



WORKSHOP

Istituto di Ricerca per la Protezione Idrogeologica

50 anni di attività

*IL CONTRIBUTO DEL CNR IRPI
AL SISTEMA PAESE
PER LA MITIGAZIONE DEI
RISCHI GEO-IDROLOGICI*

Roma, 25 - 26 novembre 2021
Sala Convegni – CNR Roma

PROGRAMMA

Primo giorno - 25 novembre 2021

9:00 – 10:00 Cerimonia di apertura:

- Presidente CNR - Prof.ssa Maria Chiara Carrozza
- Direttore DSSTA - Dott. Fabio Trincardi
- Direttore dell'ufficio II - Attività tecnico-scientifiche per la previsione e prevenzione dei rischi – DPC – Dott. Fausto Guzzetti
- Presidente Commissione Grandi Rischi – Prof. Gabriele Scarascia Mugnozza
- Già Direttori CNR IRPI: Prof. Lucio Ubertini, Dott. Marino Sorrivo Valvo, Dott. Fausto Guzzetti, Dott. Alessandro Pasuto

SESSIONE 1: Tecnologie e sistemi per il monitoraggio e la previsione di fenomeni geo-idrologici [10:00-13:30]

10:00 Davide Notti, Daniele Giordan, Marco Baldo, Melissa Latella, Carlo Camporeale

Fluvial geomorphology a quantitative approach based on high-resolution lidar data. the case of Orco River

10:15 Niccolò Dematteis, Daniele Giordan

The open-air laboratory of the Grandes Jorasses glaciers

10:30 Aleksandra Wrzesniak, Paolo Allasia, Daniele Giordan

Near real-time landslide monitoring networks: problems and possible solutions

10:45 Luca Schenato, Raniero Beber, Giulia Bossi, Matteo Mantovani, Gianluca Marcato, Alessandro Pasuto, Giacomo Titti

Optical fiber sensors for geo-hydrological applications

Workshop CNR IRPI - Roma, 25-26 novembre 2021

11:00 Maria Teresa Brunetti, Stefano Luigi Gariano, Fausto Guzzetti, Massimo Melillo, Silvia Peruccacci

Rainfall thresholds for landslide prediction: a flagship for CNR IRPI
11:15 Luca Brocca, Silvia Barbetta, Stefania Camici, Luca Ciabatta, Christian Massari, Angelica Tarpanelli, Farhad Bahmanpouri, Paolo Filippucci, Sara Modanesi, Evelina Volpe, Bianca Bonaccorsi, Sara Galeazzi, Jacopo Dari, Shima Azimi, Cristiano Corradini
High resolution hydrology: challenges and opportunities

11:30 - 11:45 PAUSA CAFFÈ

11:45 Raniero Beber, Giulia Bossi, Matteo Mantovani, Gianluca Marcato, Alessandro Pasuto, Luca Schenato, Giacomo Titti
Long-term impact of vaia-storm on slopes stability inferred from persistent scatterers time series analysis

12:00 Velio Coviello, Stefano Crema, Marco Cavalli, Massimo Arattano, Francesco Comiti, Matteo Berti, Emanuele Marchetti, Pierpaolo Macconi, Lorenzo Marchi

Debris-flow monitoring and warning: lessons from 10 years of research in the natural laboratory of Gadria, eastern Alps

12:15 Paolo Allasia, Danilo Godone, Diego Guenzi, Giorgio Lollino, Ivan Mammone, Eliano Romani, Giorgio Pezzetti

The use of a robotized inclinometer system to measure deep-seated ground deformation in a monumental area during TBM tunnel excavations. the case of Rome subway, new line

12:30 Mauro Rossi, Ivan Marchesini, Maria Elena Martinotti, Maria Teresa Brunetti, Silvia Peruccacci, Vinicio Balducci, Fausto Guzzetti
A framework for the territorial landslide early warning system implementation: applications, lessons learnt and future challenges

12:45 Evelina Volpe, Luca Brocca

Improve the flood forecasting accuracy integrating rainfall satellite observations and in situ measured data: the case study of Basilicata

13:00 - 13:30 DISCUSSIONE

13:30 - 14:30 PAUSA PRANZO

SESSIONE 2: Caratterizzazione e analisi dei processi alla base della formazione di fenomeni geo-idrologici [14:30-16:00]

14:30 Federica Mevoli, Michele Perrotti, Nunzio Luciano Fazio, Piernicola Lollino

Enhanced finite-element based charts for the assessment of stability of underground cavities at large scale

14:45 Lorenzo Marchi, Marco Borga, Marco Cavalli, Francesco Comiti, Velio Coviello, Stefano Crema, Nicola Surian

Flash floods in Europe: flow response and geomorphic impact

15:00 Daniela de Lucia, Angelo Ugenti, Nunzio Luciano Fazio, Piernicola Lollino

Assessment of the stability of underground cavities in soft rocks under dynamic conditions

15:15 Angelo Ugenti, Daniela de Lucia, Nunzio Luciano Fazio, Piernicola Lollino

Exploring the impact of wave motion on soft rock sea cliffs: a numerical approach

Workshop CNR IRPI - Roma, 25-26 novembre 2021

15:30 Piernicola Lollino, Daniele Giordan, Paolo Allasia, Michele Perrotti, Nunzio Luciano Fazio

Evolution of the Montaguto large earthflow: insights from long-term monitoring and modelling research activity

15:45 Rosa Maria Cavalli

Comparison of the capability of remote sensing data to characterize the feature of interest: three case studies

16:00 - 16:15 PAUSA CAFFÈ

SESSIONE Poster (Presentazione 2 min) [16:15 – 17:00]

Guido Nigrelli, Marta Chiarle, Andrea Merlone, Chiara Musacchio, Graziano Coppa

Risk reduction in mountain areas: the Bessanese high-elevation experimental site

Paolo Filippucci, Luca Brocca, Angelica Tarpanelli

River discharge estimation for narrow rivers: benefits of Sentinel-2 high resolution data

Veronica Zumpano, Francesca Ardizzone, Francesco Bucci, Mauro Cardinali, Federica Fiorucci, Piernicola Lollino, Luca Pisano, Paola Reichenbach, Francesca Santaloia, Michele Santangelo, Janusz Wasowski

Evaluating potential impact of landslides along the road network: an example from the southern Apennines, Italy

Michele Perrotti, Rosamaria Trizzino, Nunzio Luciano Fazio, Piernicola Lollino

Hazard assessment of rock cliffs by integration of cloud fracture detection and rock mass classification system

Loredana Antronico, Luigi Borrelli, Massimo Conforti, Francesco Chiaravalloti, Roberto Coscarelli, Giovanni Gullà, Olga Petrucci

Impact and typification of geo-hydrological phenomena and extreme weather events: advancing knowledge and supporting strategies for adaptation, mitigation and risk reduction

Luigi Borrelli, Massimo Conforti, Michele Mercuri, Muto Francesco

Assessment of space-time evolution of a large earthflow by comparing multi-source data

Marta Chiarle, Guido Nigrelli, Laura Turconi, Fabio Luino, Giovanni Mortara, Michele Guerini, Roberta Paranunzio, Marco Giardino

Slope instability at high elevation in the Italian alps: effect and indicator of climate change

Livia Emanuela Zuffianò, Maurizio Polemio

Geodatabase of coastal carbonate aquifers of the Adriatic and Ionian seas supporting water resources risk mitigation

Livia Emanuela Zuffianò, Pier Paolo Limoni, Maurizio Polemio

Geochemical and isotope tools to identify the groundwater nitrogen risk source

Livia Emanuela Zuffianò, Alessia Basso, Domenico Casarano, Vittoria Dragone, Pier Paolo Limoni, Francesca Santaloia, Maurizio Polemio

Conceptual and numerical model of coastal springs supporting the environmental restoration of Mar Piccolo (Taranto, southern Italy)

Pier Paolo Limoni, Livia Emanuela Zuffianò, Maurizio Polemio

The risk of low enthalpy geothermal system on groundwater of the Cesine wetland

Loredana Antronico, Roberto Coscarelli, Maria Teresa Carone

An approach to measure resilience of communities to climate change: the case study of Lago and Amantea municipalities, Calabria

Carmela Vennari, Paola Salvati, Ivan Marchesini, Cinzia Bianchi, Domenico Casarano, Alessia Basso, Mario Parise, Piernicola Lollino
Geo-spatial database on phenomena, damage, costs and mitigation works regarding geo-hydrological events occurred in Apulian region
Giorgia Macchi, Stefano Crema, Gabriella Boretto, Giovanni Monegato, Lorenzo Marchi, Luciano Arzillero, Barbara De Fanti, Marco Cavalli

A framework for assessing sediment volumes mobilized by debris flows: the case of study of Liera catchment (Dolomites)

Fabio Luino, Fabrizio Gizzi, Walter Palmieri, Sabrina Porfido, Laura Turconi

Historical memory as an useful tool for a forecasting and prevention of natural processes and correct land-use planning

Giuseppe Esposito

New research perspectives from poorly studied geo-hydrological processes

Laura Turconi, Guido Paliaga, Francesco Faccini, Fabio Luino

Geo-hydrological hazard to terraced landscapes of Liguria

Stefano Crema, Alessandro Sarretta, Giorgia Macchi, Velio Coviello, Marco Borga, Francesco Marra, Lorenzo Marchi, Marco Cavalli

Thunderslide - from rainfall to preliminary landslide mapping: an open data-oriented tool for local management authorities

SESSIONE 3 - Prima Parte: Pericolosità, esposizione, impatto e mitigazione dei rischi geo-idrologici in un contesto di cambiamento globale [17:00-18:30]

17:00 Martina Cignetti, Daniele Giordan, Danilo Godone, Francesco Zucca, Davide Bertolo

Impact of deep-seated gravitational slope deformation on large infrastructures

17:15 Bianca Bonaccorsi, Silvia Barbetta, Tommaso Moramarco

Analysis of seepage process in earthen levee and vulnerability estimate

17:30 Olga Petrucci, Roberto Coscarelli, Michele Mercuri, Fabio Zimbo

Comparison of damaging hydrogeological events with climatic indices. Has the concept of extreme event been modifying in the last 40 years?

17:45 Ivan Marchesini, Paola Salvati, Mauro Rossi, Marco Donnini, Simone Sterlacchini, Fausto Guzzetti

A data-driven approach to flood hazard zonation: an application to Italy

18:00 – 18:30 DISCUSSIONE

Secondo giorno - 26 novembre 2021

SESSIONE 3 - Seconda Parte [9:00 -11:45]

09:00 Francesca Ardizzone, Francesco Bucci, Mauro Cardinali, Federica Fiorucci, Alessandro Cesare Mondini, Michele Santangelo
Landslide mapping: evolution, current challenges and perspectives

09:15 Massimo Conforti, Luigi Borrelli, and Giovanni Gullà

Exploring effects of training set selection on the shallow landslide susceptibility modeling at regional scale using maxent machine learning technique

09:30 Evelina Volpe, Loredana Antronico, Francesca Ardizzone, Roberto Coscarelli, Stefano Luigi Gariano, Alessandro Mondini

Evaluating the climate impact on slow-moving landslides at a regional scale using earth observation data

09:45 Giulia Bossi, Raniero Beber, Matteo Mantovani, Gianluca Marcato, Alessandro Pasuto, Luca Schenato, Giacomo Titti

Design of large landslides mitigation measures through bayesian updating: uncertainty as an opportunity

10:00 Sara Galeazzi, Francesco Ponziani, Nicola Berni, Luca Brocca, Stefania Camici Luca Ciabatta

Redefinition of thresholds for landslides forecasting in the Umbria region

10:15 Maurizio Polemio, Vittoria Dragone, Pier Paolo Limoni, Annarita Romanazzi, Livia Emanuela Zuffianò

Improving the geothermal resources use and natural risks: from the knowledge to the safe planning and design

10:30 Mauro Cardinali, Francesca Ardizzone, Francesco Bucci, Federica Fiorucci, Luca Pisano, Michele Santangelo and Veronica Zumpano

Geomorphological landslide inventory map of the Daunia Southern Apennine

10:45 Luca Ciabatta, Evelina Volpe, Massimiliano Bordoni, Valerio Vivaldi, Claudia Meisina, Luca Brocca

Physically-based slope stability analysis through remote sensing data

11:00 -11:15 PAUSA CAFFÈ

11:15 Marco Cavalli, Stefano Crema, Lorenzo Borselli, Francesco Comiti, Sara Cucchiario, Giorgia Macchi, Sebastiano Trevisani, Lorenzo Marchi

Sediment connectivity assessment through a geomorphometric approach: review of recent applications

11:30 Massimiliano Alvioli, F. Mori, A. Mendicelli, Mauro Rossi, M. Moscatelli, Ivan Marchesini, Paola Reichenbach

Rockfall susceptibility and seismically induced rockfall susceptibility at regional and national scale

SESSIONE 4: Comunicazione dei rischi geo-idrologici e delle relative incertezze [11:45-13:30]

11:45 Paola Salvati, Mauro Rossi, Cinzia Bianchi, Fausto Guzzetti

Sparse data on landslide fatalities: what they say and why to use

12:00 Giulia Margaritelli

Past climate changes: divulgation & communication

12:15 Paolo Allasia, Massimiliano Alvioli, Vinicio Balducci, Luca Ciabatta, Nunzio Luciano Fazio, Daniele Giordan, Giovanni Gullà, Diego Guenzi, Ivan Marchesini, Christian Massari, Mauro Rossi, Alessandro Sarretta

Designing a data and computing infrastructure to support and disseminate research activities of CNR-IRPI

Designing a data and computing infrastructure to support and disseminate research activities of CNR-IRPI

12:30 Diego Guenzi

A user friendly, free and open source software architecture to disseminate geo-referred information about territorial data over the world wide web.

12:45 Marco Donnini, Ivan Marchesini, Christian Massari, Giulia Margaritelli

The contribution of chemical weathering on atmospheric CO2 concentration: perspectives in a context of climate change

13:00 - 13:30 DISCUSSIONE

13:30 - 14:30 PAUSA PRANZO

FORUM: Prospettive future attività CNR IRPI sui Rischi Geo-Idrologici (Interventi programmati) [14:30 - 16:00]

16:00 – 16:15 PAUSA CAFFÈ

16:15 – 17:00 CONCLUSIONI

COMITATO ORGANIZZATORE

Marco Baldo, Antonella Barizza, Claudia Bruno, Massimo Conforti, Cristiano Corradini, Velio Coviello, Nunzio Luciano Fazio, Danilo Godone, Mauro Rossi, Livia Zuffianò

SEGRETERIA ORGANIZZATIVA

Danilo Godone

Livia Zuffianò

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✳️ Webinar gotomeeting (richiesta link a segreteria)

