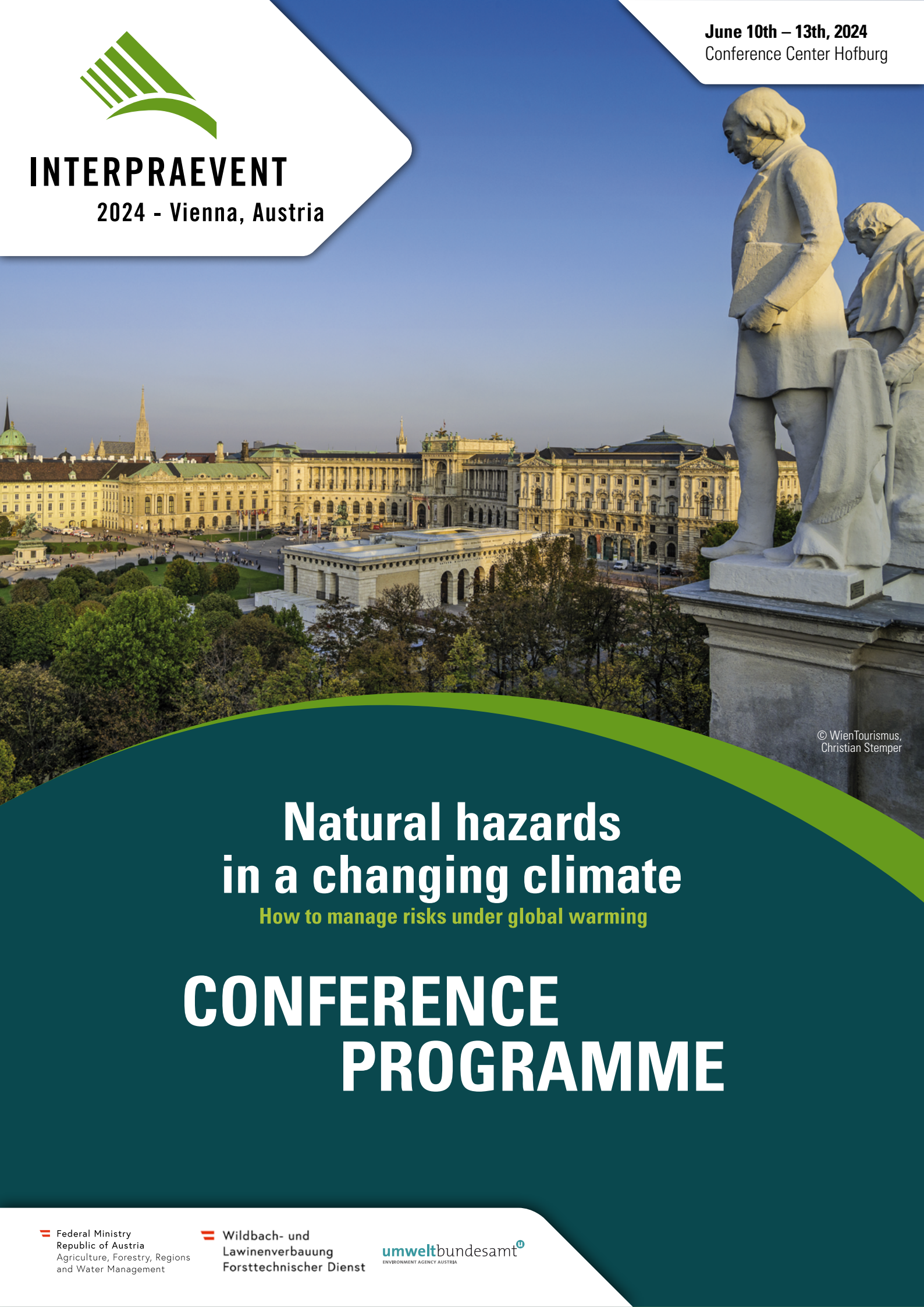




INTERPRAEVENT

2024 - Vienna, Austria

June 10th – 13th, 2024
Conference Center Hofburg



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Christian Stemper

Natural hazards in a changing climate

How to manage risks under global warming

CONFERENCE PROGRAMME

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DEAR PARTICIPANTS OF INTERPRAEVENT 2024!

The international research society Interpraevent was founded in Austria after the extreme flood disasters of 1968 and provides a framework for experts from science, practice and administration. The international conferences has the aim to strengthen the international cooperation, connect scientists and practitioners, discuss and exchange. They are organised every two years alternately in Europe and Asia on the Pacific Rim.

Vienna - undoubtedly one of the most beautiful cities in the world - welcomes the participants of Interpraevent 2024 for the first time in its history. The conference with around 500 participants from more than 20 nations will take place on around 1000 m² of conference space in the imperial setting of the Vienna Hofburg.

Global warming and its massive impact on natural disasters is one of the main challenges of our era. Traditional concepts of hazard prevention or disaster management are outdated since climate change requires sustainable adaptation processes for the protective system. From 10 until 13 June 2024 Interpraevent 2024 will address this issue under the overall theme: "Natural hazards in a changing climate – How to manage risks under global warming?"

The conference offers 46 inspiring oral presentations in 6 thematic sessions, 11 field trips, 5 workshops, a poster exhibition with around 150 posters, an exhibition area and several side and social events. This year, special emphasis will be placed on promoting the two programmes: The student programme with the Student Award and the Science Day and the women's programme, which is being implemented in cooperation with the network we4DRR. In addition, the Disaster Competence Network Austria (DCNA) and the International Commission for the Protection of the Danube River (ICPDR) also support the professional networking of the conference.

The Organising Committee thanks the research society Interpraevent, around 20 institutional partners and over 25 business partners for their support to make Interpraevent 2024 to an unforgettable and exciting conference in Vienna. Thanks and recognition are due to the many conference participants who submitted papers, presentations or posters for the discussion or foster the exchange through their participation.

Florian Rudolf-Miklau

(Chairman of the Organising Committee, Head of Torrent and Avalanche Control in Austria)

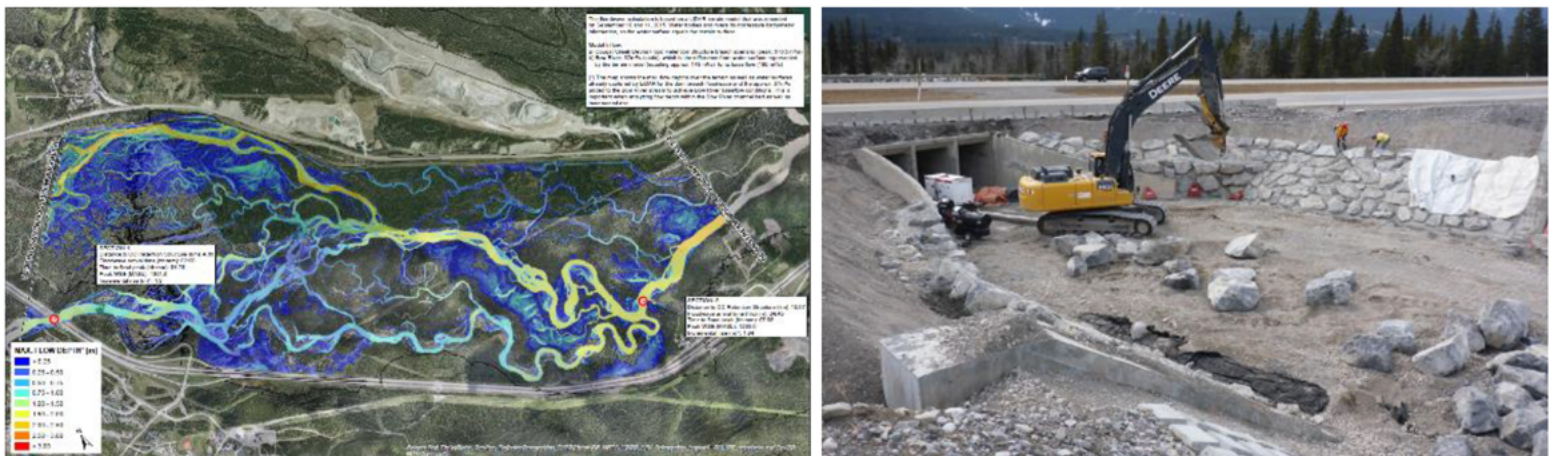
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GEOHAZARD MITIGATION



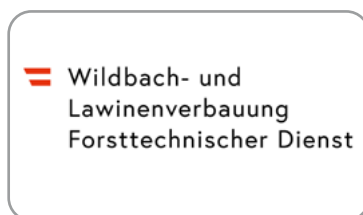
FLOOD MITIGATION



AVALANCHE MITIGATION



The international conference Interpraevent 2024 is jointly organized by the Austrian Service for Torrent and Avalanche Control, the Austrian Federal Ministry of Agriculture, Forestry, Regions and Water Management and the Environment Agency Austria, which play a key role for sustainable protection of settlement areas and the natural environment in Austria, in cooperation with the research society Interpraevent. The organising committee is responsible for preparing and running the conference.



PROGRAMME COMMITTEE:

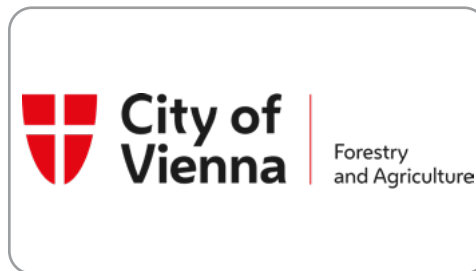
Responsible for the programme is the Scientific and technical advisory board of Interpraevent, the members are:

- **Beyer Portner** Niki, Switzerland
- **Comiti** Francesco, Italy
- **Fischer** Jan Thomas, Austria
- **Hiller** Helene Priska, Norway
- **Hübl** Johannes, Austria
- **Koboltschnig** Gernot, Austria
- **Laigle** Dominique, France
- **Margreth** Stefan, Switzerland
- **Mayer** Karl, Germany
- **Mikoš** Matjaž, Slovenia
- **Olefs** Marc, Austria
- **Richard** Didier, France
- **Rudolf-Miklau** Florian, Austria
- **Schneider** Josef, Austria
- **Simonini** Paolo, Italy
- **Stoffel** Markus, Switzerland
- **Uchida** Taro, Japan

INSTITUTIONAL PARTNER ORGANISATIONS:

In addition to the organising committee, parts of the conference are also carried out by various partner organisations.

Interpraevent 2024 is organised in cooperation with:



04 CONFERENCE VENUE

The Organisation team and the International Research Society Interpraevent is pleased to welcome you to Vienna, Austria. The international conference Interpraevent 2024 will take place at the former Vienna imperial palace Hofburg. ([Here you can find the location on Google Maps.](#))

The access to Interpraevent 2024 is through the "Schweizerhof" (The Swiss Court) and the entrance "Botschafterstiege" (Ambassador Stairway). A detailed map to the conference venue can be found on the next page.

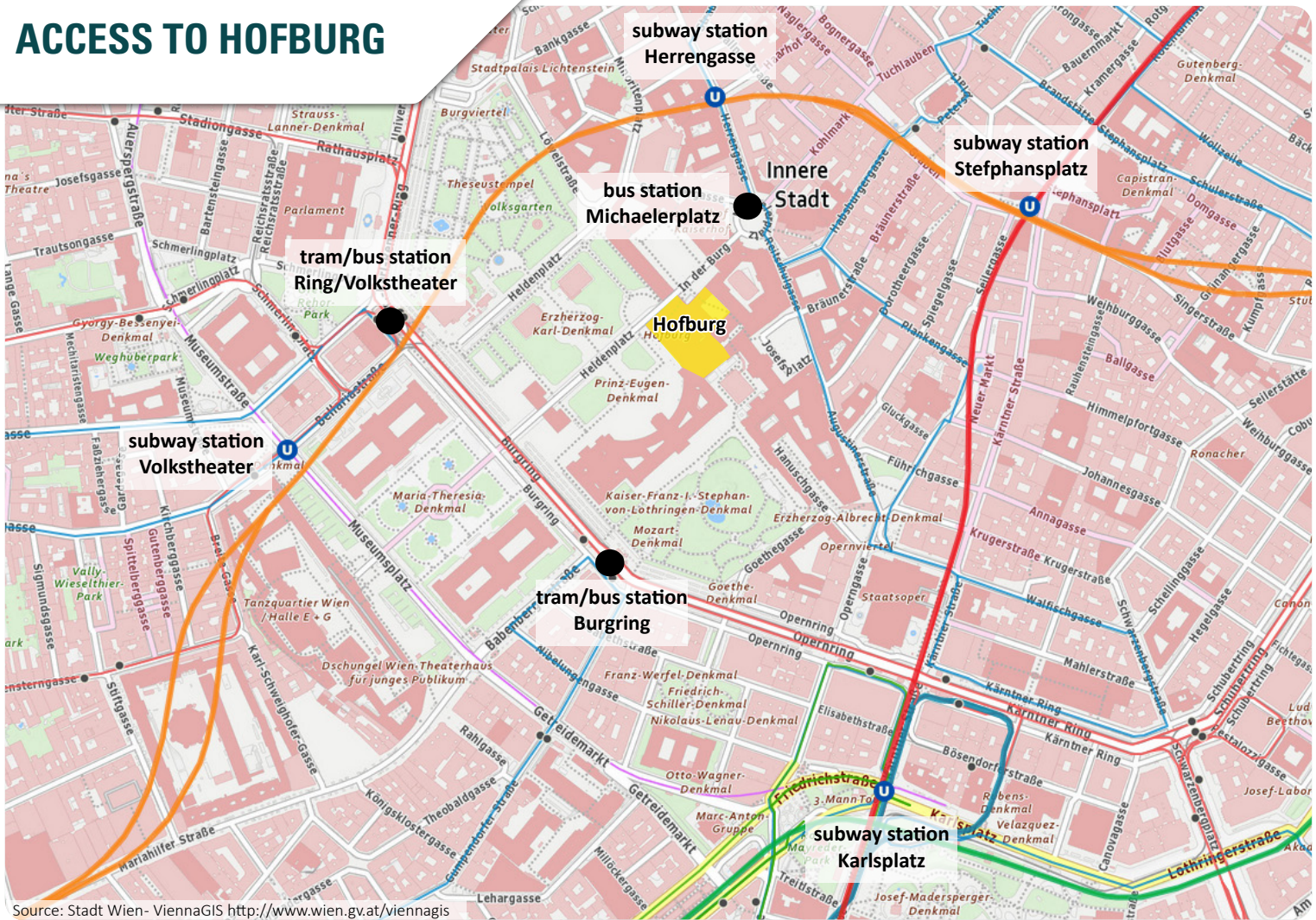
The conference and event location Hofburg is situated in the city centre of Vienna and the best way to reach it is by public transport. Subway stations as well as bus and tram stops are all within walking distance:

Subway stations	
Herrengasse (line U3)	5 min
Karlsplatz (line U1 & U4)	10 min
Stephansplatz (line U1 & line U3)	8 min
Volkstheater (line U3)	8 min
Tram station	
Burgring (line D, 1, 2 & 71)	4 min
Bus stations	
Burgring (line 57A)	4 min
Michaelerplatz (line 1A & 2A)	3 min

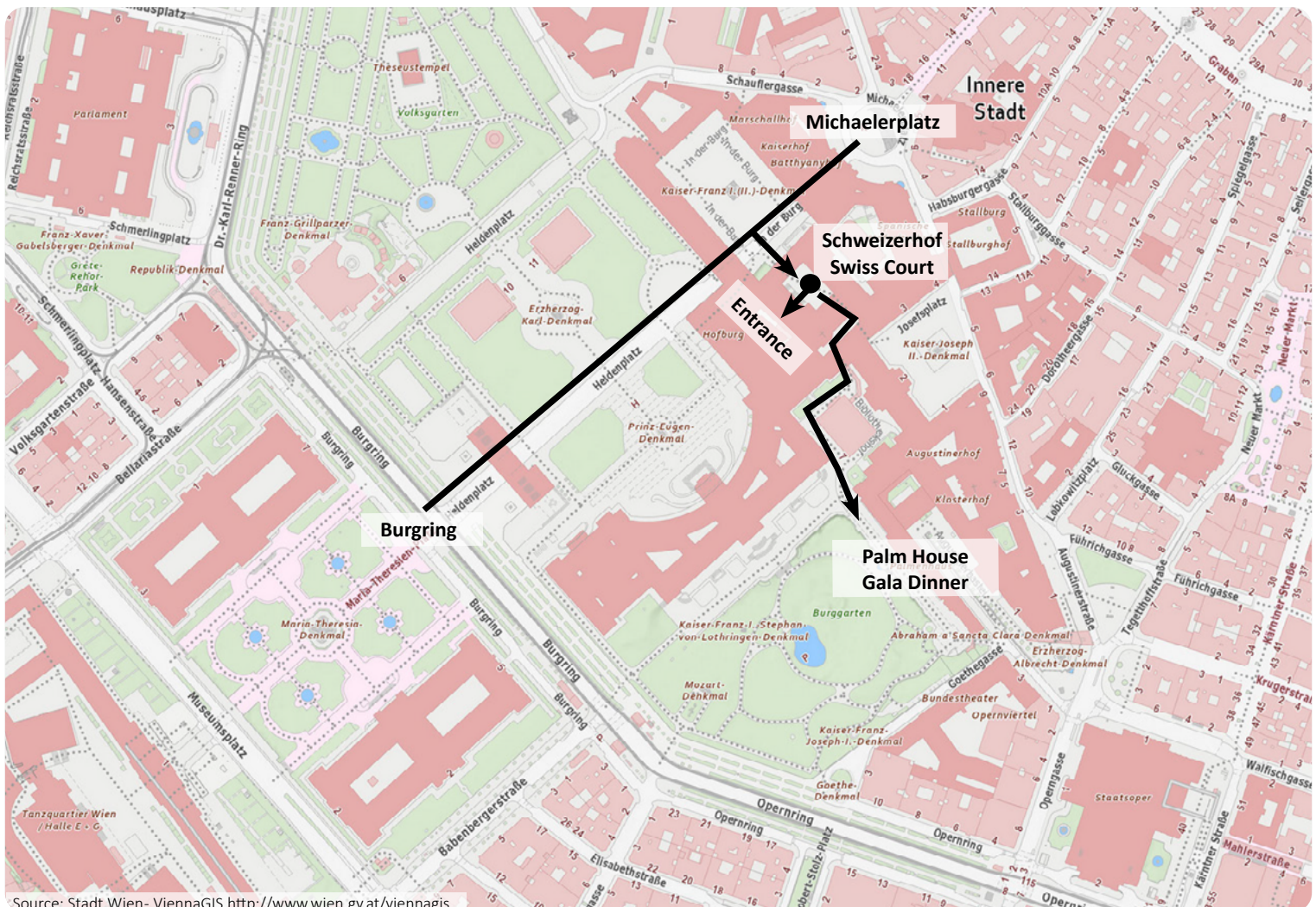
Arrival by car is not recommended, but there are several parking garages (for a fee) available in walking distance. Further information are available on the conference venue website:

https://www.hofburg.com/en/information/where_to_find_us/location

ACCESS TO HOFBURG



Source: Stadt Wien- ViennaGIS <http://www.wien.gv.at/viennagis>



Source: Stadt Wien- ViennaGIS <http://www.wien.gv.at/viennagis>

05 GENERAL CONFERENCE INFORMATION

The overall theme of Interpraevent 2024 is "Natural hazards in a changing climate - How to manage risks under global warming?". The conference programme is divided into six thematic sessions, dealing with the main natural hazard processes.

1. Climate Change: Drivers, Triggers and Consequences
2. Risk Governance, Policies and Resilience
3. From Observations and Experiments to Modelling and Simulations
4. Hazard and Risk Assessment
5. Structural and Non-Structural Mitigation Measures
6. Emergency Management and Recovery

Altogether, participants will await 46 inspiring and trailblazing oral presentations from science to practice, 7 high-level keynote speakers, 1 panel discussion with 7 outstanding panellists, 5 workshops focused on the main topics organised by different experts and 2 poster sessions (Poster Walks) with around 150 highly interesting posters. Additionally the conference offers an exhibition area to present and discuss latest products, technologies and services. Several side and social events offer the opportunity to further connect and exchange with other participants in a relaxed atmosphere.



REGISTRATION

Participants can pick up the name badge as well as the conference bag at the Interpraevent 2024 registration desks that are located in the Botschafterstiege (Ambassador Stairway). The registration is organised alphabetically by last name. To ensure a smooth process, we kindly ask you to follow the signs and choose the respective registration desk.

Please wear your name badge and ensure that it is always visible as it is your admission pass to the conference venue.

REGISTRATION OPENING HOURS

- SUNDAY 9 JUNE 2024 | 15:00 – 18:00
- MONDAY 10 JUNE 2024 | 08:00 – 19:30
- TUESDAY 11 JUNE 2024 | 08:00 – 18:30
- WEDNESDAY 12 JUNE 2024 | 08:00 – 17:00

WARDROBE/LOST PROPERTY

The Wardrobe is available during the opening of the conference venue and is located in the room next to the registration.

Please report any lost or unattended items immediately to the Interpraevent 2024 staff members or bring it to the wardrobe. Should you lose anything during the conference, please ask at the wardrobe.

REDUCED MOBILITY

If participants have special needs (reduced mobility) and need additional assistance, please let us know in advance under: information@Interpraevent2024.at The barrier-free entrance is not located at the general conference entrance.

SMOKING

Please note that smoking is prohibited in the conference venue Hofburg Vienna, this also includes E-Cigarettes and others. Smoking is possible in front of the conference entrance in the Schweizerhof (Swiss Court) where ashtrays will be provided.

Please keep in mind that glasses or plates from the coffee or lunch breaks are not allowed to be taken outside.

CONFERENCE LANGUAGE

The official conference languages are English and German for the main programme, the conference will be simultaneously translated. The Workshops as well as the Field Trips are either in English or German. All Side Events are in English.

WIFI

A free WIFI is available at the conference venue for all participants:

- NETWORK: HofburgSecured
- PASSWORD: IP2024wifi

CATERING

COFFEE BREAKS

The coffee breaks are supported by Trumer Schutzbauten and will be available during the breaks in the following rooms:

- Wintergarten
- Geheime Ratsstube
- Antekammer



LUNCH BREAKS

Lunch will be provided during the conference in the rooms Wintergarten and Geheime Ratsstube. To avoid long waiting times, we kindly ask you to make use of both rooms.

- MONDAY 10 JUNE 2024 | 13:00 – 14:30
- TUESDAY 11 JUNE 2024 | 12:45 – 14:15
- WEDNESDAY 12 JUNE 2024 | 12:45 – 14:15

WELCOME RECEPTION

The Welcome Reception is supported by the City of Vienna – Water Management (MA45) and takes place on Monday 10 June 2024 after the panel discussion from 18:30 – 20:00.



MONDAY, JUNE 10

TUESDAY, JUNE 11

MORNING

09:30 - 10:50
**Emergency Management
and Recovery**

08:30 - 10:15
**Hazard and Risk
Assessment**

11:20 - 13:00
Opening Ceremony

10:40 - 12:45
**Hazard and Risk
Assessment**

LUNCHBREAK

13:15 - 14:15
Impulse lecture

AFTERNOON

14:30 - 16:35
**Climate Change: Drivers,
Triggers and
Consequences**

15:30 - 16:30
**WORKSHOP 1
Alps as risk
area**

14:15 - 16:00
**From Observations and
Experiments to Modelling
and Simulations**

14:30 - 15:30
**WORKSHOP 2
Forest Fire Risk
Governance**

17:00 - 18:30
**Panel discussion
„How to manage risks under
global warming?“**

16:15 - 17:40
**Student Session
(Student Award)**

16:30 - 17:30
**WORKSHOP 3
Detection &
Monitoring
using InSAR**

EVENING

18:30 - 20:00
Poster Walk

17:40 - 19:15
Poster Walk

17:50 - 19:15
Film session

18:30 - 20:00
Welcome Reception

from 19:30
Gala Dinner

WEDNESDAY, JUNE 12

THURSDAY, JUNE 13

FRIDAY, JUNE 14

MORNING

08:30 - 10:15
**From Observations and
Experiments to Modelling
and Simulations**

10:45 - 12:45
**Structural and
Non-Structural Mitigation
Measures**

LUNCHBREAK

AFTERNOON

14:15 - 15:00
**Structural and
Non-Structural Mitigation
Measures**

14:15 - 15:15
**WORKSHOP 4
Debris flow
modelling**

15:00 - 16:45
**Risk Governance,
Policies
and Resilience**

15:30 - 16:30
**WORKSHOP 5
Avalanche
Model
AVAFRAME**

17:00 - 17:45
Closing Ceremony

Field Trips

Post-Conference
Excursion

EVENING

from 18:00
Side Events

ELFRIEDE MOSER



Director-General for
Forestry and Sustainability
Austrian Federal Ministry
of Agriculture, Forestry,
Regions and Water
Management

PROTECTIVE FORESTS IN A CHANGING CLIMATE - CHALLENGES AND SOLUTIONS

MONDAY, 10 JUNE 2024

Elfriede Moser is Director-General for Forestry and Sustainability at the Austrian Federal Ministry of Agriculture, Forestry, Regions and Water Management. In 1989, she joined the Forest Technology and Silviculture Department at the Upper Austrian State Forestry Directorate. Elfriede Moser took over the management of a District Forestry Inspectorate in 2010. In 2016, she became the first female Director of the State Forest Service in Upper Austria and was responsible for around 500,000 hectares of forest. Since December 2023, she is Director-General for Forestry and Sustainability at the Federal Ministry of Agriculture, Forestry, Regions and Water Management. She holds a degree of Forestry and Wood Management from the University of Natural Resources and Applied Life Sciences in Vienna.

LEENA YLÄ-MONONEN



Executive Director
European Environment
Agency (EEA-ED)

SUSTAINABILITY, RESILIENCE AND JUSTICE IN EUROPE: MONITORING PROGRESS AND MANAGING RISK IN A CHANGING CLIMATE

MONDAY, 10 JUNE 2024

Leena Ylä-Mononen is Executive Director of the European Environment Agency since 1 June 2023. She has a master's degree in environmental sciences, specialising in ecotoxicology and chemicals risk assessment and management.

Before joining the EEA, Leena was Director General at the Ministry of Environment of Finland, managing the Climate and Environmental Protection Department.

Before joining the Ministry in 2019, Ms Ylä-Mononen worked for over 11 years in management positions in the European Chemicals Agency in Helsinki. Prior to ECHA, she worked in the European Commission, Directorate-General for Environment, on chemicals and pesticides policy files.

Earlier in her career she worked in the Finnish Environment Institute (SYKE) on environmental risk assessment and management of industrial chemicals, biocides and pesticides.

Ms Ylä-Mononen has been involved in international cooperation at the Nordic, European, OECD and global levels, and in negotiations and implementation of multilateral environmental agreements on chemicals, waste and climate change.

BIRGIT VOGEL



Executive Secretary
International Commission
for the Protection of the
Danube River (ICPDR)

TOWARDS A RESILIENT DANUBE: TRANSBOUNDARY WATER AND FLOOD RISK MANAGEMENT IN THE CLIMATE CHANGE ERA

MONDAY, 10 JUNE 2024

Since August 2021, Birgit Vogel is the ICPDR Executive Secretary, the first woman to take on the role, and the 4th Executive Secretary since the ICPDR's establishment. An Austrian native and water resources manager, she has a very elaborated multicultural and international work experience in river basin management. Over more than 20 years, she has worked across Europe, India, South-East Asia, China, Africa, and the South Caucasus, covering many transboundary river basins like the Danube, Mekong, the Ganga, the Okavango. Ms. Vogel previously worked for the Secretariat of the Mekong River Commission, where she tackled coordination matters including mainstream hydropower development and possible transboundary impacts. Her last post was in Delhi with GIZ India within an EU and German BMZ co-financed action, in which she successfully supported the EU to strengthen the India-EU Water Partnership and the joint water policy dialogue regarding the challenging management of river basins of India.

MICHAELA TEICH



Head of the Unit Snow and
Avalanches
Department of Natural
Hazards
Austrian Research Centre
for Forests (BFW)

GLOBAL CHANGE IMPACTS ON MOUNTAIN PROTECTIVE FORESTS: WHAT DO WE KNOW AND WHERE DO WE GROW FROM HERE?

MONDAY, 10 JUNE 2024

Michaela Teich is a forest scientist with a special interest in working in inter- and transdisciplinary teams, aiming to study and manage protective forests and natural hazard risks in mountain areas. She earned a M.Sc. in Forestry from Technische Universität Dresden (TUD), Germany, completed her PhD on forest-avalanche interactions in 2013 at the WSL Institute for Snow and Avalanche Research SLF in Davos and ETH Zurich, Switzerland, and subsequently worked as a research associate and teaching assistant at ETH's Planning of Landscape and Urban Systems (PLUS) lab. During her postdoctoral research at Utah State University in Logan, USA, she studied for four years the snowpack in forests disturbed by bark beetles and fire. Since 2019, she is working at the Austrian Research Centre for Forests (BFW) in the Department of Natural Hazards in Innsbruck, Austria and is leading the Unit Snow and Avalanches since 2021. Michaela coordinates the IUFRO Snow and Avalanches Unit and is currently the managing director of the women exchange for Disaster Risk Reduction (we4DRR) network.

MANUELA BRUNNER



Professor for Hydrology and
Climate Impacts in Mountain
Regions
ETH Zurich and the
WSL-Institute for Snow and
Avalanche Research SLF

CLIMATE IMPACTS ON HYDRO-CLIMATIC EXTREMES IN THE ALPS

MONDAY, 10 JUNE 2024

Manuela Brunner is an assistant professor at the Institute for Atmospheric and Climate Science at ETH Zurich and the WSL Institute for Snow and Avalanche Research SLF in Davos. Before moving to Davos, she studied Geography and Climate Sciences at the University of Bern, obtained a PhD from the Universities of Zurich and Grenoble-Alpes, and did postdocs at the Swiss Federal Institute for Forest, Snow and Landscape Research WSL and the National Center for Atmospheric Research in Boulder Colorado. Her research focuses on extreme climatic and hydrological events such as floods and droughts. She studies the hydro-meteorological drivers of extreme events, develops methods for their prediction, and assesses changes in the water cycle and extremes. Her group at ETH and SLF studies water and climate extremes in mountain regions under global change and focuses on three core areas:

- (1) Understanding processes governing multivariate hydro-climatic extreme events;
- (2) Assessing climate impacts on water and climate extremes in mountain regions with a particular focus on the Alps; and
- (3) Improving predictions of extreme events by exploiting new datasets and the latest methodological advances in statistics, data science, and climate modeling.

CHRISTIAN WILHELM



Head of the Unit Natural
Hazards & Protection
Measures
Canton of Grison (retired)

DEALING WITH MAJOR EVENTS - CHALLENGES FOR RISK MANAGEMENT

TUESDAY, 11 JUNE 2024

As a research associate at the SLF in Davos, I spent around ten years researching the methodology of risk analysis for natural hazards and cost-benefit analyses of protective measures. This resulted in quantitative cost functions in avalanche protection (and a dissertation at ETH-Zurich and SLF-Davos on the topic of economic efficiency in avalanche protection), which are used to derive the society's willingness to pay for the prevention of mortality risks. Thanks to a practical guide, this risk approach has been widely applied in Switzerland, continuously developed and is now indispensable in dealing with natural hazards in the private and public sectors. Since 2001 I have been intensively involved with the establishment of a unit on natural hazards in the canton of Graubünden and the implementation of hazard and risk basics to create the most effective products in practice. This integral risk management of natural hazards has always been confronted with limited resources and the principle "the longer it lasts, the society's demands for protection against natural hazards increases". Dealing with three major risk situations over the last ten years in the canton of Graubünden has highlighted the challenges of risk management. Additionally I wrote a Master's thesis on risk management in private companies at the University of Zurich.

I have been retired since October 2023 and carry out individual consulting and teaching mandates.

ROBERT HOFMANN



Professor and Head
of Department Unit for
Geotechnical Engineering
University of Innsbruck

GEOTECHNICAL ASPECTS OF MITIGATION MEASURES AGAINST NATURAL HAZARDS IN THE CONTEXT OF CLIMATE CHANGE

WEDNESDAY, 12 JUNE 2024

Robert Hofmann, Professor for Geotechnics at the University of Innsbruck, deals with geotechnics and natural hazards as well as protective structures against natural hazards, impacts

of gravitational mass movements on protective structures, rock avalanches/granular flow, landslides, flood protection levees and focuses here on the expected extreme weather events in the context of climate change. The retreat of permafrost is increasingly leading to gravitational mass movements that require mitigation measures. The design of protective structures and the effects are a current area of research.

A further scope of expertise is catastrophe protection in aspects of protective structures. The evaluation and stabilization of slow and rapid moving landslides is a focal point of the work in practice and in research. Sustainable and reliable protective structures against rockfall, both embankments and the foundations of nets, are an essential focus of research in climate change.

Focus: Geotechnics and natural hazards, landslides, flood protection levees, sustainable mitigation measures in the context of climate change, impacts of gravitational mass movements on protective structures, rock avalanches/granular flow, stabilization of slow and rapid moving landslides.



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	Session I: Emergency Management and Recovery Chairs: Johannes Hübl and Paolo Simonini	Zeremoniensaal
09:30 - 10:50	The Gjerdrum quick clay landslide	Toril Hofshagen (Norway)
	Method for assessing financial damage induced by landslides in case of national-scale natural disasters	Ela Šegina (Slovenia)
	Effectiveness of unprecedented rainfall index for achieving appropriate evacuation from the Kurume disaster in July 2023	Ken'ichirou Kosugi (Japan)
	Flood on the stream "Afritzer- und Treffner Bach", June 29, 2022. Processing in the context of flood risk management, sediment management and ecology	Stefan Schober (Austria)
10:50 - 11:20	Break	
	Opening Session Moderation: Sabine Volgger	Zeremoniensaal
11:20 - 13:00	Conference Intro: Verena Ehold , Co-Organiser of IP2024 Florian Rudolf-Miklau , Chair of the organising committee of IP2024	
	Welcome Address: Norbert Sereinig , President of the International Research Society Interpraevent	
	Keynote 1: Sustainability, resilience and justice in Europe: Monitoring progress and managing risk in a changing climate	Leena Ylä-Mononen
	Keynote 2: Towards a Resilient Danube: Transboundary Water and Flood Risk Management in the Climate Change Era	Birgit Vogel
	Keynote 3: Global change impacts on mountain protective forests: What do we know and where do we grow from here?	Michaela Teich
	Opening Speech/Keynote 4: Protective Forests in a changing climate - Challenges and solutions	Elfriede Moser
13:00 - 14:30	Lunch Break	

	Session II: Climate Change: Drivers, Triggers and Consequences Chairs: Marc Olefs and Francesco Comiti	Zeremoniensaal
14:30 - 16:35	Keynote 5: Climate impacts on hydro-climatic extremes in the Alps	Manuela Brunner
	On the challenges of assessing trends in torrential flooding	Matthias Schlögl (Austria)
	Supporting the management of protection forests in a changing climate	Klaus Klebinder (Austria)
	A multi-step framework for the quantification of climate change impacts on large scale avalanche risk	Gregor Ortner (Switzerland)
	Local climate change impacts - New insights for Salzburg based on high resolution climate simulations and damage assessment	Marianne Bügelmay-er-Blaschek (Austria)
	Integration of climate change projections into debris flow hazard planning: Experiences from the Toverino river basin, South Tyrol	Laura Bozzoli (Italy)
16:35 - 17:00	Break	
	Panel Discussion “How to manage risks under global warming?” Chair: Thomas Glade	Zeremoniensaal
17:00 - 18:30	Catherine Gamper Head of Climate Change Adaptation at OECD	France
	Andreas Januskovecz Head of Climate Division and Forest Director at the City of Vienna	Austria
	Michael Krautblatter University Professor at the Chair of Landslide Research Technical at the University of Munich	Germany
	Anton Mattle Governor of Tyrol	Austria
	Matjaž Mikoš Professor of Hydraulic Engineering and Professor of Hydrology at the Faculty of Civil and Geodetic Engineering at the University of Ljubljana	Slovenia
	Monika Mörth Director-General for Water Management at the Austrian Federal Ministry of Agriculture, Forestry, Regions and Water Management	Austria
	Taro Uchida Professor at the University of Tsukuba	Japan
18:30 - 20:00	Poster Walk I & Welcome Reception Intro Speech	Entréezimmer, Trabantenstube & Rittersaal

Session III: Hazard and Risk Assessment - Part I Chairs: Dominique Laigle and Matjaž Mikoš		Zeremoniensaal
08:30 - 10:15	The Cadegliano-Viconago active landslide: The impact of the Pleistocene Alpine glacier system as a key for the comprehension of the current evolution and the future collapse	Alessandro De Pedrini (Switzerland)
	Quantitative assessment of landslide risk in Ivey Lake subdivision, Pemberton, British Columbia	Lauren Hutchinson (Canada)
	Post-wildfire debris-flow assessment methodology in British Columbia, Canada	Hazel Wong (Canada)
	Storm Alex – Lessons learnt from the debris floods that occurred on October 2nd 2020 in the French Maritime Alps	Clément Misset (France)
	Water fluxes in fractured bedrock permafrost: A potential hazard for high alpine infrastructure	Maike Offer (Germany)
10:15 - 10:40	Break	
Session IV: Hazard and Risk Assessment - Part II Chairs: Matjaž Mikoš and Dominique Laigle		Zeremoniensaal
10:40 - 12:45	Keynote 6: Dealing with major events - Challenges for risk management	Christian Wilhelm
	Persistence table as an efficient instrument to forecast and to manage extreme natural events in the joint information platform for natural hazards	Markus Aeschlimann (Switzerland)
	Dynamic hazard assessment method of mass movements in constantly changing alpine environments	Adrian Peter (Switzerland)
	Long-term monitoring of the rock slope deformation Gradenbach-Eggerberg and revised engineering geological assessment	Anne Hormes (Austria)
	Vulnerability to wildfire in the Austrian wildland urban interface	Maria Papathoma-Köhle (Austria)
The first Austrian indication map of protective forests showing their object-protective function cartographically	Alexander Starsich (Austria)	
12:45 - 14:15	Lunch Break	
13:15 - 14:15	Impluse lecture „Gender in DRR – Why bother?“	Künstlerzimmer

	Session V: From Observations and Experiments to Modelling and Simulations - Part I Chairs: Priska Hiller and Jan Thomas Fischer	Zeremoniensaal
14:15 - 16:00	Long-term records of integrative measured bedload data as a means of evaluating the performance of transport equations: case study Urslau	Andrea Lammer (Austria)
	Within the wave pattern of three natural debris flows	Tobias Schöffl (Austria)
	A new DX approach of landscape using slam technology in Kamikochi national park, Japan	Hiroya Nitta (Japan)
	The new operational bedload monitoring station in the Sulden/Solda river (South Tyrol, Italy): Innovative aspects and preliminary observations	Rudi Nadalet (Italy)
	Laboratory experiments on effects of different groyne designs on bed and bank stability in a torrent	Ursula Stephan (Austria)
16:00 - 16:15	Break	
	Session VI: Student Session and Interpraevent Student Award Chair: Niki Beyer-Porter and Gernot Koboltschnig	Zeremoniensaal
16:15 - 17:40	Experimental study on debris flow loads using open Sabo dam supported by cables	Yuta Miyahara (Japan)
	Exploring the effect of landslide mitigation and protection measures under simulated hazard scenarios	Yenny Alejandra Jiménez Donato (Austria)
	Culverts for draining torrent-systems during flash floods – Current state and ideas for improvements	Susanne Scherbaum (Austria)
	Strategies for improved levee safety: Integrating traditional and novel monitoring technologies	Nicola Fabbian (Italy)
	Woody vegetation database: A step towards sustaining ecosystem services in the midst of climate change	Helene Müller (Austria)
17:40 - 19:15	Poster Walk II Intro Speech	Entréezimmer, Trabantenstube & Rittersaal
	Film Session: Risk and Art	Zeremoniensaal
17:50 - 19:15	Award-winning Austrian documentary film "Sicherheit 1 2 3"	
	Convenor: Christian Resch , DCNA	
	Artist Talk: Julia Gutweniger Florian Kofler	
19:30	Gala Dinner (Palmenhaus in the Burggarten)	

Session VII: From Observations and Experiments to Modelling and Simulations - Part II Chairs: Jan Thomas Fischer and Priska Hiller		Zeremoniensaal
08:30 - 10:15	Layered slides, slow flows, and virtual reality: Recent enhancements of the r.avaflow mass flow simulation tool	Martin Mergili (Austria)
	Using an artificial intelligence model to develop real-time prediction technology for landslides	Song- Yue Yang (Taiwan)
	Rock-avalanche Fluchthorn: Back-calculation of the event with the open source model AvaFrame	Michael Mölk (Austria)
	Path to wildfire resilience: Advanced modeling for fire danger risk along railway infrastructure	Christian Rachoy (Austria)
	Numerical modelling of post-fire debris flows triggered by rainfall: A case study in north-western Italy	Giulia La Porta (Italy)
10:15 - 10:45	Break	
Session VIII: Structural and Non-Structural Mitigation Measures - Part I Chairs: Karl Mayer and Stefan Margreth		Zeremoniensaal
10:45 - 12:45	Keynote 7: Geotechnical aspects of mitigation measures against natural hazards in the context of climate change	Robert Hofmann
	Dealing with ageing protection systems in torrents	Catherine Berger (Switzerland)
	Cold spring creek debris-flow mitigation: A roller-compacted slot barrier under construction in western Canada	Patrick Nolan (Canada)
	Feedback from two proglacial lake risk situations in French Alps	Thomas Geay (France)
	Brienz/Brinzauls landslide 2023: From interferometric radar measurements and deformation camera monitoring to real-time rockfall detection with automatic road closure	Susanne Wahlen (Switzerland)
	Real-time and multi-method monitoring of the imminent Hochvogel rock slope failure	Johannes Leinauer (Germany)
12:45 - 14:15	Lunch Break	

	Session IX: Structural and Non-Structural Mitigation Measures - Part II Chairs: Stefan Margreth and Karl Mayer	Zeremoniensaal
14:15 - 15:00	A comparison of forces due to avalanches and a debris flow on a flexible net structure	Engelbert Gleirscher (Austria)
	Paravalanche engineering in a context of climate change	Rémy Martin (France)
	Session X: Risk Governance, Policies and Resilience Chair: Florian Rudolf-Miklau and Didier Richard	Zeremoniensaal
15:00 - 16:45	Integrating social and psychological factors in cost-benefit analysis for flood risk management	Sebastian Seebauer (Austria)
	The identification of forested areas prone to erosion in the catchments of torrents in Slovenia	Urša Vilhar (Slovenia)
	“Schutz vor Naturgefahren” – A collaborative initiative to enhance risk awareness and resilience in Switzerland	Corinne Singeisen (Switzerland)
	Climate risk management at the local level: Experiences from Longyearbyen	Stina Marie Hov Andreassen (Norway)
	Improving awareness of flash-flood risks by simulating disasters through mixed reality tools	Peter A. Fischer-Stabel (Germany)
16:45 - 17:00	Break	
	Closing Session Moderation: Norbert Sereinig and Gebhard Walter	Zeremoniensaal
17:00 - 17:45	Conference Summary & Conclusion by Scientific and Technical Advisory Board of IP2024	
	Tributes and Awards	
	Closing Address	
18:00	Side Events (external) Talking Science Transboundary Water Management in the Danube River Basin Women Networking Event	

11 WORKSHOP PROGRAMME

In addition to the session programme of the oral presentations, Interpraevent 2024 offers participants workshops on selected hot spot topics. The workshops are professionally designed by partner organisations, take place on a small scale (max. 70 participants) and are limited to a compact duration of 1 hour. The workshops offer a thematic introduction to current governance topics or the latest technological developments and are intended to encourage further knowledge transfer and networking.

The workshops will take place in the room "Künstlerzimmer". The participation is only possible on-site.

WORKSHOP 1 |

ALPS AS RISK AREA: BETWEEN CLIMATE CHANGE AND SOIL CONSUMPTION

The Alpine region is under the influence of climate change, increasing natural hazard risks and progressive land use associated with massive soil consumption. The workshop will examine the challenges of this development from a European, national and regional perspective. Stakeholders from the scientific community, the European Macro-Regional Strategy for the Alpine area, the Alpine Convention and the field of regional policy will have their say.

Language: German

Time: Monday 10 June, 15:30 - 16:30

Organiser: Technical University Vienna | Department for Land Policy and Management | Arthur Kanonier & Barbara Steinbrunner



WORKSHOP 2 |

FOREST FIRE RISK GOVERNANCE AT THE WILDLAND-URBAN INTERFACE

Forest fires are a relatively “unknown” risk in Austria in the context of climate change, especially in the vicinity of large cities such as Vienna. The workshop will focus on the forest fire risk at the so-called “wildland-urban interface”, i.e. the transition zone between forest and settlement areas. Using examples from the Vienna Woods, the discussion will focus on the challenges of spatial planning, forestry and firefighting. Conflict areas such as raising awareness of forest fires and behaviour in the event of forest fire risk in the urban environment or conflicts of interest between land use, leisure and forestry will be addressed.

Language: English

Time: Tuesday 11 June 2024, 14:30 - 15:30

Organiser: University for Natural Resources and Applied Life Sciences | Institute of Silviculture | Mortimer Müller & Harald Vacik



WORKSHOP 3 |

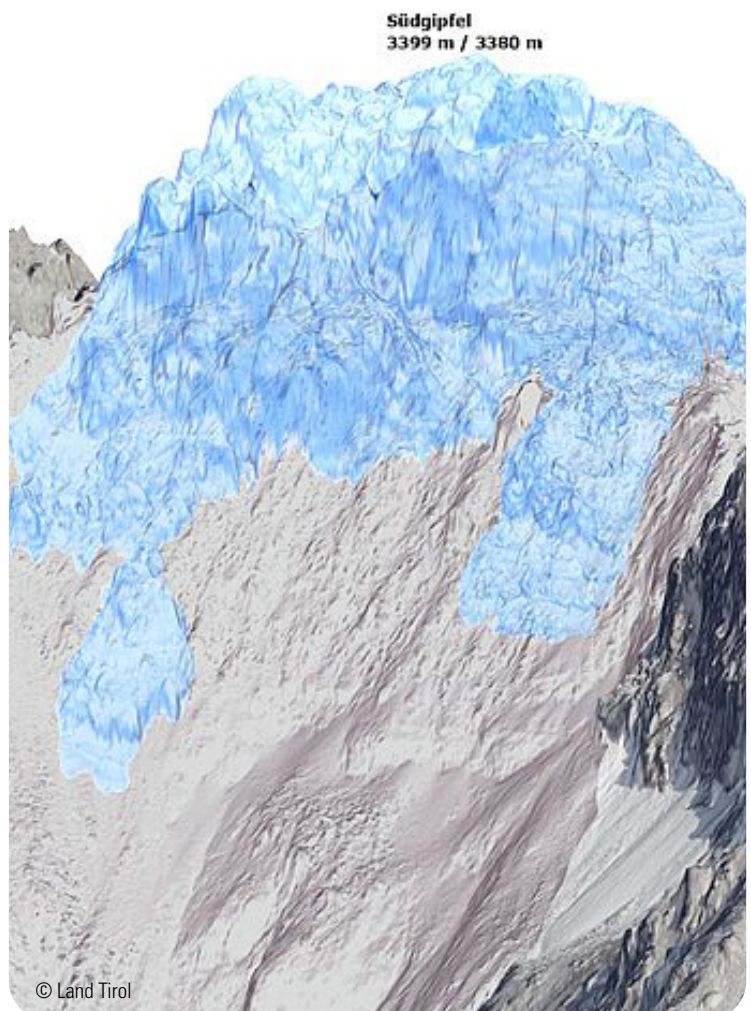
DETECTION AND MONITORING OF ALPINE LANDSLIDES USING SATELLITE-BASED INSAR

Interferometric Synthetic Aperture Radar (InSAR) technology offers a revolutionary approach for detecting and monitoring alpine mass movements. By analyzing radar signals bounced off Earth’s surface, InSAR can detect subtle ground deformations that indicate landslides. This technology enables continuous monitoring over large areas, providing early warnings and valuable data for understanding dynamic processes in alpine environments. Cutting-edge satellites systematically measure ground movements directly, covering a wide area with high precision in millimeter-range. The information obtained is particularly important for the detection and monitoring of landslides. After a short theoretical introduction, we will discuss the potential and limits of InSAR based on practical examples like the Fluchthorn event (Austria) with more than 1.000.000 m³.

Language: English

Time: Tuesday 11 June 2024, 16:30 - 17:30

Organiser: Georesearch | Markus Keuschnig



WORKSHOP 4 |

DEBRIS FLOW MODELLING: SCIENCE

MEETS PRACTICE

In torrential catchment areas, the greatest risk comes from debris flows. Their analysis and numerical modelling is therefore a core task of safety planning and requires sound data collection in the field, the selection of suitable simulation models for the type of process and the calibration of these models for specific hazard zone and action planning. The Torrent and Avalanche Control and the Institute for Alpine Natural Hazards (BOKU) jointly provide an overview of the state of the art in science and engineering practice for mudflow modelling in Austria.

Language: German

Time: Wednesday 12 June 2024, 14:15 - 15:15

Organiser: Austrian Service for Torrent and Avalanche Control & University for Natural Resources and Applied Life Sciences |
Markus Moser & Roland Kaitna



WORKSHOP 5 |

THE AUSTRIAN OPEN SOURCE AVALANCHE

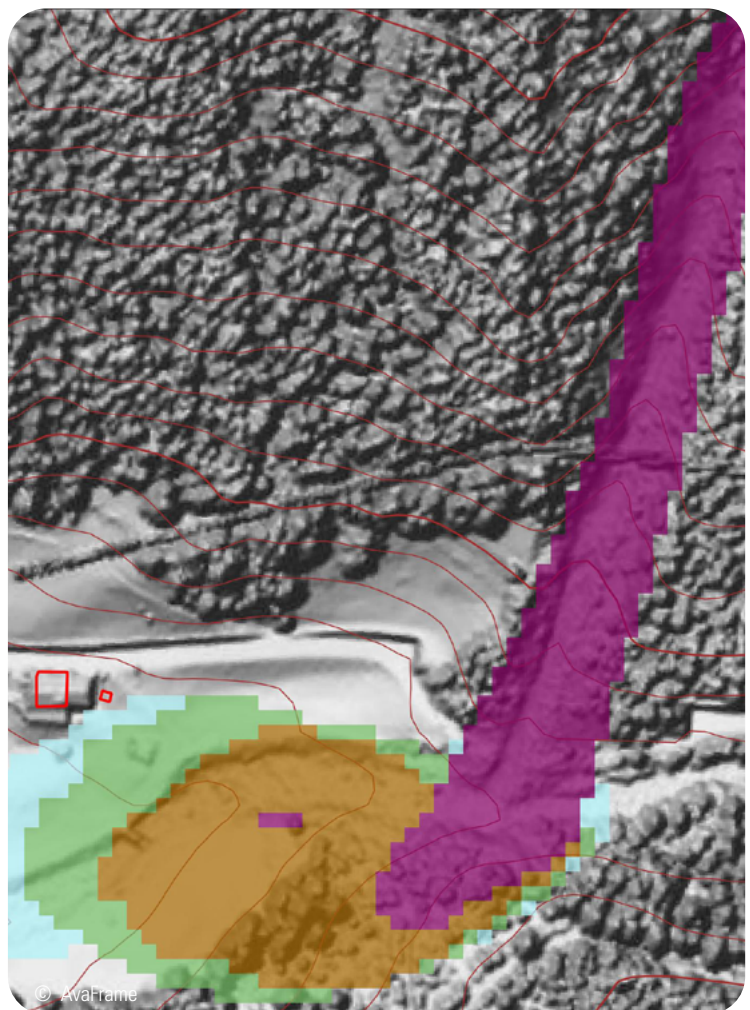
MODEL AVAFRAME

The new Austrian avalanche model AvaFrame was developed on an open source basis to promote transnational cooperation and development. The workshop provides an insight into this new development and the experience gained from its application in engineering practice. It shows the new approach and the advantages of an open source development concept for simulation software.

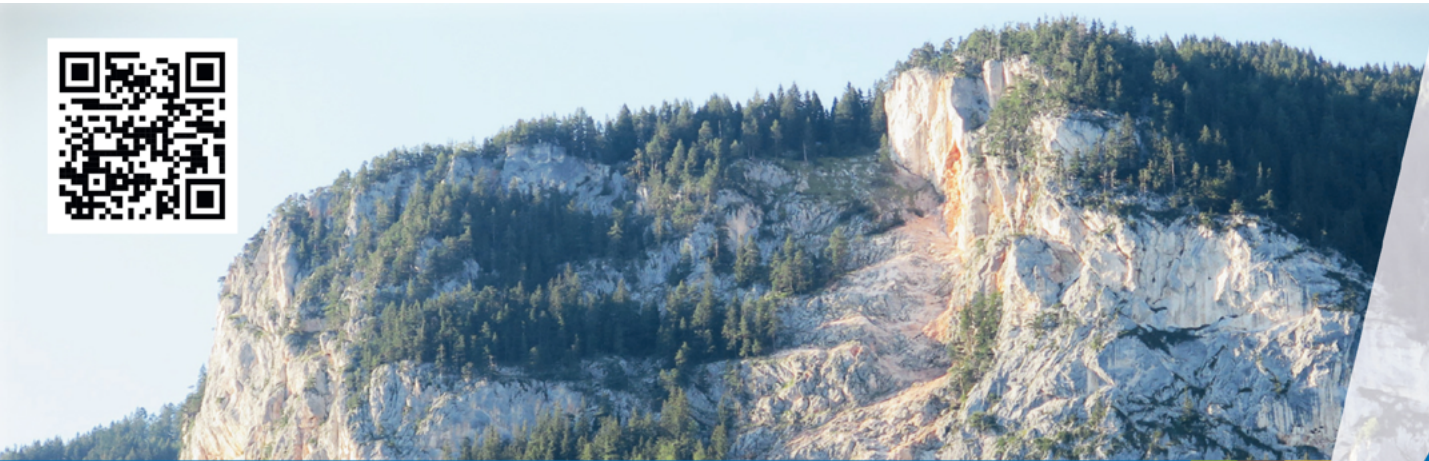
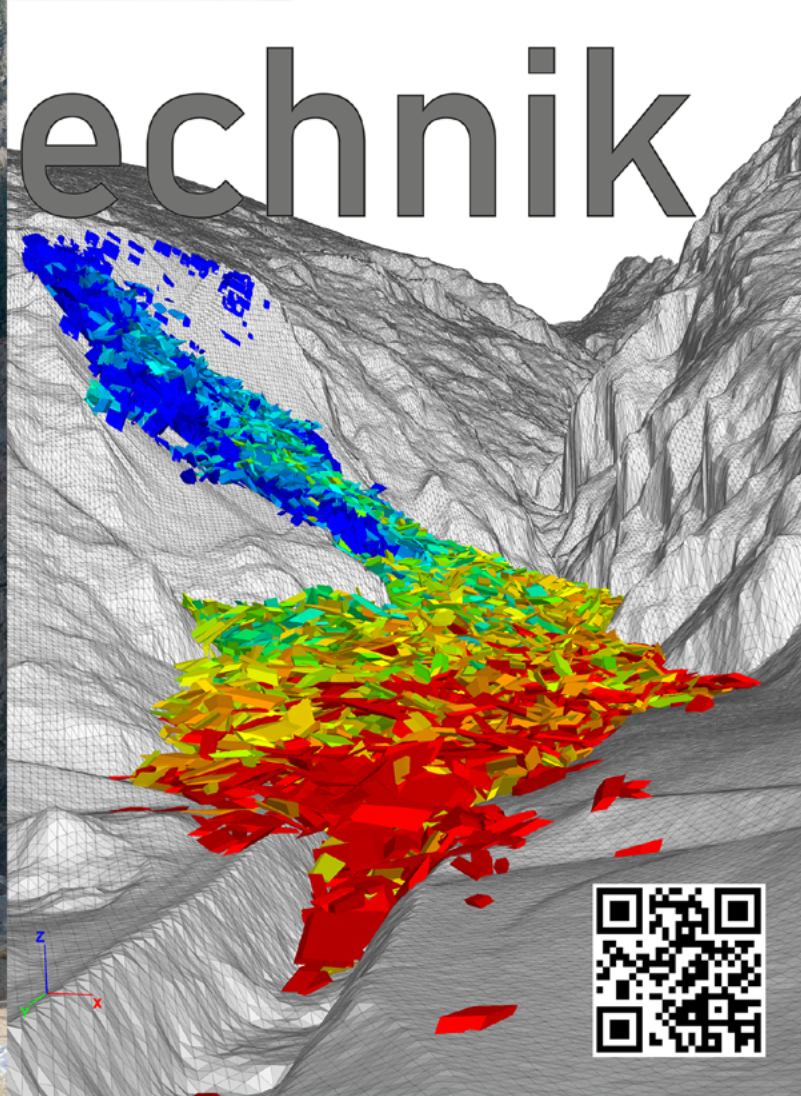
Language: English

Time: Wednesday 12 June 2024, 15:30 - 16:30

Organiser: Federal Research Centre for Forests |
Felix Oesterle



pi geotechnik



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12 STUDENTS PROGRAMME

Supporting the next generation of scientists and engineers is an important task of the Interpraevent research society. Hence, Interpraevent 2024 offers a special student programme during the conference, comprising:

- the Student Award (with a specific student session)
- a follow-up workshop for students, “Science Day” at the University of Vienna
- scientific coaching at the conference by members of Scientific and technical advisory board

STUDENT AWARD

For the Student Award, students were able to submit contributions. The 5 most outstanding submissions are invited to present their papers at the conference. Within the student session on Tuesday 11 June from 16:15 to 17:40. All fellow conference participants are able to vote for the best contribution. This student will then be awarded during the Gala Dinner.

SCIENCE DAY

A follow-up workshop is organised on the 13 June 2024 at the University of Vienna, called the “Interpraevent Science Day”. The Science Day will offer the participating students the opportunity to summarise and debrief the results of the Interpraevent 2024 conference, and to evaluate the gained knowledge for their individual academic education together with leading experts. Several key topics of the conference will be discussed in parallel disciplinary workshops. Furthermore, the interdisciplinary exchange and networking with experts and other students from several countries will be promoted. The follow-up workshops will be held in English.

LOCATION:

New Institute Building (NIG) of the University of Vienna, Universitätsstraße 7, 1010 Vienna

PROGRAMME:

see next page!

PROGRAMME:

08:30-08:50	Welcome, [Lecture hall 5A]			
09:00-09:30	Workshop A Nature-based solutions [Seminar room 5A]	Workshop B Fluvial dynamics [Seminar room 4C]	Workshop C Landslide dynamics [Seminar room]	Workshop D Pluvial floods [GIS Lab]
09:30-10:00	Critical conference reflection	Critical conference reflection	Critical conference reflection	Critical conference reflection
10:00-10:15	Coffee break			
10:15-12:15	Emerging demands, new challenges and take home message	Emerging demands, new challenges and take home message	Emerging demands, new challenges and take home message	Practical GIS exercise
12:15-13:15	Lunch break [Roof-deck NIG]			
13:15-13:45	Workshop A Nature-based solutions [Seminar room 5A]	Workshop B Fluvial dynamics [Seminar room 4C]	Workshop C Landslide dynamics [Seminar room]	Practical GIS Exercise
13:45-14:15	Critical conference reflection	Critical conference reflection	Critical conference reflection	
14:15-16:45	Emerging demands, new challenges and take home message	Emerging demands, new challenges and take home message	Emerging demands, new challenges and take home message	Practical GIS exercise
16:45-17:15	Coffee break			
17:15-18:15	Career field presentation [Lecture hall 5A]			
18:30-	Social event [Roof-deck NIG]			

Poster presentations are a valuable way to share the work, connect and discuss with the international community at the conference. The poster area is located in the rooms Entréezimmer, Trabantenstube and Rittersaal and is in general open during the following times:

- MONDAY 10 JUNE, 13:00 – 20:00
- TUESDAY 11 JUNE, 8:30 – 19:15
- WEDNESDAY 12 JUNE, 8:30 – 13:45

To make sure that the poster presentations get the attention they deserve, Interpraevent 2024 has scheduled two specific Poster Sessions, the Poster Walks:

- MONDAY 10 JUNE, 18:30 – 20:00
- TUESDAY 11 JUNE, 17:40 – 19:15

There, all participants will have the opportunity to ask detailed questions about the posters and get in touch with the presenters.

PRESENTERS INSTRUCTIONS

Please print your poster on your own and bring it with you to Interpraevent 2024. We recommend printing two copies in case anything happens. The poster area is located in the rooms Entréezimmer, Trabantenstube and Rittersaal. Posters can be set-up on:

- MONDAY 10 JUNE FROM 8:00 – 12:30

For the set-up, go to the registration desk and register there. After the registration, you can go to the poster area where you will find your poster board, you have received the poster number in advance. The Interpraevent 2024 Staff will support you. Tape will be available at the poster boards. Please plan to be present at your poster during the Poster Walks on:

- MONDAY 10 JUNE FROM 18:30 – 20:00
- TUESDAY 11 JUNE FROM 17:40 – 19:15

Please remove your poster on Wednesday 12 June between 13:45 – 15:30 (at the end of the lunch break).

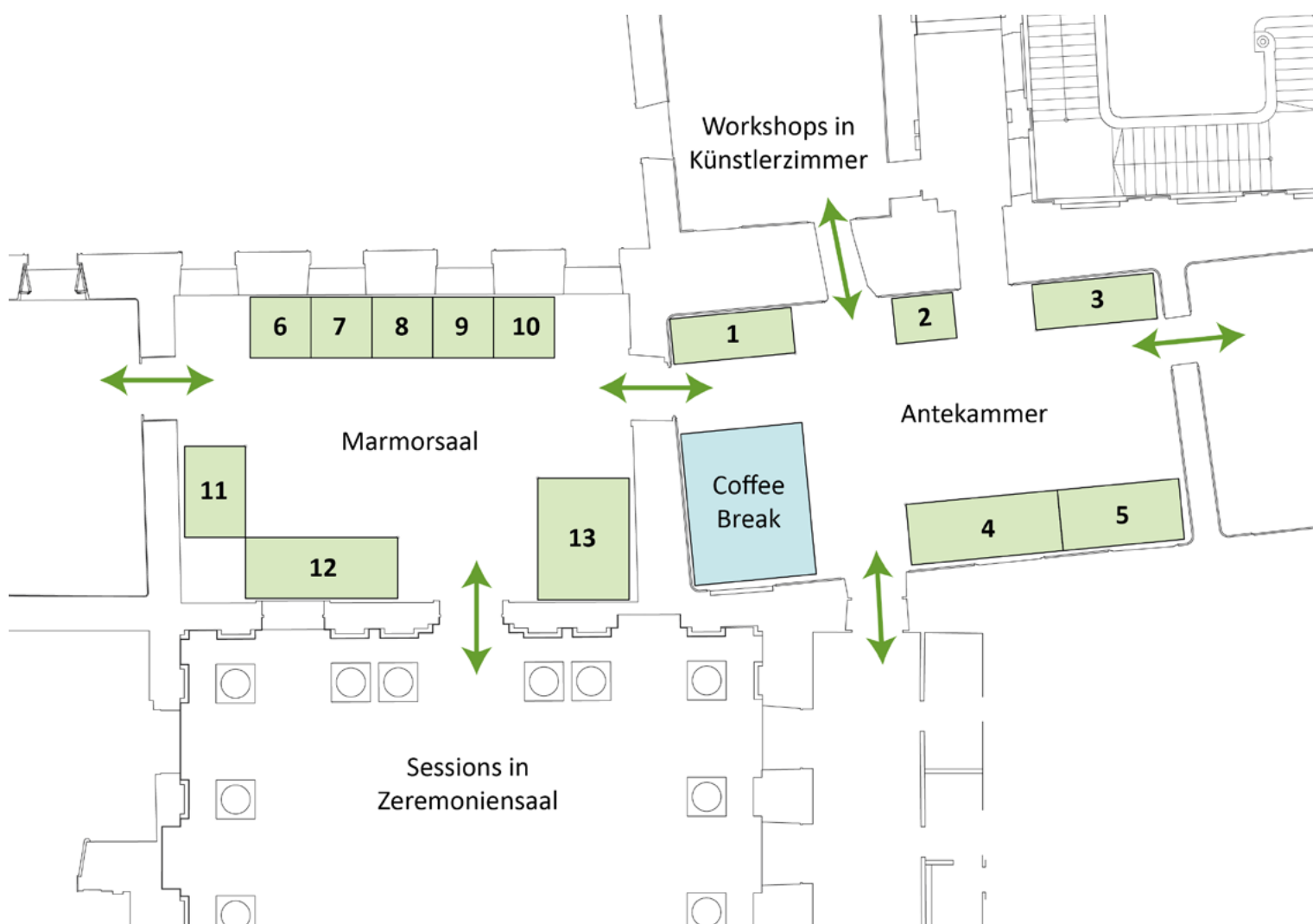
14 EXHIBITIONS

Interpraevent 2024 offers a unique opportunity to meet planners, developers, decision-makers and business partners at one place. Exchanging and networking is one of the core values of the conference. We are pleased to welcome many different exhibitors at the conference. The exhibition area is located in the rooms Marmorsaal and Trabantenstube and is open for participants during the following times:

- MONDAY 10 JUNE, 13:00 – 20:00
- TUESDAY 11 JUNE, 8:30 – 19:15
- WEDNESDAY 12 JUNE, 8:30 – 14:15

Exhibitor	Booth
Sichuan OST Slope Protection Engineering Co., Ltd	1
The Austrian Forests Dialogue	2
JOANNEUM RESEARCH DIGITAL	3
EDUCATION & LEARNING	4
Trumer Schutzbauten GmbH	5
Mair Wilfried GmbH	6
ecorisQ	7
IBTP Koschuch	8
Geoprevent	9
GEOBRUGG AG	10
ms.GIS	11
IP2024 Organisers	12
BECO Bermüller	13



15 GALA DINNER

Join us for the Interpraevent 2024 Gala Dinner on Tuesday 11 June 2024 at the stunning Palm House at the “Burggarten” directly next to the conference place. This beautiful venue mixes history with greenery and creates a relaxed atmosphere.

Enjoy a carefully planned seated menu with a mix of traditional Austrian dishes and modern delights while connect and exchange with fellow attendees. Musical entertainment will complete the captivating ambiance of the evening. The event starts at 19:30. You are already welcome to join from 19:15 on, where an aperitif and traditional Austrian brass music will await you.

Norbert Totschnig, Austrian Federal Minister of Agriculture, Forestry, Regions and Water Management will be opening the Gala Dinner. During the course of the evening, he will present and hand over the Student Award, an award for the best student paper on the subject of natural hazards.

Do not miss this opportunity to network, celebrate, and enjoy an unforgettable evening in one of Vienna’s most beautiful locations.

Please note that registration for the Interpraevent 2024 Gala Dinner is mandatory and we kindly remind you to bring your conference badge with you.

Furthermore, we would like to inform you that the floor at the venue is gravelled. A specific dress code is not necessary. Please be aware that the Palm House is a historic steel and glass construction.

Start: 19:30, Entrance from 19:15

Location: Palmenhaus Burggarten, Burggarten 1, 1010 Vienna



TALKING SCIENCE

Networking in the spirit of science and crisis communication: The Disaster Competence Network Austria invites participants of the IP24 to a stimulating evening, taking place in the beautiful Kuppelsaal at the Vienna University of Technology.

The evening will be kicked off with exciting keynotes from representatives of the Ministry of Science, Research and Education, the Austrian Broadcasting Cooperation, and the Austrian Academy of Sciences. The focus is on communication and science skepticism, as well as new approaches and insights in the field of crisis communication. In thematic groups – floods, gravitational mass movements, extreme weather phenomena, and protection of critical infrastructure – you will be able to exchange ideas with other experts and make new contacts, all while enjoying culinary and cultural frame.

Time: 12 June 2024 | Time: 18:00 – 21:00

Location: Kuppelsaal at Vienna University of Technology |
Karlsplatz 13, 1040 Vienna (4th floor)



TRANSBOUNDARY WATER MANAGEMENT IN THE DANUBE RIVER BASIN ORGANISED BY ICPDR

The International Commission for the Protection of the Danube River (ICPDR) invites participants to discuss the broad applicability, the associated benefits but also the bottlenecks in the implementation process of natural water retention measures and nature-based solutions in a transboundary water management context. Participants can look forward to the following presentations and discussions:

- ICPDR (Petra Repnik Mah & Clemens Neuhold): NbS in flood risk management – how to coordinate EU legislation on Danube river basin scale
- Land4Climate (Marion Wallner & Martin Wenk): How to implement NbS on private property an overview of 6 countries in the Danube catchment
- MERLIN (Silke-Silvia Drexler): Mainstreaming Ecological Restoration of freshwater related ecosystems in a Landscape context – NbS along the Danube

In addition, the opportunity for networking accompanied by drinks and snacks will be given.

The International Commission for the Protection of the Danube River (ICPDR) works to ensure the sustainable and equitable use

of waters in the Danube River Basin through three main goals:

- a Cleaner Danube
- a Healthier Danube
- a Safer Danube

To achieve these goals an integrated and coordinated approach is needed. Especially, natural water retention measures and nature-based solutions are of utmost interest. Nature-based solutions (NBS) often do not require interventions, they are options to simply allow nature to do its task (i.e. self sustainable river restoration). Nature-based solutions are also recognised as “actions to protect, sustainably manage and restore natural and modified ecosystems in ways that address societal challenges effectively and adaptively, to provide both human well-being and biodiversity benefits” which is in line with the ICPDR goals.

Date: 12 June 2024 | Time: 18:30 – 21:00
Location: Gobelinsaal (Saal II) at Austrian Federal Ministry of Agriculture, Forestry, Regions and Water Management | Stubenring 1, 1010 Vienna



WOMEN NETWORKING EVENT ORGANIZED BY WE4DRR

The international network women exchange for Disaster Risk Reduction (we4DRR) invites female students, researchers, administrators, policy makers and practitioners working in the fields of natural hazard management and disaster risk reduction to a networking event in the Dachsaal of the Wiener Urania.

The event will feature an insightful keynote with Loretta Hieber-Giradet, Chief of the Risk Knowledge, Monitoring and Capacity-Development Branch of the United Nations Office for Disaster Risk Reduction (UNDRR). Previously, Loretta served as Chief of the UNDRR Asia-Pacific regional office, covering 38 of the world's most disaster-prone countries. She also has a background in public health and worked for the World Health Organization in various capacities, including emergency contexts in Afghanistan, Pakistan and sub-Saharan Africa. Her experience in emergency contexts spans more than 25 years and she is the author of several publications. There will be interactive sessions and many opportunities to exchange and connect with others in a relaxed atmosphere. Snacks and drinks will be provided. The event venue is located in the city centre right by the Donaukanal.

Date: 12 June 2024 | Time: 18:00 – 22:00

Location: Dachsaal of the Wiener Urania |
Uraniastraße 1, 1010 Vienna

Time	Programme
17:45-18:15	Registration Welcome drink & snacks
18:15-18:30	Welcome Moderation: Catrin Promper (Austrian Environmental Agency) Introduction to we4DRR, Michaela Teich (Austrian Research Centre for Forests; Managing Director we4DRR)
18:30-19:15	Keynote lecture with Q&A Moderation: Catrin Promper (Environment Agency Austria) Keynote: Loretta Hieber-Girardet (UNDRR)
19:15-19:30	Interactive session with the audience Moderation: Catrin Promper (Austrian Environmental Agency)
19:30-20:00	Snacks & drinks (Break)
20:00-20:30	4 women – 4 paths Moderation: Lydia Pedoth (EURAC Research, Italy) <ul style="list-style-type: none"> • Maria Patek (formerly Federal Ministry for Agriculture, Forestry, Regions and Water Management, Austria) • Giulia Bossi (National Research Council, Italy) • Anne Hormes (W&P Felsprojekt, Germany) • Helen Gosteli (Swiss National Platform for Natural Hazards Planat)
20:30-22:00	Poster exhibition Mingle with drinks and snacks





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Departments

- Natural Hazards
- Geotechnical Engineering
- Hydraulic Engineering
- Infrastructure & Traffic
- Industrial Construction
- Building Construction



Locations

Vienna/Lower Austria

Breitenfurter Straße 320/1.13
1230 Vienna

Carinthia

Villacher Straße 222
9020 Klagenfurt

**Upper Austria/
Lower Austria**

Altenhofnerstraße 24
4300 St. Valentin

Styria

Kaiserfeldgasse 13
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