4-30 | Rita Tufano, Luigi Annunziata, Enrico Di Clemente, Giovanni Falgiano, Francesco Fusco, <u>Pantaleone De Vita</u> | Dipartimento di Scienze della Terra, dell'Ambiente e delle Risorse - Università di Napoli Federico II | Italy | Analysis of shear strength variability of ash-fall pyroclastic soils involved in flow-like landslides | FCB | Onsite |
| 4-31 | <u>L K Nimani S Kulathilake</u> , E H N Premasiri & A A Virajh Dias | Central engineering consultancy Bureau | Sri Lanka | Comparison of Soil Parameters and Soil Moduli E50 & E70 of Residual Soils used in Stability Analysis | FCB | Pre-recorded |
| 4-33 | <u>Pongsakorn Wongnana</u> , Peerapong Jitsangiam, Suriyah Thongmune, and <u>Tawatjai Tanabhaiwanat</u> | Chiang Mai University | Thailand | Modelling of Creep Behavior of Claystone in Mae Moh Open-Pit Mine Using the Soft Soil Creep Model | FCB | Onsite |
| 4-34 | <u>Istiyanti Mega Lia</u> , Goto Satoshi, Dung Mai Xuan | University of Yamanashi | Japan | Relation between water content and shear strength characteristics on undisturbed and reconstituted samples at tephra layers in Aso volcano, Kyushu, Japan | FCB | |
| 4-35 | <u>Deepak Raj Bhat</u> | Okuyama Boring Co., Ltd. | Japan | Shearing rate effect on residual strength of typical clay soils in ring shear test | FCB | Onsite |
| 4-36 | Mariagiovanna Moscariello and <u>Sabatino Cuomo</u> | University of Salerno | Italy | Simple shear tests for unsaturated soils | FCB | Onsite |
| 4-37 | <u>Beena Ajmera</u> and Binod Tiwari | North Dakota State University | USA | Simplest Methods of Determining Dynamic Soil Properties for Use in Co-seismic Hazard Analysis | FCB | Onsite |
| 4-38 | <u>Yao Jiang</u> , Gonghui Wang | Institute of Mountain Hazards and Environment, Chinese Academy of Sciences | China | The acoustic emission characteristics and shear behaviour during granular shearing | FCB | Onsite |

Session 4.4 Recent Advancements in the Methods of Slope Stability and Deformation Analyses

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|------|---|----------------------------------|--------|--|-----|--------------|
| 4-39 | <u>Masahiro Katayama</u> , Tsuyoshi Nakade, Tetsuji Yamaguchi and Masafumi Okawara | Kumagai Gumi Co.,Ltd. | Japan | Prediction of deformation of caisson type piles in open cut works and countermeasures employing early closure method | FCB | No |
| 4-40 | <u>Timur Ersöz</u> , Merve Özköse and Tamer Topal | Middle East Technical University | Turkey | Slope Stability Assessment of Weak and Weathered Rocks with BQ System | FCB | Onsite |
| 4-41 | Paul J Vardanega, <u>Elizabeth A Holcombe</u> , Myrto Savva, Casey J Shephard, Rose Hen-Jones, Flavia De Luca | University of Bristol | UK | Soil databases to assist slope stability assessments in the Eastern Caribbean | FCB | Pre-recorded |
| 4-42 | <u>Saaduddin</u> , Jurgen Neuberger, Mark E. Thomas, Jon Hill | University of Leeds, UK | UK | The Mt Gamalama instability level in generating landslide-induced tsunami in Ternate Island, Indonesia | FCB | Onsite |

Session 4.5 Recent Development in Disaster Risk Assessment

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|------|---|--|--------|---|-----|----------------|
| 4-43 | <u>Limin Zhang</u> , Jian He, and Te Xiao | Hong Kong University of Science and Technology | China | Engineering Risk Mitigation for Landslide Hazard Chains: the Baige Landslides on the Jinsha River in 2018 | FCB | Online Virtual |
| 4-44 | Kelvin Sattler, David Elwood, Michael T. Hendry, David Huntley, Jessica Holmes, and Paul B. Wilkinson | University of Saskatchewan | Canada | Effect of Pore Pressure Dynamics on Progressive Failure in a Clayey Glaciolacustrine Landslide | FCB | |
| 4-45 | <u>Shantanu Sarkar</u> and Koushik Pandit | Central Building Research Institute | India | Engineering Geological Investigation and Slope Stability Analysis for Landslide Hazard Assessment in Indian Himalayas | FCB | Onsite |
| 4-46 | Damiano Vacha, <u>Giuseppe Mandrone</u> , Matteo Garbarino & Donato Morresi | University of Torino | Italy | First considerations about post 2017 wildfire erosion response and debris flows in Susa valley (NW Italy) | FCB | Pre-recorded |

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| 4-47 | <u>Wahyu Wilopo</u> , Hendy Setiawan, Doni Prakasa Eka Putra, Teuku Faisal Fathani | Gadjah Mada University, Indonesia | Indonesia | Identification of Sliding Surface and Crack Pattern in the Soil Creep, Case Study: Unika Soegijapranata Campus, Semarang, Central Java, Indonesia | FCB | Online Virtual |
| 4-48 | <u>Tina Peternel</u> , Ela Šegina, Matija Zupan, Mateja Jemec Auflič and Jernej Jež | Geological Survey of Slovenia | Slovenia | Preliminary result of real-time landslide monitoring in the case of the hinterland of Koroška Bela, NW Slovenia | FCB | Online Virtual or Pre-recorded |
| 4-49 | <u>Saskia de Vrield</u> , Chris Massey, Tony Taig, Biljana Lukovic, Garth Archibald, and Regine Merganstrom | GNS Science | New Zealand | Quantitative risk analysis of earthquake-induced landslides | FCB | Onsite or Online Virtual |
| 4-50 | <u>Julian S. H. Kwan</u> , W. K. Leung, and Clarence E. Choi | Geotechnical Engineering Office | Hong Kong SAR, China | Role of Remote Sensing Technology in Landslide Risk Management of Hong Kong | FCB | Online Virtual |

E-proceedings papers for Theme 4

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|------|--|---------------------------------|-------|--|-----|--|
| 4-52 | <u>Luqi Wang</u> , Yueping Yin, Bolin Huang, Zhenwei Dai, Zhihua Zhang | China University of Geosciences | China | Risk assessment of submerged rock mass in reservoir area | EPR | |
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One-page abstract papers for Theme 4

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|------|-------------------|---|------------|--|-----|----------------|
| 4-54 | Emmanouil Fleris | Technical University of Vienna | Austria | A study of Rockfall processes at different geomorphological settings through a stochastic numerical approach in 3D. | 1PA | |
| 4-55 | Md. Rafiqul Islam | Department of Petroleum and Mining Engineering, Shahjalal University of Science and Technology, Sylhet-3114, Bangladesh | Bangladesh | Numerical modeling sliding behavior and safety factor analysis of the right-bank of the river Jamuna, Central Banglaesh | 1PA | |
| 4-56 | Masato Kobiyama | Federal University of Rio Grande do Sul | Brazil | Hazard connectivity index for debris-flow disaster management | 1PA | |
| 4-57 | Jiajia Wang | Chang'an University | China | Tsunami Squares modeling of landslide generated impulsive waves | 1PA | |
| 4-58 | Dongri Song | Institute of Mountain Hazards and Environment, Chinese Academy of Sciences | China | Basal stresses of debris flow in instrumented flume | 1PA | Online Virtual |
| 4-59 | Yajun Li | Lanzhou University | China | Active periods of debris flows on the eastern margin of the Tibetan Plateau | 1PA | |
| 4-60 | George Goodwin | University of Hong Kong | China | Coarse-grained flows and slit-structures: a closer look at the transition between self-cleaning and mechanical trapping | 1PA | |
| 4-61 | Zhenwei Dai | Wuhan Centre of China Geological Survey | China | Study on Deterioration Characteristics of Slope Rock Mass and Its New Anchorage Control Technology in Three Gorges Reservoir Area, China | 1PA | |
| 4-62 | Bolin Huang | China Three Gorges University | China | Dynamic Analysis of Impulse Wave Generated by the Collapse of Granular Pillar | 1PA | |
| 4-63 | Xiaofan An | Xi'an University of Technology | China | Grain-based distinct element modelling for flexural toppling of rock slopes | 1PA | |
| 4-64 | Xiaoqin Lei | Institute of Mountain Hazards and Environment, CAS | China | Effects of internal erosion on the stability of slopes composed of loose deposits | 1PA | |
| 4-65 | Chaojun Ouyang | Institute of Mountain Hazards and Environment, CAS | China | Numerical modeling of dynamic process and risk prediction of recent catastrophe landslides | 1PA | |
| 4-66 | WEI ZHONG | Institute of Mountain Hazards and Environment, CAS | China | Spatial Stability Evaluation of Landslide | 1PA | |
| 4-67 | Clarence Choi | The University of Hong Kong | China | Impact of debris flow against multiple barriers | 1PA | Online Virtual |

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|------|----------------------------|--|----------------------|--|-----|--------------------------|
| 4-68 | Jianqi Zhuang | Chang'an University | China | Mechanism of the remodel loess failure due to Gully Stabilization and Highland Protection and improvement using Sodium Alginate | 1PA | Pre-recorded |
| 4-69 | Yuan-Jun Jiang | Institute of Mountain Hazards and Environment, Chinese Academy of Sciences | China | Interaction mechanism of dry granular flow and countermeasure structure | 1PA | |
| 4-70 | Yu Huang | Tongji University | China | Resilience assessment of Anchored Engineering Slopes Subject to seismic excitation | 1PA | |
| 4-71 | Keh-Jian Shou | NATIONAL CHUNG-HSING UNIVERSITY | Chinese Taipei | On the scale effect of the catchment landslide susceptibility with consideration of climate change | 1PA | |
| 4-73 | Sanja Dugonjic Jovancevic | University of Rijeka, Faculty of Civil Engineering | Croatia | Analysis of rock mass and instability phenomena along the karst-flysch contact | 1PA | |
| 4-74 | Alonso A. Alfaro Navarrete | MOPT - El Salvador | El Salvador | Rockfall and landslides events and its study in Los Chorros Segment of the CA01 route, El Salvador. | 1PA | |
| 4-75 | Anthony Leung | Hong Kong University of Science and Technology | Hong Kong SAR, China | Innovative use of thermo-active pile row in unsaturated soil slope | 1PA | Online Virtual |
| 4-76 | Thambidurai Ponnugounder | Priyadarshini Engineering College | India | Electrical Resistivity and Geotechnical Approach for Landslide Investigation of Mangan Town, Sikkim, Northeastern India - A Case Study | 1PA | |
| 4-77 | Vamshi Krishna Rao Karanam | Leibniz University of Hannover | India | Land slide monitoring using Persistent scatterer interferometry (ADInSAR) | 1PA | |
| 4-78 | RAJESH KUMAR DASH | CSIR-Central Building Research Institute | India | Debris flow runout estimation for landslide risk assessment in Indian Himalaya | 1PA | |
| 4-79 | Philips Omowumi Falae | 2Academy of Scientific and Innovative Research (AcSIR), Ghaziabad, India | India | Integrated Geo-investigations for Landslide Investigation | 1PA | |
| 4-80 | Jun Umemura | Nihon University | JAPAN | Shear tests for the slip surface of earthquake induced landslides based on the scenario at the time of their occurrence | 1PA | |
| 4-81 | Shuji Moriguchi | Tohoku University | Japan | Sensitivity analysis of DEM parameters in granular flow simulations | 1PA | Onsite or Online Virtual |
| 4-82 | Ngoc Ha Do | University of Yamanashi | Japan | Research on landslides mechanism in case of heavy rainfall by flume experiment | 1PA | Onsite |
| 4-83 | Kazuya ITOH | Tokyo City University | Japan | Centrifuge model tests of rainfall-induced slope failures | 1PA | |
| 4-84 | Netra Prakash Bhandary | Ehime University | Japan | Residual-state ring shear creep tests on clayey materials and development of creep failure model | 1PA | |
| 4-85 | Zili Dai | Shimane University | Japan | SPH-based numerical modeling of submarine landslide propagation and its generated surge waves | 1PA | |
| 4-86 | Jonathan Nuttall | Deltares | Netherlands | Probabilistic Site Characterization using CPT data, Convolutional Neural Networks and Random Fields | 1PA | |
| 4-87 | mario martinelli | DELTARES | Netherlands | Modelling landslide triggering and runout with the Material Point Method | 1PA | No |

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| 4-88 | Marta Tomaszczyk | Polish Geological Institute-NRI | Poland | Numerical restoration of pre-failure slope geometry using DSI algorithm | 1PA | Online Virtual |
| 4-89 | Panyabot Kaathon | Gangneung-Wonjo National University | Republic of Korea | Master Curve Approach to Soil Nail Design Based on Finite Element Method | 1PA | |
| 4-90 | Ananta Man Singh Pradhan | Pukyong National University | Republic of Korea | Hybrid rainfall thresholds and landslide susceptibility for scenario-based vulnerability and risk assessment in South Korea | 1PA | |
| 4-91 | Valentina Svalova | Sergeev Institute of Environmental Geoscience RAS | Russia | Landslide risk assessment and management for city territories | 1PA | |
| 4-92 | Vladimir Matsiy | Kuban State Agrarian University | Russia | Landslide risk assessment of transportation systems | 1PA | |
| 4-93 | Jordi Corominas, Gerard Matas, Roger-Ruiz Carulla, Nieves Lantada | Universitat Politècnica de Catalunya-BarcelonaTech | Spain | Fragmental rockfalls and the analysis of risk | 1PA | Onsite or Online Virtual |
| 4-95 | Kumari M. Weerasinghe | CECB | Sri Lanka | Deformities & Dynamics of Long-Travel Landslides | 1PA | |
| 4-96 | Avirut Chinkulkijniwat | Suranaree University of Technology | Thailand | Evaluation of failure plane for shallow landslides under rainfall conditions. | 1PA | |
| 4-97 | Tolga CAN | University of Cukurova / Turkey | TURKEY | Quantitative Landslide Risk Assessment in part of Central Taurus Mountains (Turkey) | 1PA | |
| 4-98 | guotao ma | university of warwick | UK | Probabilistic kinematics of landslides with stochastic material point method considering random fields | 1PA | |
| 4-99 | Paul Vardanega | University of Bristol | UK | Soil databases to assist slope stability assessments in the Eastern Caribbean | 1PA | No |
| 4-100 | Domenico Lombardi | The University of Manchester | UK | A state-dependent procedure for the evaluation of post-liquefaction stability of sand | 1PA | |
| 4-101 | Jin Sun | University of Edinburgh | UK | Particle simulation methods for slope stability and flow analysis | 1PA | |

Theme 5 Catastrophic Landslides and Frontiers of Landslide Science

Contact: Vít Vilímek <vit.vilimek@natur.cuni.cz>

Session 5.1 Landslides and earthquakes

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|-----|---|---|-----------|---|---------|----------------|
| 5-1 | <u>Paulus Rahardjo</u> | Universitas Katolik Parahyangan | Indonesia | Study on the Phenomena of Liquefaction Induced Massive Landslides in 28 September 2018 Palu-Donggala Earthquake | FCB | |
| 5-2 | Igor Fomenko, Oleg Zerkal, Alexander Strom, <u>Daria Shubina</u> and Ludmila Musaeva | Sergo Ordzhonikidze Russian State University for Geological Prospecting | Russia | The Krasnogorsk landslide (Northern Caucasus): its evolution and modern activity | FCB | Onsite |
| 5-3 | <u>Salvatore Martino</u> , Celine Bourdeau, José Delgado and Luca Lenti | University of Rome La Sapienza | Italy | Earthquake-triggered landslides and slope-seismic waves interaction inferring induced displacements | FCB | Online Virtual |
| 5-4 | <u>Hiroshi Yagi</u> , Go Sato, Hiroshi P. SATO, Daisuke HIGAKI, Vishunu Dangol, Shanmukesh C. Amatya | Yamagata University | Japan | Slope deformation of Jure landslide 2014 along Sun Koshi in Lesser Nepal Himalaya and effect of Gorkha earthquake 2015 | FCB | Onsite |
| 5-6 | <u>Toshiya Aoki</u> , Shin'ya Katsura, Takahiko Yoshino, Takashi Koi, Yasutaka Tanaka, and Takashi Yamada | Hokkaido University | Japan | Pressure head dynamics on a natural slope in Eastern Iburi struck by the 2018 Hokkaido earthquake | FCB | |
| 5-7 | Dalei Peng, <u>Limin Zhang</u> , Hofai Wong, Ruilin Fan, and Shuai Zhang | Hong Kong University of Science and Technology | China | Investigation of 20 August 2019 Catastrophic Debris Flows Triggered by Extreme Rainstorms near Epicentre of Wenchuan Earthquake | FCB+EPR | |

| Session 5.2 Landslide dams and outburst floods | | | | | | |
|--|--|---|----------------|---|-----|--------------------------------|
| 5-9 | <u>Tomas Kroccek</u> , Vit Vilimek | Charles University | Czech Republic | Rockfall/rockslide hazard, lake expansion and dead-ice melting assessment: Lake Imja, Nepal | FCB | Online Virtual |
| 5-10 | <u>Oleg V. Zerkal</u> , Aleksey N. Makhinov, Alexander L. Strom, Vladimir I. Kim, Michael E. Kharitonov, Igor K. Fomenko | Lomonosov Moscow State University | Russia | Formation of the 2018 Bureya landslide, Far East of Russia | FCB | Onsite |
| 5-11 | <u>Regine Morgenstern</u> , Chris Massey, Brenda Rosser and Garth Archibald | GNS Science | New Zealand | Landslide dam hazards: assessing their formation, failure modes, longevity and downstream impacts | FCB | Onsite |
| 5-12 | <u>Chukwuueloka A.U. Okeke</u> | Covenant University, Nigeria | Nigeria | The Sedimentology and Internal Structure of Landslide Dams – Implications for Internal Erosion and Piping Failure: A Review | FCB | Onsite |
| 5-13 | <u>Arash Barjasteh</u> | Khuzestan Water & Power Authority (KWPA) | IRAN | March 2019 flood impact on the stability of Ambal salt ridge in the Gotvand dam reservoir, Southern Iran | FCB | Onsite |
| Session 5.3 Catastrophic large-scale landslides in mountainous regions | | | | | | |
| 5-14 | <u>Alexand Strom</u> | Geodynamics Research Center | Russia | Rock avalanches: basic characteristics and classification criteria | FCB | Onsite |
| 5-15 | <u>Jan Burda</u> , Vit Vilimek | VUHU | Czech Republic | An interdisciplinary assessment of a coal-mining-induced catastrophic landslide (Czech Republic) | FCB | Onsite |
| 5-16 | <u>Gioachino Roberti</u> , Brent Ward, Benjamin van Wyk de Vries, Nicolas Le Corvec, Swetha Venugopal, Glyn Williams-Jones, John J. Clague, Pierre Friele, Giacomo Falorni, Geidy Baldeon, Luigi Perotti, Marco Giardino, and Brian Menounos | Minerva Intelligence | Canada | Could glacial retreat-related landslides trigger volcanic eruptions? Insights from Mount Meager, British Columbia | FCB | Online Virtual |
| 5-17 | <u>Andrey A. Ponomarev</u> , Kai Kang, Oleg V. Zerkal | Lomonosov Moscow State University | Russia | Rock avalanches in the upper reaches of the Mzymta River, Russia | FCB | Online Virtual |
| 5-18 | Emilie Lemaire, Anne-Sophie Mreyen and <u>Hans-Balder Havenith</u> | Liège University | Belgium | Structural and dynamic numerical models of rockslides in the Carpathians and the Alps | FCB | Onsite or Online Virtual |
| 5-19 | <u>Michele Delchiaro</u> , Emanuele Mele, Marta Della Seta, Salvatore Martino, Paolo Mazzanti and Carlo Esposito | Sapienza University of Rome | Italy | Quantitative investigation of a Mass Rock Creep deforming slope through A-Din SAR and geomorphometry | FCB | Online virtual |
| 5-20 | <u>Ching-Ying Tsou</u> , Masahiro Chigira, Yu-Chung Hsieh, Mien-Ming Chen, and TaiChieh He | Faculty of Agriculture and Life Science/Hirosaki University | Japan | Deformational Features of Deep-Seated Gravitational Slope Deformation of Slate Slopes in the Central Range, Taiwan | FCB | Online Virtual or Pre-recorded |
| 5-21 | <u>Kiichiro Kawamura</u> , Jan Sverre Laberg | Yamaguchi University | Japan | Bathymetric Analyses of Submarine Landslides on the Jan Mayen Ridge, Norwegian–Greenland Sea | FCB | Online virtual |

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|------|--|---|----------------|---|-----|--------------------------|
| 5-22 | <u>Dirk Kuhn</u> , Reginald Hermanns, Jewgenij Torizin, Michael Fuchs, Tim Redfield, Raymond Eilertsen and Dirk Balzer | Federal Institute for Geosciences and Natural Resources | Germany | Forkastningsfjellet rock slide, Spitsbergen: State of activity in a changing climate | FCB | Onsite |
| 5-23 | <u>Vinod K Sharma</u> | Geological Survey of India (Retd) | India | Catastrophic landslides in Indian sector of Himalaya | FCB | Onsite |
| 5-24 | Andrée Blais-Stevens | Geological Survey of Canada | Canada | Landslides that caused fatalities in Canada from 1771-2019 | EPR | Onsite or Online Virtual |
| 5-25 | <u>Tomáš Pánek</u> , Elisabeth Schö nfeldt, Michal Břežný, Diego Winocur, Oliver Korup | University of Ostrava | Czech Republic | Giant landslides in the foreland of Patagonian Andes: effects of deglaciation and drawdown of glacial lakes | EPR | Onsite |
| 5-26 | <u>Mark E. Reid</u> , Brian D. Collins | U.S. Geological Survey | USA | Basal Liquefaction from Rapid Landsliding: The 2014 Deadly Oso Landslide (USA) | EPR | Onsite (Maybe) |
| 5-27 | Toshimi Mizuno | OYO Corporation | Japan | The evaluation of Deep-seated catastrophic landslides (DCLs) on Kii Peninsula 2011 by means of the historical deformation | EPR | Onsite |

Session 5.4. Landslides triggered by extreme rainfall and other effects of climate change

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|------|---|--|----------|---|-----|--------------------------------|
| 5-28 | <u>Ken Ho</u> , H.W. Sun, E.J. Lam and F.L.C. Lo | GEO | China | Enhancing Preparedness against Impact of Climate Change on Slope Safety in Hong Kong | FCB | Online virtual |
| 5-29 | <u>Wei Shan</u> , Chengcheng Zhang, Ying Guo, Monan Shan, Xujing Zeng, Chunjiao Wang | Northeast Forestry University | China | Climate Change and Surface Deformation Characteristics in Degradation Area of Permafrost in Lesser Khingan Mountain, China | FCB | Pre-recorded |
| 5-30 | <u>Nejc Bezak</u> , Tina Peternel, Anže Medved, Matjaž Mikoš | University of Ljubljana | Slovenia | Climate change impact evaluation on the water balance of the Koroška Bela area, NW Slovenia | FCB | Online Virtual or Pre-recorded |
| 5-31 | Jessica Maria Chicco, Marco Frasca, <u>Giuseppe Mandrone</u> , Damiano Vacha and Laurie Jayne Kurilla | University of Torino | Italy | Global warming as a predisposing factor for landslides in glacial and periglacial areas: an example from western Alps (Aosta Valley, Italy) | FCB | Pre-recorded |
| 5-32 | <u>Qiang Zou</u> , Peng Cui, Hu Jiang, Yanguo Liu, Cong Li, Sheng Hu, Bin Zhou | Institute of Mountain Hazards and Environment, CAS | China | Characteristics and causes of the debris flow in Shelong Gully, China | FCB | Onsite or Online Virtual |
| 5-33 | <u>Kounghoon Nam</u> and Fawu Wang | Tongji University | China | Extreme rainfall induced landslide susceptibility assessment using Autoencoder combined with Random forest | FCB | Onsite |

Session 5.5. Frontiers of landslide science

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|------|--|----------------------------------|-------------|---|-----|--------|
| 5-34 | <u>Sabatino Cuomo</u> , Angela Di Perna and Mario Martinelli | University of Salerno | Italy | MPM modelling of buildings impacted by landslides | FCB | Onsite |
| 5-35 | Rafael Caduff, <u>Tazio Strozzi</u> , Nils Hählen and Jörg Häberle | Gamma Remote Sensing | Switzerland | Accelerating Landslide Hazard at Kandersteg, Swiss Alps; Combining 28 years of satellite InSAR and single campaign terrestrial radar data | FCB | Onsite |
| 5-36 | <u>Ying GUO</u> , Wei SHAN, Zhichao XU, Chunjiao WANG and Shuanglin WANG | Northeast Forestry University | China | Identification old landslides in permafrost degradation area in Northeast China by difference distribution of surface trees | FCB | |
| 5-37 | <u>Thi Minh Hue Le</u> , Vidar Gjelsvik, Suzanne Lacasse, Stein-Are Strand, Eirik Traae and Vikas Thakur | Norwegian Geotechnical Institute | Norway | Forensic geotechnical investigation of the Skjeggstad quick clay landslide, Norway | FCB | Onsite |

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|------|--|---|-----------------|---|-----|----------------|
| 5-40 | <u>Paula Hilger</u> , Reginald L. Hermanns, Bernd Etzelmüller | Western Norway University of Applied Sciences | Norway | A landform evolution model for the Mannen area in Romsdal valley, Norway | FCB | Onsite |
| 5-41 | <u>Guglielmo Grechi</u> , Salvatore Martino | University of Rome La Sapienza | Italy | Multimethodological study of non-linear strain effects induced by thermal stresses on jointed rock masses | FCB | Online Virtual |
| 5-42 | <u>S.O.A.D. Mihira Lakruwan</u> , S.A.S. Kulathilaka | Tohoku University, Japan | Japan | Economizing the Soil Nailing Design by Drainage Improvement – Case History at Ginigathhena | FCB | Onsite |
| 5-43 | <u>Sabatino Cuomo</u> , Sabrina Moretti, Lorenzo Frigo and Stefano Aversa | University of Salerno | Italy | Performances of geosynthetics-reinforced barriers for protection against debris avalanches | FCB | Onsite |
| 5-44 | Carlo Tacconi Stefanelli, Teresa Gracchi, Guglielmo Rossi, and <u>Sandro Moretti</u> | University of Firenze | Italy | Large and small scale multi-sensors remote sensing for landslide characterisation and monitoring | FCB | Onsite |
| 5-45 | Pilar Jeanneret, <u>Stella Moreiras</u> , Silke Merchel, Andreas Gärtner, Steven Binnie, Maria Julia Orgeira, G. Aumaitre, D Bourlès, and K. Keddadouche | CONICET | Argentina | Novel cosmogenic datings in landslide deposits, San Juan, Argentina | FCB | No |
| 5-46 | <u>Gabriel Legorreta Paulin</u> , Trevor A. Contreras, Katherine A. Mickelson, Kara E. Jacobacci, and William Gallin | Universidad Nacional Autonoma de Mexico | Mexico | Modeling landslide volumes: A case study in Whatcom County, Washington, USA | FCB | Onsite |
| 5-47 | Santiago Noriega-Londoño, <u>Maria Isabel Marín-Cerón</u> , Julien Carcaillet, Matthias Bernet, Isandra Angel | EAFIT University | Colombia | CRE dating of torrential alluvial deposits as an approximation of the Holocene climate-changes signatures in the Northwestern Colombian Andes | FCB | Onsite |
| 5-48 | Andrey Kazeev, German Postoev | Soil Mechanics, Sergeev Institute of Environmental Geoscience of Russian Academy of Science | Russia | Features of Construction in Areas with Deep Block-type Landslides | FCB | |
| 5-49 | <u>Isakbek Torgoev</u> and Salamat Toguzbaev | Institute of Geomechanics and Mining of National Academy of Sciences of Kyrgyz Republic | Kyrgyz Republic | Rock Glaciers and Landslides in the Waste Dump of High-Altitude Kumtor Goldmine (Kyrgyzstan) | FCB | |
| 5-50 | <u>Pietro Rimoldi</u> , Matteo Lelli, Pietro Pezzano, Fabrizia Trovato | Consultant | Italy | Geosynthetic reinforced soil structures for slope stabilization and landslide rehabilitation in Asia | FCB | Online Virtual |

One-page abstract papers for Theme 5

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|------|-----------------------|---|------------|---|-----|----------------|
| 5-51 | Nicholas Roberts | Mineral Resources Tasmania | Australia | Managing hazard and risk of landslide-generated waves in lakes | 1PA | |
| 5-52 | Marc Ostermann | Geological Survey of Austria | Austria | The Pineda Rockslide -Characteristics of Vajont's elder brother | 1PA | |
| 5-53 | Christian Zangerl | University of Natural Resources and Life Sciences, Vienna | Austria | Investigation, characterisation and monitoring of deep-seated landslides in the surroundings of large dam reservoirs | 1PA | Online Virtual |
| 5-54 | Reshad Md. Ekram Ali | Geological Survey of Bangladesh | Bangladesh | Influence of geology and geological structures in triggering landslides, Bangladesh | 1PA | Online Virtual |
| 5-55 | Atm Shakhawat Hossain | Jahangirnagar University | Bangladesh | Rainfall Induced Landslide Hazards of Bangladesh---Challenges, Issues and sustainable Development | 1PA | |
| 5-56 | Renato de Lima | CENACID-UFPR | Brazil | Understanding the landslides in the mega disasters of Santa Catarina (2008), Rio de Janeiro (2011) and Paraná. (2011)- Brazil | 1PA | |

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|------|--------------------------|--|----------------|--|-----|--------------------------------|
| 5-57 | Dave Gauthier | BGC Engineering | Canada | Karrat Fjord (Greenland) tsunamigenic landslide of 17 June 2017: initial 3D observations | 1PA | |
| 5-58 | Violchen Sepulveda | Universidad de Chile | Chile | Catastrophic landslide and subsequent tsunamis in Los Lagos District, Chile | 1PA | Onsite or Online Virtual |
| 5-59 | Marcelo Somos-Valenzuela | Universidad de La Frontera | Chile | Landslides triggered by hydroclimatological events in the Chilean Andes | 1PA | |
| 5-60 | Xiaolin Fu | Wuhan Centre of China Geological Survey | China | Study on deformation and formation mechanism of the deep-seated landslide triggered by human engineering activities: A case study of the Baiyangwan landslide in Wushan County, the Three Gorges Reservoir region, China | 1PA | |
| 5-61 | Lei Zhu | Institute of Mountain Hazards and Environment, Chinese Academy of Sciences, Chengdu | China | Failure mechanism and dynamic processes of rock avalanche occurrence in Chengkun railway, China, on August 14, 2019 | 1PA | |
| 5-62 | Hongjuan Yang | Institute of Mountain Hazards and Environment, Chinese Academy of Sciences | China | Rainfall-induced landslides and debris flows in Mengdong Town, Yunnan Province, China | 1PA | Online Virtual or Pre-recorded |
| 5-63 | Baoping Wen | China University of Geosciences (Beijing) | China | Necessary and sufficient conditions on the prediction and description of rapid and long run-out rock landslides mobility | 1PA | |
| 5-64 | Chenxiao Tang | Institute of Mountain Hazards and Environment, CAS | China | Monitoring of landslide risk components after the 2008 Wenchuan earthquake | 1PA | |
| 5-65 | Ruichen Chen | China University of Geosciences (Beijing) | China | Kinematic mechanism of a long runout landslide in the upper reaches of the Jinsha River | 1PA | Pre-recorded |
| 5-66 | Jian Chen | China University of Geosciences (Beijing) | China | Evolution of a giant paleolake in the upper Minjiang River, eastern Tibetan Plateau | 1PA | |
| 5-67 | YunusAli Pulpadan | State Key Laboratory of GeoHazard Prevention and Geoenvironment Monitoring | China | Fluvial responses to large scale landslides | 1PA | |
| 5-68 | Xuanmei Fan | SKLGP, Chengdu University of Technology | China | The disaster chain effect of landslides after strong earthquakes | 1PA | |
| 5-69 | Shenghua Cui | State Key Laboratory of Geohazard Prevention and Geoenvironment Protection, Chengdu University of Technology | China | Liquefaction within Bedding Fault: New Understanding of the Initiation and Movement of Daguangbao Landslide Triggered by the 2008 Wenchuan Earthquake (Ms=8.0) | 1PA | Onsite |
| 5-70 | Jia-Jyun Dong | National Central University | Chinese Taipei | Submarine landslide: A case study from the southwestern of Taiwan offshore | 1PA | |
| 5-71 | Edwin Garcia | University of Antioquia | Colombia | A technical investigation on causation on the catastrophic landslide on 26th October 2016 in Copacabana, Colombia | 1PA | |
| 5-72 | Dericks Shukla | Indian Institute of Technology Mandi | India | What happened at Kotrupi landslide of Himachal Pradesh, India | 1PA | |

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|------|-------------------------------|--|-------------|---|-----|----------------|
| 5-73 | SARADA PRASAD PRADHAN | INDIAN INSTITUTE OF TECHNOLOGY ROORKEE, INDIA | India | Large scale landslide in mountainous region | 1PA | |
| 5-74 | Chandrasekaran S S | Vellore Institute of Technology, India | India | Geotechnical Investigations on mechanism of flow type catastrophic landslides of Western Ghats, India | 1PA | |
| 5-75 | Swapna Acharjee | State Remote Sensing Application Centre, Department of Science and Technology, Government of Arunachal Pradesh | India | Landslide triggered by rainfall and landuse change: A case study of Laptap Landslide, Arunachal Pradesh, India | 1PA | Online Virtual |
| 5-76 | Sreekumar Sankara Pillai | IRTC | India | Landslides 2018 in Kera,India,Lessons Learned | 1PA | |
| 5-77 | Federico Agliardi | University of Milano-Bicocca | Italy | Practical characterization of slow rock slope deformation mechanisms, long-term activity and progressive failure: implications for dam reservoirs | 1PA | |
| 5-78 | Carlo Esposito | Universit  La Sapienza | Italy | Time-dependent rock mass deformation and landscape evolution in causing catastrophic rockslides | 1PA | Onsite |
| 5-79 | Guido Rianna | CMCC Foundation | Italy | Bridging the gap between climate sciences and landslide practitioners: insights from European experiences | 1PA | |
| 5-81 | Atsuhiko Kinoshita | National Institute for Land and Infrastructure Management | Japan | Study on the mechanism of the deep-seated landslide using the airborne electromagnetic surveys | 1PA | |
| 5-82 | Komatsubara Taku | Geological Survey of Japan, AIST | Japan | Relationships between antecedent rainfall and volume of earthquake-induced landslides in historical era of Japan | 1PA | Onsite |
| 5-83 | Prakash Chandra Ghimire | Institute of Engineering, Pulchowk Campus, Tribhuvan University | Nepal | Large Scale Landslide mechanism: A case study of Jure landslides in Nepal | 1PA | |
| 5-84 | Caleb Gasston | University of Auckland | New Zealand | Surface fault rupture and landslides: investigating the triggering mechanisms of large volume landslides generated by the 2016 Kaikoura Earthquake. | 1PA | |
| 5-85 | Nikola Chevyaga | Grad23 | Russia | Paragenetic landslide-mudflow process in the upper Belaya river (Caucasus, Russia) | 1PA | |
| 5-86 | Igor Fomenko, Denis Gorobtsov | Russian State Geological Prospecting University n. a. Sergo Ordzhonikidz (MGRI) | Russia | Paragenetic landslide-mudflow process in the upper Belaya river (Caucasus, Russia) | 1PA | |
| 5-87 | John Reynolds | Reynolds International Ltd | UK | Slope instabilities and Glacial Lake Outburst Floods: processes, hazard assessment and mitigation | 1PA | |
| 5-88 | David Alexander | University College London | UK | The role of landslides in cascading disasters | 1PA | |
| 5-89 | Marte Gutierrez | Colorado School of Mines | USA | The Massive February 17, 2006, Leyte, Philippines, Rockslide | 1PA | Onsite |
| 5-90 | Ubydul Haque | University of North Texas Health Science Center | USA | Increasing deadly landslides worldwide 1995-2019: an update | 1PA | |
| 5-92 | Md Aftabur Rahman | Chittagong University of Engineering & Technology | Bangladesh | Numerical simulation debris flow along curved channel | 1PA | |

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|-------|-----------------------|--|----------------|--|-----|----------------|
| 5-93 | Scott McDougall | University of British Columbia Department of Earth, Ocean and Atmospheric Sciences | Canada | Drone-based LiDAR surveying of landslide deposits to characterize runout behaviour | 1PA | Pre-recorded |
| 5-94 | Peter Bobrowsky | Geological Survey of Canada | Canada | Drone Technology and Landslide Hazards in British Columbia | 1PA | |
| 5-95 | Michael Hendry | University of Alberta | Canada | Development of Active landslides and ground hazards into full-scale laboratories: outcomes and benefits | 1PA | |
| 5-96 | Marten Geertsema | Ministry of Forests, Lands, Natural Resource Operations and Rural Development | Canada | Challenges with radiocarbon dating landslides | 1PA | |
| 5-97 | Yi Zhang | Lanzhou University | China | Geomorphology and movements of deep-seated landslide along active fault in the Bailong River basin | 1PA | Onsite |
| 5-98 | Wen-Chieh Cheng | Xi'an University of Architecture and Technology | China | Mobility Characteristics in Loess Landslide over Erodible Bed: Insights from Sandbox Experiment | 1PA | Onsite |
| 5-99 | Xingmin Meng | School of Earth Sciences, Lanzhou University | China | Landslide Hazards and Management in Beilong River Corridor, China | 1PA | Onsite |
| 5-101 | Xiwei Xu | Institute of Crustal Dynamics, China Earthquake Administration | China | Correlation between surface rupture-associated geological hazards and casualties related to the 2008 Wenchuan, China Mw7.9 earthquake | 1PA | |
| 5-102 | Guoyu Li | State Key Laboratory of Frozen Soil Engineering, Chinese Academy of Sciences | China | Rock glacier degradation in Tianshan Mountains, China: a case study | 1PA | |
| 5-103 | Si Fan Zhang | School of engineering, harbin institute of technology | China | Formation Mechanism and Mitigative Measures of Frost Hazards encountered by Crude Oil Pipeline along the Slope in Daxing'anling Permafrost Region | 1PA | |
| 5-104 | Xinyu Li | School of civil engineering, harbin institute of technology | china | Engineering geological environment of permafrost region in NE China under permafrost degradation | 1PA | |
| 5-105 | Jan Hradecky | University of Ostrava, Faculty of Science | Czech Republic | Long-term slope instability in Crimean Mountains-dating of giant rockslides. | 1PA | |
| 5-106 | Michal Bil | CDV - Transport Research Centre | Czech Republic | A Prediction of Landslide Risks to Transportation Infrastructure in Czechia: An assessment based on climate scenarios and transport infrastructure planned development | 1PA | |
| 5-107 | Costanza Morino | Universite de Nantes | France | Different dynamics of permafrost degradation-induced landslides revealed by molards | 1PA | Online Virtual |
| 5-108 | Niels Hovius | GFZ German Centre for Geoscience Research | Germany | Causes of transient changes of landslide rates after earthquakes | 1PA | |
| 5-109 | Oded Katz | Geological Survey of Isreal | Israel | Submarine landslide hazard assessment and mapping | 1PA | |
| 5-110 | <u>Mario Valiante</u> | Sapienza University of Rome | Italy | A spatiotemporal object-oriented data model for landslides (LOOM): some first pilot applications from the Cilento Geopark (Italy) | TMI | Online Virtual |
| 5-111 | Davide Bertolo | Regione Autonoma Valle d'Aosta | Italy | Integrating PS-InSAR monitoring and local early warning systems in the Alps: form the regional to the local scale. The experience of a public service. | 1PA | |

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| 5-112 | Giuseppe Cardile | Mediterranea University of Reggio Calabria DICEAM | Italy | Key factors to define the design parameters of geosynthetic-reinforced soil structures for landslide stabilisation | 1PA | |
| 5-113 | Yoshinori Otani | Hirose Hokyodo & Co.,Ltd. | Japan | Recent Development of the Mechanically Stabilized Earth Walls with Geosynthetic Strap Reinforcements | 1PA | Online Virtual |
| 5-114 | Junichi Koseki | University of Tokyo | Japan | Japanese case histories on use of geosynthetics in reconstructing failed slopes | 1PA | Onsite |
| 5-115 | Bharat Prasad Bhandari | Tribhuvan University | Nepal | Spatial dynamics of soil composition in the landslides of Siwalik zone, Nepal | 1PA | Onsite |
| 5-116 | Mohammad Ibrahim Mazhar | IGIS NUST Pakistan | Pakistan | Landslide Susceptibility mapping through integration of GIS and Geotechnical approaches | 1PA | |
| 5-117 | Haleem Magsi | Karakoram International University | Pakistan | 1. Sesimotectonic Method In Evaluation Of Slope Stability 2. Seismotectonic Landslide Zoning in Northern Areas | 1PA | |
| 5-118 | Artem Khomutov | Earth Cryosphere Institute Tyumen Scientific Centre SB RAS | Russia | Mechanisms of cryogenic landslides and landforms under warming, Yamal, Russia | 1PA | |
| 5-119 | Elena Babkina | Earth Cryosphere Institute, Tyumen Scientific Centre SB RAS | Russia | Response of slope process to permafrost warming in the North of West Siberia, Russia | 1PA | |
| 5-120 | Mohamed Ayeldeen | Keller Grundbau GmbH | UAE | Landslides modelling and ground improvement | 1PA | |

Theme 6 Specific Topics in Landslide Science and Applications

Contact: Zeljko Arbanas <zeljko.arbanas@gradri.uniri.hr>

Session 6.1 Impact of large ground deformations near seismic faults on critically important civil-infrastructures

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|-----|---|---|----------------|--|-----|----------------|
| 6-1 | <u>Kazuo Konagai</u> , Alex K. Tang and John M. Eidinger | International Consortium on Landslides | Japan | Recent earthquakes that hit areas covered and/or underlain by pyroclastic matters and their impacts on lifelines | FCB | Onsite |
| 6-2 | <u>Kazuo Konagai</u> | International Consortium on Landslides | Japan | Landslides in recent earthquakes and damage to lifelines | FCB | Onsite |
| 6-3 | <u>Alex Tang</u> | L&T Consulting | Canada | Lessons Learned – Landslide Induced Lifelines Disasters from Past Earthquakes | FCB | Onsite |
| 6-4 | <u>Hiroshi P. Sato</u> and Hiroshi Une | College of Humanities and Sciences, Nihon Univ. | Japan | Relation between horizontal direction of crustal deformation surveyed on the control points and area ratio of the slope failures triggered by the 2016 Kumamoto earthquake (Mj7.3) | FCB | Pre-recorded |
| 6-5 | Farzad TALEBI and <u>Junji KIYONO</u> | Kyoto University | Japan | Seismic response of buried pipeline to strong ground motion of strike-slip fault | FCB | Onsite |
| 6-6 | <u>Tara Nidhi Bhattarai</u> , Dhruva Prasad Sharma and Lekh Prasad Bhatta | Tribhuvan University | Nepal | Reconstruction Strategies for Mw 7.8 Earthquake-induced Landslide-affected Settlements in Nepal | FCB | Online Virtual |
| 6-7 | <u>Katsumi Ebisawa</u> , Toshiaki Sakai, Futoshi Tanaka, Ryusuke Haraguchi, Yoshinori Mihara and Yuji Nikaido | Central Research Institute of Electric Power Industry | Japan | State of nuclear power plant risk assessment for ground deformation with seismic faulting | FCB | Online Virtual |
| 6-8 | Ching Hung, <u>Chih-Hsuan Liu</u> and Hsuan-Ho Wang | National Cheng Kung University | Chinese Taipei | Relationship between Arias intensity and the earthquake-induced displacements of slopes | FCB | Online Virtual |

Session 6.2 Recent Progress in the Landslide Initiating Science

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|------|--|---|-------------|--|-----|----------------|
| 6-9 | <u>Amin Askarinejad</u> & Sarah M. Springman | Delft University of Technology | Netherlands | Water exfiltration from bedrock: a drastic landslide triggering mechanism | FCB | Online Virtual |
| 6-10 | <u>Haijun Qiu</u> , Yifei Cui, Dongdong Yang, Sheng Hu, Yanqian Pei, Shuyue Ma | Northwest University | China | Controls on landslide size: insights from field survey data | FCB | Onsite |
| 6-11 | <u>Ikuo Towhata</u> , Takeshi Akima, Satoshi Goto, Shigeru Goto, Junya Tanaka and Shogo Aoyama | Kanto Gakuin University | Japan | Geologic and hydrologic investigations on slope failures triggered by extreme rainfall on Izu Oshima Island, Japan | FCB | Onsite |
| 6-12 | <u>Tao Wang</u> and Mingfeng Deng | Institute of Mountain Hazards and Environment, Chinese Academy of Sciences | China | Comparison of Relationship between Debris-flow Volume and Peak Discharge in Different Regions | FCB | |
| 6-13 | <u>Yifei Cui</u> , Yanzhou Yin, Chaoxu Guo | Tsinghua University | China | Investigation of internal erosion of wide grading loose soil – a micromechanics-based study | FCB | Onsite |
| 6-15 | <u>Hirota Ochiai</u> , Katsuo Sasahara, Yusuke Koyama | Japan Forest Technology Association | Japan | Landslide Field Experiment on a Natural Slope in Futtsu City, Chiba Prefecture | FCB | Onsite |
| 6-16 | <u>Vedran Jagodnik</u> , Josip Peranić and Željko Arbanas | Faculty of Civil Engineering, University of Rijeka | Croatia | Mechanism of landslide initiation in small-scale sandy slope triggered by an artificial rain | FCB | Online Virtual |
| 6-17 | <u>Huayong Chen</u> , Peng Cui, Xiaqing Chen, and Jiangang Chen | Institute of Mountain Hazards and Environment, CAS, 14AQEICQDXGR0JD V Chengdu 610041, China | China | Experimental study on formation and propagation of debris flow triggered by the glacial lake outburst flood | FCB | Onsite |
| 6-18 | <u>Yan Yan</u> , Yifei Cui, Shuyao Yin, Xin Tian | Southwest Jiaotong University | China | Quantitative analysis of landslide processes based on seismic signals - a new method for monitoring and early warning of landslide hazards | FCB | Onsite |

Session 6.3 Earth Observation and Machine Learning

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|------|--|--|-------------|--|-----|----------------|
| 6-19 | <u>Christopher Gomez</u> , Allouis, T, Lissak C, Hotta N, Shinohara Y, Hadmoko D.S, Vilimek V, Wassmer P, Lavigne F, Setiawan A, Sartohadi J, Saputra A, Rahardianto T | Kobe University | Japan | High-resolution point-cloud for Landslides in the 21st Century: from data acquisition to new processing concepts | FCB | Onsite |
| 6-20 | Giacomo Titti, Matteo Mantovani, <u>Giulia Bossi</u> | CNR-IRPI, Research Institute for Geo-Hydrological Protection | Italy | Detecting change of patterns in landslide displacements using machine learning, an example application | FCB | Online Virtual |
| 6-21 | <u>Elahe Jamalnia</u> , Faraz S. Tehrani, Susan C. Steele-Dunne, Philip J. Vardon | Delft university of technology | Netherlands | Predicting rainfall induced slope stability using Random Forest regression and synthetic data | FCB | Online Virtual |
| 6-22 | <u>Daniele Giordan</u> , Aleksandra Wrzesniak, Paolo Allasia, Davide Bertolo | CNR IRPI | Italy | Automatized dissemination of landslide monitoring bulletins for early warning applications | FCB | Onsite |

Session 6.4 General Landslide Studies

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|------|---|---|--------|---|-----|--------|
| 6-23 | <u>Vassilis Marinos</u> , Kostas Papazachos, Georgios Stoumpos, Dimitra Papouli, George Papathanassiou, Theodoros Stimaratzis | National Technical University of Athens | Greece | Engineering geological appreciation in landslide mapping for a natural gas pipeline project: challenges and risk reduction measures | FCB | Onsite |
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|------|--|--|-----------|---|-----|--------------------------|
| 6-24 | <u>Tonglu LI</u> , Mumtaz Haider, Wei Shen, Ping Li | Chang'an University | China | Loess Stratigraphy and Loess Landslides in the Chinese Loess Plateau | FCB | Pre-recorded |
| 6-25 | <u>Louise M Vick</u> , Jørgen N Berg, Mark Eggers, Anne Hormes, Ingrid Skrede, Lars Harald Blikra | UiT The Arctic University of Norway | Norway | The Jettan Rockslide- an engineering geological overview | FCB | Onsite or Online Virtual |
| 6-26 | <u>Hermanns Reginald L</u> , Oppikofer Thierry, Böhme Martina, Penna Ivanna M, Nicolet Pierrick, and Bredal Marie | Geological Survey of Norway | Norway | Mapping, hazard and consequence analyses for unstable rock slopes in Norway | FCB | Onsite |
| 6-27 | <u>Martina Böhme</u> , Reginald L. Hermanns, Tom R. Lauknes | Geological Survey of Norway | Norway | Landscape formation and large rock slope instabilities in Manndalen, northern Norway | FCB | Onsite |
| 6-28 | <u>Peng Cui</u> , Qiang Zou, Yu Lei, Zhengtao Zhang, Shengnan Wu | Institute of Mountain Hazards and Environment, CAS | China | Disaster Risk Assessment of the Silk Road | FCB | Onsite or Online Virtual |
| 6-29 | <u>Jiao Wang</u> , Qiang Zou, Wen Jin, Yanju Fu | Institute of Mountain Hazards and Environment, CAS | China | Analyzing the characteristics of glacial debris flow activity in Parlung Tsangpo basin, Tibet | FCB | |
| 6-30 | <u>Daisuke Higaki</u> , Kishor Kumar Karki, Naoto Koiwa, Mio Takahashi, Sohan Kumar Ghimire | Hirosaki University | Japan | Rehabilitation of gully-dominant hill slopes by using low-cost measures-a case study in Nepal | FCB | Onsite |
| 6-31 | <u>Chinthaka Ganepola</u> , Udeni Priyantha Nawagamuwa, Anurudda Kumara Karunarathna, Senaka Basnayake, Lilanka Kankanamge and Dhanushka Jayathilake | Asian Disaster Preparedness Center | Sri Lanka | Site Suitability Analysis for Nature-based Landslide Risk Mitigation | FCB | Pre-recorded |
| 6-33 | <u>Kiyoharu HIROTA</u> , Cincy ROSA and Koichi HASEGAWA | KOKUSAI KOGYO CO., LTD/(ICL) | Japan | Slope stability around the northern part of the Tegucigalpa Basin, Honduras: A case of landslide process at residential development areas | FCB | Onsite |
| 6-34 | <u>Oleg V. Zerkal</u> , Alexander L. Strom | Lomonosov Moscow State University, Geological Department | Russia | Classification of Cryogenic Landslides and Related Phenomena (by Example of the Territory of Russia) | FCB | Onsite |

E-proceedings papers for Theme 6

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|------|--|---|-------------|--|-----|--------------|
| 6-35 | <u>Yu Zhao</u> , Jingzhi Wu, Liangbo Hu, Yu Jiang | Institute of Mountain Hazards and Environment, CAS | China | Measuring colloidal forces between clay microparticles with optical tweezers | EPR | |
| 6-36 | <u>Jana Eichel</u> | Karlsruhe Institute of Technology, Institute of Geography and Geocology | Germany | Biogeomorphic feedbacks between plants and mass movement processes in periglacial environments | EPR | Onsite |
| 6-37 | Jose A. Chavez, Mauricio E. Vasquez | OPAMSS | El Salvador | Slope Behavior Improvement of Partially-Saturated Pyroclastic in Data Scarse Regions | EPR | Pre-recorded |
| 6-38 | <u>Vishnu Dangol</u> , Tuk Lal Adhikari, Achyuta Nanda Bhandary, and Ishwor Dahal | Nepal Landslide Society | Nepal | Geotechnical Investigation for Landslide Stabilization Works in Narayanghat-Mugling Road, Central Nepal | EPR | Onsite |
| 6-39 | <u>Yasunori Katsume</u> , Yutaka Shimizu, Takumi Abe, Yasuko Okajima, Kazue Fujita | OYO CORPORATION | Japan | Three-dimensional shape of mountainous landslide and the ground deformation caused by snow melting - Jin'nosuke-dani landslide, Mount Hakusan, Central Japan | EPR | Onsite |

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|------|---|--|-------------|---|-----|--------|
| 6-40 | <u>Kumiko Fujita</u> | International Consortium on Landslides | Japan | Starting International Joint Research for Landslide Disaster Risk Reduction: The Use of Japanese Warning Technology Considering the Social Differences in Sri Lanka and Japan | EPR | Onsite |
| 6-41 | A.Wrzesniak, D.Notti, D.Giordan, N.Dematteis, P.Lollino, <u>N.L.Fazio</u> | CNR-IRPI | Italy | Numerical modeling and risk assessment of large Monesi slide (Italy) based on multi-source monitoring data analysis | EPR | |
| 6-42 | <u>Christophe Balg</u> , Nobuhito Nishimura | Geobru gg AG | Switzerland | Applying over ten years of experience in debris flow barriers to examples in South Africa and India for permanent protection | EPR | Onsite |
| 6-43 | <u>Shiguo Xiao</u> , Yuan Qi, Xuan Wang | Southwest Jiaotong University | China | A calculation method for frame-type stabilizing piles in slope engineering | EPR | Onsite |
| 6-44 | <u>Vishnu Dangol</u> , Dinesh Pathak, and Samjwal Ratna Bajracharya | Nepal Landslide Society | Nepal | Impact on Infrastructure by 2015 Gorkha Earthquake Induced Landslides | EPR | Onsite |

Session 6.5 The Japanese Geotechnical Society Session "Risk and Adaptation in Geo-Disaster Vulnerable Areas under Recent Severe Earthquake and Extreme Rainfall"

Contact: Kazunari Sako <sako@oce.kagoshima-u.ac.jp>

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|------|--|---------------------------------|-------|--|-----------|--------|
| 6-45 | <u>Kazuya Yasuhara</u> | Ibaraki University | Japan | Contribution of geotechnical engineering to climate change and IPCC | EPR | Onsite |
| 6-46 | T. Komatsu | | | (Tentative) Risk prevention and management: the great challenge on water-related disasters | 1PA | |
| 6-47 | <u>Motoyuki Suzuki</u> , Kyoko Kagohara, Kazuyuki Sakaguchi, Hiroaki Matsugi, Satoru Kataoka | Yamaguchi University | Japan | Urgent issues and new suggestions for geo-disaster prevention in Japan | FCB/Vol.3 | Onsite |
| 6-48 | <u>Tatsuya Ishikawa</u> | Hokkaido University | Japan | Lessons from recent geo-disasters in Hokkaido under heavy rainfall | FCB/Vol.6 | Onsite |
| 6-49 | Satoshi Murakami | Fukuoka University | Japan | Lessons from recent geo-disasters due to extreme rainfall events in Kyushu district, Japan | 1PA | |
| 6-50 | <u>Noriyuki Yasufuku</u> and Adel Alowiasy | Kyushu University | Japan | Lessons from recent geo-disasters caused by heavy rainfall in recent years in Kyushu Island, Japan | FCB/Vol.6 | Onsite |
| 6-51 | <u>Shima Kawamura</u> | Muroran Institute of Technology | Japan | Lessons from recent geo-disasters in Hokkaido under earthquake | FCB/Vol.6 | Onsite |
| 6-52 | <u>Kiyonobu Kasama</u> , Zentaro Furukawa, Noriyuki Yasufuku | Tokyo Institute of Technology | Japan | Lessons from recent earthquake-induced Geo-disaster in Kyushu | EPR | Onsite |

One-page abstract papers for Theme 6

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|------|---------------|---|-------|---|-----|----------------|
| 6-53 | Weile Li | Chengdu University of Technology | China | Precursor of large rockslides and its application on landslide early detection | 1PA | Online Virtual |
| 6-54 | Lingjing LI | Institute of geomechanics, Chinese academy of geological sciences | China | Study on the deformation models and spatial-temporal distribution characteristics of landslides in Jinsha River based on InSAR technology | 1PA | |
| 6-55 | Chaoying Zhao | Chang'an University | China | Landslide Dynamic Deformation Monitoring with Sequential Least Squares Based SAR/InSAR techniques | 1PA | Online Virtual |
| 6-56 | Lu Zhang | Wuhan University | China | Challenges and opportunities in landslide hazards detection and disaster early warning with SAR/InSAR observations | 1PA | |
| 6-57 | Hong-Hu Zhu | Nanjing University | China | Multi-field monitoring of landslide using a distributed fiber optic sensing system | 1PA | |

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| 6-59 | Fujun Niu | State Key Laboratory of Frozen Soil Engineering, Northwest Institute of Eco-Environment and Resources, Chinese Academy of Science | China | Slope Failures in Permafrost Regions of the Qinghai-Tibet Plateau | 1PA | |
| 6-60 | Changbao Guo | Institute of Geomechanics, China Geological Survey | China | Reactivation mechanism of ancient landslide in the eastern Tibetan Plateau, China | 1PA | |
| 6-61 | Martina Vivoda Prodan | Faculty of Civil Engineering | Croatia | Structural protection measures on deep seated landslides in Croatia | 1PA | |
| 6-62 | Martin Krkac | University of Zagreb - Faculty of Mining, Geology and Petroleum Engineering | Croatia | Landslide movement prediction using Random Forests and Multiple Linear Regression | 1PA | |
| 6-63 | Mahdi Motagh | GFZ German Research Center for Geosciences | Germany | Multi-sensor analysis of catastrophic landslides related to the 2019 extreme rainfall events in Iran | 1PA | |
| 6-64 | Stavroula Fotopoulou | Aristotle University of Thessaloniki | Greece | Towards a probabilistic performance-based methodology for the vulnerability assessment of buildings subjected to seismically induced landslides | 1PA | Online Virtual or Pre-recorded |
| 6-65 | Vickie Kong | Geotechnical Engineering Office | Hong Kong SAR, China | Territory-wide rainfall landslides prediction using Machine Learning Algorithm | 1PA | |
| 6-66 | Akshay Pandey | Indian Institute of Technology Roorkee | India | Application of Web-GIS for Dissemination of Landslide Susceptibility information | 1PA | |
| 6-67 | Dhanya Madhu | Amrita Vishwa Vidyapeetham | India | Rainfall thresholds for landslide initiation | 1PA | |
| 6-68 | Lal Dinpuia | Mizoram University (Pachhunga University College) | India | Slope instabilities analysis and monitoring of Aizawl landslides, Mizoram, Northeast India | 1PA | Onsite |
| 6-69 | Alessandro Pasuto | Research Institute for Geo-Hydrological Protection - National Research Council (IRPI-CNR) | Italy | Assessing Landslide Hazard along the Belt and Road | 1PA | |
| 6-70 | Alessandro Leonardi | Politecnico di Torino | Italy | A multiscale paradigm for the simulation of debris flow and countermeasures | 1PA | |
| 6-71 | YongSu Kim | NPO Sediment Disaster Prevention Publicity Center | Japan | A STUDY FOR IMPROVING DISASTER PREVENTION OF COMMUNITY | 1PA | |
| 6-72 | Xi Xiong | Nagoya Institute of Technology | Japan | Investigation on unsaturated slope stability influenced by rainfall and fluctuation of reservoir water level with varied rainfall infiltration rates | 1PA | |
| 6-73 | Kaoru Nakazato | Pacific Consultants CO.,LTD. | Japan | Generating Landslide Hazard Map on 2015 Nepal Earthquake and Subsequent Training Activity | 1PA | Onsite |
| 6-74 | Naoki Watanabe | Niigata University | Japan | Relationship between chemical weathering rate and landslide disaster - An example from the middle Hime river basin | 1PA | |
| 6-75 | Katsunori Hattori | GODAI Development Corporation Limited | Japan | Landslide Simulation | 1PA | |
| 6-76 | Susumu Nakamura | College of Engineering, Nihon University | Japan | Risk assessment of structural damage for rock collision due to earthquake-induced landslide | 1PA | Onsite |

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| 6-77 | Michiyo Nakashima | NIPPON KOEI | Japan | The Report on a landslide in Kyotango city,Kyoto prefecture | 1PA | Onsite |
| 6-78 | YAMASHITA YUICHI | Technico Ltd. | Japan | Daily education for disaster risk reduction and victim support in disaster | 1PA | |
| 6-79 | JamesMotVG JamesMotVG | google | Lithuania | drug testing policy | 1PA | |
| 6-80 | Faraz Tehrani | Deltares | Netherlands | Global Landslide Detection using Random Forest Classifier and Optical Satellite Imagery | 1PA | |
| 6-81 | Zhongqiang Liu | Norwegian Geotechnical Institute | Norway | Landslide displacement prediction using deep learning methods | 1PA | |
| 6-82 | Sigurdur Mar Valsson | Statens vegvesen | Norway | Detection of highly sensitive clay layers using machine learning with CPTu data | 1PA | |
| 6-83 | Ivan Depina | SINTEF | Norway | Machine learning models for rainfall-induced landslide predictions on local to regional scales | 1PA | Online Virtual |
| 6-84 | Emir Ahmet Oguz | NTNU | Norway | Critical Appraisal of Machine Learning Methods for the Assessment of Slope Failure | 1PA | |
| 6-87 | <u>Lee Jin-Ho</u> , Seo Bo-Sung, Bae Hyun-Suk, Lee Kwang-Youn | Korean Association of Soil and Water Conservation | Republic of Korea | Introduction of a Technique Developed for Examining Distribution of Land Creep Susceptible Zones in Korea | 1PA | Online Virtual |
| 6-88 | <u>JUNG IL SEO</u> | Korean Society of Forest Engineering | Republic of Korea | Development of a Statistical Model to Assess the Potential Possibility of Land Creep in Korean Mountain Areas | 1PA | Online Virtual |
| 6-89 | Man-II Kim, <u>Namgyun Kim</u> , Jaehwan Kwak | National Forestry Cooperative Federation | Republic of Korea | Stability analysis for cut-slope collapse by earthquake | 1PA | Online Virtual |
| 6-90 | <u>Sung Jin Lee</u> | Korea Forest Service | Republic of Korea | Landslide Control Policy of Korea | 1PA | Online Virtual |
| 6-91 | <u>Sangjun IM</u> | Seoul National University | Republic of Korea | Quantitative Evaluation of Erosion Contro Dam on Sediment Trapping Efficiency with a Simulation Approach | 1PA | Online Virtual |
| 6-92 | Bahaaeldin Sadagah | King Abdulaziz University | Saudi Arabia | Mitigation of slope stability | 1PA | |
| 6-93 | Suneth Neranjan | National Building Research Organisation | Sri Lanka | Adaptation of GPR Technique in Identification of Slip Surfaces of Landslides | 1PA | |
| 6-94 | Galip Usta | Trabzon University | Turkey | Emergency Aid in Disasters | 1PA | |
| 6-95 | Sultan Kocaman | Hacettepe University | Turkey | The role of VGI in landslide inventory preparation | 1PA | |
| 6-96 | Candan Gokceoglu | Hacettepe University | Turkey | A new horizon in landslide researches based on CitSci Approach | 1PA | |
| 6-97 | Zhenhong Li | Newcastle University / Chang'an University | UK | Rapid landslide detection over wide regions with GACOS and OTL based InSAR analysis | 1PA | |
| 6-98 | Chun-Hsing Ho | Northern Arizona University | USA | Oral | 1PA | |
| 6-99 | Zhong Lu | Southern Methodist University | USA | Study of hydrology-driven landslide hazards in Northwestern USA using InSAR and other satellite and in-situ observations | 1PA | |
| 6-101 | Young-Suk Song | Korea Institute of Geoscience and Mineral Resources | Republic of Korea | Development of physically-based model using hydrological and geotechnical analysis to forecast shallow landslide | 1PA | Online Virtual |

Thematic issue "Sendai Landslide Partnerships 2015-2025"

Contact: Kyoji Sassa <secretariat@ichhq.org>

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|------|---|--|----------------|---|-----|--------------------------|
| T-1 | Masahiro Shinoda | National Defense Academy | Japan | Regional landslide susceptibility following the 2016 Kumamoto earthquake using back-calculated geomaterial strength parameters | TMI | Onsite |
| T-3 | Roberta Boni | Department of Earth and Environmental Sciences | Italy | Assessment of the Sentinel-1 based ground motion data feasibility for large scale landslide monitoring | TMI | |
| T-4 | <u>Martin Krkač</u> , Sanja Bernat Gazibara, Željko Arbanas, Marin Sečan, Snježana Mihalić Arbanas | University of Rijeka | Croatia | A comparative study of random forests and multiple linear regression in the prediction of landslide velocity | TMI | Onsite |
| T-5 | <u>Ting-kai Nian</u> , Hao Wu, Dongyang Li, Wei Zhao, Kaoru Takara, De-feng Zheng | Dalian University of Technology | China | Experimental investigation on the formation process of landslide dams and a criterion of river blockage | TMI | Onsite |
| T-6 | <u>Piciullo Luca</u> , Tiranti Davide, Pecoraro Gaetano, Cepeda Jose Mauricio, Calvello Michele | NGI | Norway | Standards for the performance assessment of territorial landslide early warning systems | TMI | Pre-recorded |
| T-9 | <u>Yuki Matsuoka</u> , Erick Gonzales Rocha | UNDRR Office in Japan | Japan | Sendai voluntary commitments: landslide stakeholders and the all-of-society approach enhanced by UNDRR | TMI | Onsite or Online Virtual |
| T-10 | <u>Benjamin B. Mirus</u> , Eric S. Jones, Rex L. Baum, Jonathan W. Godt, Stephen Slaughter, Matthew Crawford, Jeremy Lancaster, Thomas Stanley, Dalia B. Kirschbaum, William J. Burns, Robert G. Schmitt, Kassandra O. Lindsey, and Kevin McCoy | U.S. Geological Survey | USA | Landslides across the USA: occurrence, susceptibility, and data limitations | TMI | Onsite |
| T-11 | <u>Jeffrey A. Coe</u> | US Geological Survey | USA | Bellwether sites for evaluating changes in landslide frequency and magnitude in cryospheric mountainous terrain: a call for systematic, long-term observations to decipher the impact of climate change | TMI | Onsite or Online Virtual |
| T-12 | KANBARA Junichi, <u>IMAMORI Naoki</u> | MLIT | Japan | Outline of measures for sediment disaster by the Sabo department of MLIT, Japan | TMI | Onsite |
| T-13 | Stefano Alberti, Andrew Senogles, Kara Kingen, Adam Booth, Pete Castro, Jill DeKoekkoek, Kira Glover-Cutter, Curran Mohny, Michael Olsen, and <u>Ben Leshchinsky</u> | Oregon State University | USA | The Hooskanaden Landslide: historic and recent surge behavior of an active earthflow on the Oregon Coast | TMI | Onsite |
| T-14 | Zinan Li, Faming Zhang, Wen Gu, Menglong Dong | Hohai University | China | The Niushou landslide in Nanjing City, Jiangsu Province of China: a slow-moving landslide triggered by rainfall | TMI | |
| T-15 | Haibing Yu, <u>Changdong Li</u> , Jia-Qing Zhou, Wenqiang Chen, Jingjing Long, Xutao Wang, Tao Peng | China University of Geosciences, Wuhan | China | Recent rainfall- and excavation-induced bedding rockslide occurring on 22 October 2018 along the Jian-En expressway, Hubei, China | TMI | Online Virtual |
| T-16 | <u>Samuele Segoni</u> , Giulio Pappafico, Tania Luti, Filippo Catani | University of Florence | Italy | Landslide susceptibility assessment in complex geological settings: sensitivity to geological information and insights on its parameterization | TMI | Onsite |
| T-17 | <u>Karel Šilhán</u> | University of Hradec Kralove | Czech Republic | Dendrogeomorphology of landslides: principles, results and perspectives | TMI | Pre-recorded |

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| T-18 | <u>Judith Uwihirwe</u> , Markus Hrachowitz, Thom A. Bogaard | Delft University of Technology | Netherlands | Landslide precipitation thresholds in Rwanda | TMI | Onsite |
| T-19 | <u>Ran LI</u> , Fawu WANG, Shuai ZHANG | Tongji University | China | Failure mechanism of a flow-like landslide triggered by the 2018 Western Shimane Earthquake | TMI | Onsite |
| T-20 | <u>Nejc Bezak</u> , Jošt Sodnik, Jernej Jež, Mateja Jemec Auflič, Matjaž Mikoš | University of Ljubljana | Slovenia | An extreme May 2018 debris flood case study in northern Slovenia: analysis, modelling, and mitigation | TMI | Online Virtual or Pre-recorded |
| T-21 | Guruh Samodra, Muhammad Fauzan Ramadhan, Junun Sartohadi, Muhammad Anggri Setiawan, Nugroho Christanto, Adhera Sukmawijaya | Universitas Gadjah Mada | Indonesia | Characterization of displacement and internal structure of landslides from multitemporal UAV and ERT imaging | TMI | Pre-recorded |
| T-22 | <u>Luke A. McGuire</u> , Ann M. Youberg | University of Arizona | USA | What drives spatial variability in rainfall intensity-duration thresholds for post-wildfire debris flows? Insights from the 2018 Buzzard Fire, NM, USA | TMI | Onsite |
| T-23 | <u>Zongji Yang</u> , Liyong Wang, Jianping Qiao, Taro Uchimura, Lin Wang | Institute of Mountain Hazards and Environment | China | Application and verification of a multivariate real-time early warning method for rainfall-induced landslides: implication for evolution of landslide-generated debris flows Landslides | TMI | Onsite |
| T-24 | <u>Christopher I. Massey</u> , Dougal Townsend, Biljana Lukovic, Regine Morgenstern, Katie Jones, Brenda Rosser, Saskia de Vilder | GNS Science | New Zealand | Landslides triggered by the MW7.8 14 November 2016 Kaikōura earthquake: an update | TMI | Onsite |
| T-26 | <u>Picarelli L</u> , Olivares L, Damiano E, Darban R, Santo A | Universita della Campania | Italy | The effects of extreme precipitations on landslide hazard in the pyroclastic deposits of Campania Region: a review | TMI | |
| T-28 | Huanling Wang, Shiqi Liu, Weiya Xu, Long Yan, Xiao Qu, Wei-Chau Xie | Hohai University | China | Numerical investigation on the sliding process and deposit feature of an earthquake-induced landslide: a case study | TMI | |
| T-29 | Susanta Kumar Samanta, Ranjit Kumar Majumdar | Jadavpur University | India | Identification of landslide prone slopes at Paglajhora area, Darjeeling Himalaya, India | TMI | |
| T-30 | Alex Palma, Rosie Garrill, Martin S. Brook, Nicholas Richards, Jon Tunnicliffe | University of Auckland | New Zealand | Reactivation of coastal landsliding at Sunkist Bay, Auckland, following ex-Tropical Cyclone Debbie, 5 April 2017 | TMI | |
| T-31 | <u>Francis Rengers</u> , Luke McGuire, Nina Oakley, Jason Kean, Dennis Staley, Hui Tang | U.S. Geological Survey | USA | Landslides after wildfire: initiation, magnitude, and mobility | TMI | Onsite |
| T-32 | <u>Vít Vilímek</u> , Jan Klimeš, Ruth Verónica Tito Mamani, José Bastante Abuhadba, Fernando Astete Victoria, Piedad Zoraida Champi Monterroso | Charles University | Czech Republic | Contribution of the collaborative effort of the Czech WCoE to landslide risk reduction at the Machupicchu, Peru | TMI | Onsite |
| T-33 | <u>Sudesh Kumar Wadhawan</u> , Balmukund Singh, Maneesha Vinodini Ramesh | Amrita Vishwa Vidyapeetham | India | Causative Factors of Landslides 2019: Case Study in Malappuram and Wayanad Districts of Kerala, India | TMI | Online Virtual |
| T-34 | <u>Michele Calvello</u> , Graziella Devoli, Katy Freeborough, Stefano Luigi Gariano, Fausto Guzzetti, Dalia Kirschbaum, Hiroaki Nakaya, Joanne Robbins, Manfred Stähli | University of Salerno | Italy | LandAware: a new international network on Landslide Early Warning Systems | TMI | Onsite |

E-Proceedings session by the Japan Landslide Society

Contact: Daisuke Higaki <a9024@n-koei.co.jp>

Session 6.E1 International Cooperation in Landslide Disaster/Risk Reduction (Japan)

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|------|--|--|----------|--|-----|----------------|
| J-1 | <u>Haruki Ogasa</u> | Japan International Cooperation Agency | Japan | JICA's support in sediment disaster risk reduction | EPR | |
| J-2 | <u>Tomoharu Iwasaki</u> , Mukteshwar Gobin | KOKUSAI KOGYO CO., LTD | Japan | Technical cooperation project: Landslide Adviser for Mauritius | EPR | Onsite |
| J-3 | <u>Mukteshwar Gobin</u> , Tomoharu Iwasaki, Noriyuki Yasufuku, Ryohei Ishikura | Kyushu University | Japan | Structural and non-structural countermeasures against landslides implemented in Mauritius with the assistance of the Government of Japan | EPR | Online Virtual |
| J-4 | <u>Kiyoharu Hirota</u> , Maynor Ruiz, Takeshi Kuwano | KOKUSAI KOGYO CO., LTD/(ICL) | Japan | Preliminary report of simple hazard mapping methods for slope stability in Tegucigalpa, Honduras | EPR | Onsite |
| J-5 | <u>Lidia Torres-Bernard</u> , Elias Garcia-Urquia | Instituto Hondureno de Ciencias de la Tierra UNAH | Honduras | AHP method applicated to landslide susceptibility mapping in pilot sites of Tegucigalpa | EPR | Online Virtual |
| J-6 | <u>Elias Garcia-Urquia</u> , Lidia Torres-Bernhard | Civil Engineering Department, National Autonomous University of Honduras | Honduras | Coupling antecedant rainfall and intensity-duration thresholds for landslide occurrence in Tegucigalpa, Honduras, 2010 | EPR | Online Virtual |
| J-7 | <u>Takeshi Kuwano</u> , Takashi Hara, Hotaka Aoki, Kiyoharu Hirota, Koichi Hasegawa, Kosuke Uzawa | Kokusai Kogyo | Japan | Slope disaster and countermeasures in Honduras | EPR | Online Virtual |
| J-8 | Tempa Thinley | Department of Road, Ministry of Works and Human Settlement | Bhutan | Landslide disaster management and capacity development for roadside slope risk reduction in Bhutan | EPR | Onsite |
| J-9 | Takashi Hara | OYO International Corporation | Japan | Rockfall protection on road in Bhutan | EPR | Online virtual |
| J-10 | <u>Naoto Iwasa</u> , Daizo Tsutsumi, Shiro Ohmi, Tempa Thinley, Dowchu Drukpa | Nippon Steel Metal Products CO.,Ltd. | Japan | Application on slope stabilization method aimed an environment and landscape conservation | EPR | Online Virtual |
| J-11 | <u>Kaoru Nakazato</u> , Satoru Shibata | Pacific Consultants Co.,LTD. Land Infrastructure Div. Geotechnical Engineering Dept. | Japan | Generating landslide hazard map on 2015 Nepal Earthquake and subsequent training activity | EPR | Onsite |
| J-12 | Daisuke Higaki | Hirosaki University | Japan | A case study of low-cost measures against landslides by river bank erosion in Nepal | EPR | Onsite |
| J-13 | <u>Masanori Tozawa</u> , Hussein Yuldashev, Umedjon Shomirov, Ainiddin Boimurodzoda, Bekhruiz Shomirov | Kokusai Kougyo co., ltd. | Japan | Introduction of preventive measures in the road infrastructure development in Tajikistan, in cooperation with a JICA technical project | EPR | Onsite |
| J-14 | <u>Yoji KASAHARA</u> , Yuji YASHIRO, Yoshio KASHIWAI | Japan Conservation Engineers & Co., LTD. | Japan | Road slope disaster countermeasures in Sri Lanka | EPR | Onsite |
| J-15 | <u>Pucai Yang</u> , T. Nishikawa, H.H Hemasinghe, H.A.G. Jayathissa | Nippon Koei Co., Ltd. | Japan | Identification of debris flow hazards in Sri Lanka | EPR | Pre-recorded |

Session 6.E2 Introduction of landslide mitigation measures of Japan

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|------|--|---------------------------|-------|---|-----|--------------|
| J-16 | <u>Toko Takayama</u> , Hasi Bateer, Takahiro Yoshida | Asia Air Survey Co., Ltd. | Japan | Landslide interpretation and evaluation based on precise visualization method using high resolution geospatial data | EPR | Pre-recorded |
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|------|---|---------------------------------------|-------|--|-----|----------------|
| J-17 | <u>Wataru Takeshita</u> , Hiroyuki Sugimoto, Yoshiki Wada | Public Works Research Institute(PWRI) | Japan | Use of UAV-SfM point cloud for emergency response to landslide disasters | EPR | Onsite |
| J-18 | <u>Tomoya Hayakawa</u> , Ryuku Shimizu, Keisuke Teraguchi | Nippon Koei Co., Ltd. | Japan | The large landslide dam in Hidakahoronai, Hokkaido | EPR | Onsite |
| J-19 | <u>Senro Kuraoka</u> , Yuichi Nakashima, Hirokazu Furuki, Masahiro Chigira | Nippon Koei Co., Ltd. | Japan | Development of methods to assess the annual expected loss of earthquake-induced landslides | EPR | Online Virtual |
| J-20 | <u>Nobuyuki Shibasaki</u> , Ryota Ooya, Shunsuke Mitsuzuka, Tamiaki Fujiwara, Tadashi Hatakeyama, Kunimori Komiya | NIPPON KOEI CO., LTD. | JAPAN | Effect of S wave velocity structure of ground on occurrence of strain in landslide slope during earthquake: a case study of landslide along the YamagataSuifu Line, induced by the 2011 Off the Pacific Coast of Tohoku Earthquake | EPR | Onsite |
| J-21 | <u>Wataru Sagara</u> , Hideaki Marui | SABO & LANDSLIDE TECHNICAL CENTER | Japan | Relationship between water quality and ground condition of earthquake-induced landslide areas in a mountain watershed | EPR | Onsite |
| J-22 | <u>Yoshinori Ito</u> | Kowa Co.,Ltd. | Japan | Prediction of the groundwater level fluctuation in landslide area using genetic algorithm | EPR | Onsite |
| J-23 | <u>Akihiro Miyagi</u> , Iwao Miyoshi | SABO&Landslide Technical Center | Japan | Relationship between bamboo rhizome and surface failure | EPR | Onsite |
| J-24 | <u>Kazunori Hayashi</u> , Daisuke Sato | Okuyama Boring Co., Ltd. | Japan | Small and simple water drainage drilling method for landslide disaster prevention | EPR | Onsite |
| J-25 | <u>Yoshitsugu Kimura</u> , Hiroyuki Umezawa, Risa Tanbe, Peihong ZHU | Toa Grout Kogyo Co., Ltd | Japan | Performance Verification of sediment capture by Flexible Barrier | EPR | Onsite |
| J-26 | <u>Masayuki Ujihara</u> , Ryouichi Fukagawa | Nittoc Construction Co.,Ltd. | Japan | The Geofiber method-protecting slopes with environment-conscious continuous fiber reinforced soil | EPR | Online Virtual |
| J-27 | <u>Hiroaki KOJIMA</u> | OSASI Technos, Inc. | Japan | Case studies of installation of measuring instruments on overseas landslide countermeasures and their problems : examples of Sri Lanka and Honduras | EPR | Onsite |
| J-28 | <u>Yusuke Koyama</u> | Japan Broadcasting Corporation | Japan | Disaster risk coverage of TV media for citizens | EPR | Pre-recorded |

Sessin 6.E3 Activities of Landslide-prevention engineers to enhance local capacity for disaster reduction in Japa

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|------|--|---|-------|--|-----|--------------------------|
| J-29 | <u>Noriko Ohnuma</u> , Akio Sato, Saika Shimizu | Japan Conservation Engineers & CO.,LTD. | Japan | Process of Preparing Community Disaster Management Plan: Case Study of Communities on Ichinichi-Mae Project and CDMP that Have Experienced Recent Disaster | EPR | Onsite |
| J-30 | Kiyomi Nakamura | Japan Conservation Engineers & Co. ltd. | Japan | Extraction of subjects for regional disaster risk reduction by teaching materials simulating evacuation behaviors | EPR | Onsite |
| J-31 | <u>Shunitsu Fujii</u> | Fujii Consulting & Associates | Japan | An easy way to learning rainfall-induced landslides and its prevention using analog modelling | EPR | Pre-recorded |
| J-32 | <u>Akihiko Tadokoro</u> , Misako Yamamoto, Masahito Matsuoka, Yosuke Hamaguchi | Shikoku Geotechnical Consultants Association , Kochi Branch | japan | The workshop program of disaster prevention learning for primary school children and junior high school students | EPR | Onsite or Online Virtual |
| J-33 | <u>Kouichi Ikebe</u> | The Japan Landslide Society Chubu Branch | Japan | Approaches and actions for information dissemination and education for disaster resilience in the Chubu Branch of Japan Landslide Society | EPR | Onsite |

World Tsunami Awareness Day Special Event

Contact: Shinji Sassa <sassa_pari@hotmail.co.jp>

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| TS-2 | <u>Finn Løvholt</u> , Sylfest Glimsdal, Carl B. Harbitz | NGI | Norway | Tsunami uncertainty due to landslide dynamics | TMI | Onsite or Online Virtual |
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| TS-3 | Uri ten Brink | USGS | USA | Using statistics to understand submarine landslide processes and hazard | FCB | Pre-recorded |
| TS-4 | Hermann Fritz | Georgia Institute of Technology | USA | From granular landslide generated tsunamis in the laboratory to recent landslide | 1PA | |
| TS-5 | Saeedeh Yavari Ramsheh | California State University, Fullerton | USA | Tsunami events of the Indian Ocean-role of landslides | 1PA | |
| TS-6 | Ken Ikehara | Geological Survey of Japan, AIST | Japan | The link between upper-slope submarine landslides and mass transport deposits in the hadal | FCB | Online Virtual |
| TS-7 | Shinji Sassa | Port and Airport Research Institute, National Institute of Maritime, Port and Aviation Technology | Japan | Session Coordinator: Review of Landslides-induced Tsunamis | 1PA | Onsite |

Special Lectures and Panel Discussion for World Tsunami Awareness Day Event

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|-------|---|--|-----------|---|---------|----------------|
| TS-8 | Nicola Casagli | University of Florence | Italy | Monitoring and Early Warning of Landslides including Stromboli landslide induced tsunami | FCB | Onsite |
| TS-9 | Doan Loi, Kyoji Sassa , Khang Dang, Toyohiko Miyagi | | | Simulation of Tsunami waves induced by coastal and submarine landslides in Japan | FCB | Onsite |
| TS-10 | Luciano Picarelli , Suzanne Lacasse, Ken K.S. Ho | Universita della Campania | Italy | The impact of climate change on landslide hazard and risk | FCB | |
| TS-11 | Kazuo Konagai & Asiri Karunawardena | | | Early Warning of rain-induced rapid and long-travelling landslides in Sri Lanka | FCB | Onsite |
| TS-12 | Stephan Grilli | University of Rhode Island | USA | Tsunami generation by Volcanic flank collapse: Case study of Anak Krakatau | 1PA | Onsite |
| TS-13 | David R Tappin , Stephan T Grilli | British Geological Survey | UK | The continuing underestimated tsunami hazard from submarine landslides | FCB+EPR | Online Virtual |
| TS-14 | Viacheslav Gusiakov , Alexey Makhinov | Institute of Computational Mathematics and Mathematical Geophysics | Russia | December 11, 2018 landslide and 90-m icy tsunami in the Buryea water reservoir | FCB | Onsite |
| TS-15 | Dwikorita Karnawati | Indonesian Meteorological climatological and Geophysic Agency (BMKG) | Indonesia | Innovation in Tsunami Early Warning System in Indonesia | EPR | |
| TS-16 | Toyohiko Miyagi | Tohoku-Gakuin University | Japan | Explanation of submarine landslides distributions around Japanese islands and stereo photo of submarine landslides on the floor | | Onsite |
| | | | | Break: Observation of stereo photo of submarine landslides by participants | | |

Panel Discussion: Understanding and reducing disaster risk of landslide-induced Tsunami along with the Kyoto Landslide Commitment 2020

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| | | | | Short talks and comments from panelists and floor | | |
| | | | | Concluding remarks on World Tsunami Awareness Day Event in WLF5 | | |