IDRiM
FOR A SAFER WORLD

UNIVERSITATEA BABEŞ-BOLYAI
BABEŞ-BOLYAI TUDOMÁNYEGYETEM
BABEŞ-BOLYAI UNIVERSITÄT
BABEŞ-BOLYAI UNIVERSITY
TRADITIO ET EXCELLENTIA

FACULTY OF ENVIRONMENTAL SCIENCE AND ENGINEERING

ISUMADECIP
Research Institute for Sustainability and Disaster Management based on High Performance Computing

Conference

IDRIM2022

Cluj-Napoca, ROMANIA

21-23 September 2022

CRITICAL STEPS FOR RESEARCH AND PRACTICE IN DISASTER RISK MANAGEMENT IN THE AGE OF CLIMATE CHANGE AND COVID-19 PANDEMICS

IDRiM2022

The 12th International Conference of the International Society for the Integrated Disaster Risk Management

IDRiM
FOR A SAFER WORLD

UNIVERSITATEA BABEŞ-BOLYAI
BABEŞ-BOLYAI TUDOMÁNYEGYETEM
BABEŞ-BOLYAI UNIVERSITÄT
BABEŞ-BOLYAI UNIVERSITY
TRADITIO ET EXCELLENTIA

FACULTY OF ENVIRONMENTAL SCIENCE AND ENGINEERING

ISUMADECIP
Research Institute for Sustainability and Disaster Management based on High Performance Computing

CRITICAL STEPS FOR RESEARCH AND PRACTICE IN DISASTER RISK MANAGEMENT IN THE AGE OF CLIMATE CHANGE AND COVID-19 PANDEMICS

CALL FOR ABSTRACTS AND PAPERS

Historically, South-Eastern European (SEE) nations have faced numerous disasters, such as destructive earthquakes, floods, wildfires, landslides, etc. and technological accidents, often affecting bordering countries. Furthermore, due to the effects of the climate change, an increase in the number and intensity of weather-related complex disasters is expected. In developing SEE countries, with high social and economic vulnerability and, at the same time, low focus on prevention and preparedness activities, there is an urgent need for cooperation in the region between scientists, experts, practitioners and national authorities to deal with both slow and rapid-onset disasters.

Highly ranked scientific events, such as the International Conference of the International Society for INTEGRATED DISASTER RISK MANAGEMENT (IDRiM), can bring significant contributions to advance the state of the art in integrated disaster risk management research and increase the effectiveness of disaster risk reduction activities at all levels.

The 12th International Conference of the International Society for Integrated Disaster Risk Management (IDRiM2022) will be hosted by Babeș-Bolyai University of Cluj-Napoca (Romania), Research Institute for Sustainability and Disaster Management based on High Performance Computing and Faculty of Environmental Science and Engineering.

The main objective of the IDRiM2022 conference is to showcase research, discuss case studies, and address urgent problems within the field in SEE countries and other countries around the world.

The specific objectives of the conference include:

- To invite contributions that not only advance the state of the art in integrated disaster risk management research and effectiveness, but also summarize, synthesize, and assess field specific information in order to set future priorities in DRR;
- To strengthen networking between the academic community, practitioners and authorities and representatives of civil society in the field of disaster risk reduction;
- To share DRR policies and practices in the current pandemic situation in the different countries and extract important essences for DRR in the future.

IDRiM2022 will focus on presentations addressing issues related to:

- Understanding hazards and risks for a better risk management
- Sustainable development and resilient societies
- Reducing social, economic and environmental vulnerabilities
- Risk communication and risk perception studies
- Disaster education
- Gender issues in disaster risk reduction
- Technological disasters triggered by natural hazards (Natech)
- Disaster risk governance (with a special focus on Central and South-Eastern Europe)
- Managing cascading disasters during pandemics (Covid-19) / slow-onset catastrophes.
- Climate and weather-related disasters
- Climate change adaptation
- Early warning systems
- Critical infrastructure protection against disasters
- Systemic risks
- Economic impacts of disasters
- Other topics related with integrated disaster risk management

Call for abstracts for oral and poster presentations:

We invite submission of abstracts for oral and poster presentations. We especially encourage early-career scientists and students to submit their abstracts for consideration in the Young Scientist Session (YSS).

Call for abstracts for oral and poster presentations:

We invite all presenters including early-career scientists and students to consider submitting papers based on work presented at the IDRiM2022 conference, to be published in the following journals:

- Journal of Integrated Disaster Risk Management – the official Journal of the IDRiM Society: https://www.idrimjournal.com/
- International Journal of Disaster Risk Science - https://www.springer.com/journal/13753
- Environmental Engineering and Management Journal - http://www.eemj.icpm.tuiasi.ro/

More details and submission deadlines for the submission of papers will be provided soon.

Important dates:

8 March 2022	1st call for abstracts (abstracts, special sessions, poster, oral, YSS)
29 April 2022	Special session proposal deadline **Pre-registration starts**
30 May 2022	Abstract submission deadline
1 July 2022**	Announce accepted abstracts **Registration starts** **Early-bird conference fee**
1 August 2022	Late registration fee
15 August 2022	**Registration closes**
21-23 September 2022	CONFERENCE
Mid December 2022	Full paper submission deadline (optional)*

Papers submitted for the YSS will have three publication options, including an option to submit your papers before the conference with a guaranteed fast track review process. More information will be announced soon.

****Depending on the situations and restrictions associated with the COVID-19 pandemic, the Conference Organizing Committee can decide to switch this year's IDRiM conference format from "hybrid (in-person & online)" to "fully virtual." This decision will be announced on 1st of July 2022.***

Conference Registration fee (expressed in EURO):

	IDRiM Members	Non-members	Student IDRiM members	Student non-members
Early bird: On-site participants	220	300	120	160
Late registration: On-site participants	270	350	150	190
Online participants	40	80	30	50

For updates follow: idrim2022.com

Stephane Hallegatte

Lead Economist, Climate Change Group
The World Bank

Prioritization of disaster risk management investments: connecting to broader policy goals

Investment and spending needs to boost resilience can exceed available resources, making prioritization and sequencing of interventions a critical part of risk management. This presentation makes the case that our tools and methodologies should better connect the priorities for disaster risk management with broader policy goals. I will show two tools developed to help decision-makers decide how to prioritize risk reduction investments, based on their policy priorities. Because economic analysis can often lead to prioritizing interventions in the richest areas, a first methodology uses the concept of socio-economic resilience at the household level to take into account the role of poverty inequality in determining where and in which projects to invest. Shifting to infrastructure, a second methodology combines a traditional criticality analysis in the transport system with a model of supply chains. Such an approach does not only identify the most important components of the transport system but also identify the supply or value chains that these components are important for, such as investments in resilience can be better connected to broader development and economic objectives.

Igor Linkov

US Army Corps of Engineers, Engineer Research and Development Center

Role of Science and Scientists in addressing Resilience and Efficiency in Post-COVID Societies

I will argue that emphasis on efficiency in the operation, management and outcomes of various economic and social systems has brought much of the world to rely upon complex, nested, and interconnected systems to deliver goods and services around the globe. While this approach has many benefits, the Covid-19 crisis shows how it has also reduced the resilience of key systems to shocks, and allowed failures to cascade from one system to others. I will discuss options of framing resilience-by-design (a system must be designed to recover its critical functions from disruption on its own) or by intervention (an external resource must be envisioned to enable a system to withstand cascading and systemic disruptions). I will provide specific recommendations on building resilient infrastructure to address future systemic challenges. I will discuss the role of science and scientists in practical implementation of risk management and resilience based on my experience supporting decision makers during COVID-19 pandemics.

Raed Arafat

Secretary of State
Head of the Department for Emergency Situations
Ministry of Internal Affairs, Romania

Dealing with pandemics – Romanian Outbreak Response Framework in COVID-19 context

When the WHO started figuring out if COVID'19 should be called a pandemic at the begging of 2020, Romania was still discussing plans for a National Outbreak Response Framework.
However, few weeks earlier, the *lack of necessary protective equipment for medical staff* who could be involved in the treatment of highly contagious patients, was identified by Romanian responsible stakeholders as a vulnerability at the national level. That was the moment of deciding on a series of political, financial, social, and administrative measures aimed to ensure proper management of the incoming epidemic crises.
In the next 24 months the *National Emergency Situations Committee (CNSU)* was the responsible authority, at the national level, with the overall response. To prevent and combat the spread of the new coronavirus, Romanian authorities issued a series of *presidential decrees, government ordinances, and decisions*, but also *orders and dispositions of the action commander* – the head of the Department for Emergency Situations (DSU).
These measures, lead to a strengthened role of DSU as a key stakeholder in the management of crises in Romania.
In addition to the limiting measures meant to ensure the prevention of the spread of the virus, these legal acts were the basis for the development of *the emergency medical stocks* as reserves for operational interventions for the protection of the population.
The national response management was provided by the *National Center for Coordination and Management of Intervention (CNCCI)*. Also, *county centers for coordination and management of intervention* were activated throughout the Romanian territory ensuring continuous information flow between the components of the National Emergency Management System.
At the same time, to demonstrate solidarity, *Romania deployed medical teams* in support to other countries, *delivered in-kind assistance*, and developed a *medical stockpile under the rescEU* (one of the tools developed under the umbrella of Union Civil Protection Mechanism).
Due to an aggressive fake news campaign that was promoted on social media and some news channels, the medical system in Romania was at its breaking point at the end of October 2021. This forced the Romanian authorities to seek assistance from other countries. Europe and the rest of the world were immediately united in action. We got further equipment and teams of practitioners with special skills who helped Romanian specialists when they were in the most need. Last but not least, we sent critically patients to hospitals in EU countries that were less affected by the crisis at the time.
Today, the National Outbreak Response Framework is the strategic planning document that is available to the members of the National Emergency Committee. It lays out how prevention and response measures will be put into place.

Keynote Speakers

Fumihiko Inagaki

Vice- Director General, (NPO) Hometown Return Support Center

Practitioner's Challenge to Overcome Disasters and Continue to Create Livable Communities
-Creating an open community through interaction with the outside and supporting human resource development

The primary purpose of my invited talk is to share my implementation-oriented experience and thoughts with the IDRiM members. The key message is that our goal is to continue to create livable communities in our effort to revive from the disasters.
I begin my talk with my long experience in the reconstruction support for rural communities with depopulation and aging. With the help from other collaborators, I established an intermediary support organization, and worked with disaster-stricken communities in recovery and reconstruction from disaster but also from rural decline.
From 2011, my focus has moved more to community development based on "lessons learned from disaster recovery." We came up with the proposal to the Japanese Government to collaborate together to set up a strategic human resource development program to recruit young motivated people who are willing to work and experience in designated municipalities across Japan. The program is named the "Regional Revitalization Cooperation Volunteers" system.
I will then move to the latest challenge we are now taking on: The effort is to strategically promote migration to less populated regions of Japan. This will eventually help enhance the coping capacity of local communities to fight with disasters as well as to become more lively areas.
In my talk, I will also explain my research experiences to study with academic people, such as conducting social surveys, development of usable indicators for community diagnosis, etc.
I conclude my talk by stating that all the efforts are intended to make disaster-resilient communities which eventually aim for sustainable future.

Opening

Program

DAY 1 - 21 September

14:00 — Opening Ceremony

Speakers

Prof. Daniel David , Rector of Babes-Bolyai University

Prof. Ana Maria Cruz , President of IDRiM

Prof. Alexandru Ozunu , Director of ISUMADECIP

14:30 — Keynote Speech 1

"Dealing with pandemics - Romania Outbreak Response Framework in COVID-19 context"

Dr. Raed Arafat , Secretary of State, Head of the Department for Emergency Situations, Ministry of Internal Affairs, Romania

Break

15:10

Topic Session 1 Chiar: Abiodun Ogundeji	Topic Session 2 Chair: Miranda Dandoulaki	Special Session 1 Chair: Constantin Lonescu	Special Session 2 Mahua Mukherjee	Special Session 3 Chair: Agoston Restas Co-chair: Pekka Tiaine
Climate change adaptation	Reducing social, economic and encironmental vulnerabilities	Disaster Mitigation and Eartyh Observations: The European Plate Observation Sytem (EPOS) perspective	Resilience and risk management daialogue among stakeholders for science-informed resilience planning in the Himalayam mountains	Prevention of forest and urban fire disasters
Akhil Charak A review of various climate change exacerbated natural hazards in India and consequential socioeconomic vulnerabilities. ks: A case study in Osaka Bay, Japan	*Dimiter Velev* A vulnerability analysis of business to climate-related hazards	*Petya Trifonova* Earth observation capacity of the National Geoinformation Center of Bulgaria as part of the tools for geo- and anthropogenic-hazard management in EPOS	1. *Mahua Mukherjee* 2. *Yunus Ali Pulpadan* 3. *Andrew Collins* 4. *Aditi Mukherji* 5. *Roopam Shukla*: Vulnerability assessment for mountain socio-ecological systems 6. *Shivani Chouhan*: Multi-hazard risk assessment framework in the Himalayan region 7. *Tahmina Yasmin*: Inclusiveness in designing early warning system for flood resilience 8. *Ashrika Sharma:* Exploring the Scope of Public Participation within Nepal's Disaster Governance	*Pekka Tiainen* State of the art in forest fire preparedness and response at European level. Challenges and differences.
Simona Andrei ACCuReSy Project - a new insight on aerosol-cloud interactions within convective environment	*Bijay Anand Misra* Does the International DRR research and practice fulfil global demands and necessities?: A critique, lessons and challenges of climate change, global pandemic and the heightened conflict environment.	*Dragos Tataru* Facilitating disaster management support through the integrated use of research data, products, and services		*Viktória Finta* Firefighters' Safety in Radiological Emergency
Mark Ashley Parry British Cognizance of Climate Change	*Subhakanta Mohapatra* Resilience to Cyclone Vulnerability in Coastal Odisha: Issues and Challenges for Sustainable Development	*Bogdan Grecu* PREVENT platform - towards integrated building monitoring for seismic risk mitigation		*Agoston Restas* Advantages of tactical drone application during wildfire management
Hirokazu Tatano Designing Climate Change Adaptation Strategies in Coastal Cities at Storm Surge Ris	*Richard Kotter* Beyond technical challenges: field-based water filtration humanitarian interventions in South East Asia	*Craiu Andreea Ani Gabriela* EPOS-RO - a multidisciplinary National Research Infrastructure		*Gergõ Érces* Fire protection of smart cities in terms of urban planning
	Bruno Oliveira Urban Resilience Index: Case study of six global cities within the RECREATE project	*Anca Isac* Severe Geomagnetic Storm-a new Natural Hazard of the Technological Era		*Mark Kovacs* Environmental Aspects of the Active Fire Protection System's Installation and Maintenance for Sustainable Development
	Maki Koyama Community Disaster Prevention Planning System and Its Utilization in Japan	*Magdalena Naparus Aljancic*: Advances in research at EPOS Slovenia: the establishment of the new SLO KARST NFO site		*László Bodnár* New challenge of wildfires in Hungary - Fires at Wildland - urban Interface

Program

17:10	**Break**				
17:20	**Topic Session 3 Chiar: Muneta Yokokmatsu**	**Topic Session 4 Chair: Alexandru Ozunu**	**Stopic Session 5 Chair: Zoltan Torok**	**Special Session 4 Chiar: Ana Maria Cruz**	**Special Session 5 Chair: Funda Atun**
	Economic impacts of disasters and agriculture and food security	Managing cascading disasters during pandemics(COVID-19) / Slow-onset catastrophes	Understanding hazards and risks for a better risk management	How do the interlinkages between technolgy, knowledge, and perception relate to Natech disasters and vice-versa?	Considering the resilience of disadvantaged o\group to disasters
	Yasuhide Okuyama Models for Impact Analysis of Disasters: Recent Advancements and Future Opportunities	*Ryosuke Aota* Consideration on Japan's COVID-19 Countermeasures	*Andrei Radovici* National analysis of territorial compatibility in the vicinity of hazmats transport routes	1. *Xiaolong Luo* : A General Framework on Assessing the Natech Risk Under a Changing Climate 2. *Nicola Paltrinieri* : The synergy of vegetation and meteorological conditions affecting the Norwegian power grid: an example of Natech risk influencing factor 3. *Elisabeth Kraussmann* : The intricacies of Natech risk: Underlying risk factors 4. *Elena Petrova* : Accidents with oil spills triggered by natural hazards 5. *George Karagiannakis* : Natech risk drivers at process plants: a literature review Panel discussion: 1. *Ana Maria Cruz* 2. *Fatma Lestari* 3. *Nicola Paltrinieri* 4. *Kalliopi Sapountzaki* Facilitator: *Miranda Dandoulaki*	*Irene Petraroli* Japan's Community Disaster Preparedness: Good practices and gaps
	Yohei Chiba Increasing Resilience of Japanese Companies to Address Multi-Hazards	*Hiroaki Daimon* Trust is the Secret Ingredient: A Comparative Analysis of the Differences in How Small Organizations Adapted to the COVID-19 Pandemic in Japan and the United States of America	*Areti Plessa* Rising awareness for low probability - high consequences hazards: The case of tsunamis in Greece		*Funda Atun* Are migrants (in)visible victims of disasters? A study with Turkish migrants in Italy
	Dacinia Crina Petrescu Environmental Cues In Consumers' Food Quality Evaluation	*Andries Jordaan* Review of the disaster management institutional arrangements and coordination modalities for the COVID-19 response at national, provincial and local levels: March to December 2020	*Kei Hiroi* ICT System Risk Analysis of IoT based Monitoring		*Ashley Allen* Using memory work to develop an inclusive framework for disaster resilience
	Ildiko Tulbure Provoking Humanity Approach of Moving to Space	*Andries Jordaan* Review of the functionality and efficiency of disaster management institutional arrangements and coordination modalities for the COVID-19 response at national, provincial and local levels in South Africa: March to December 2020	*Lee Miles*: The Role and Timing of Meta-Leadership' An Analysis of November 2021 Wellington Fuel Tanker Incident in Sierra Leone		*Marina Hamidzada* Exploratory Study Regarding Risk Governance of Chemical and Natech Hazards in Turkey
	Philippe Burny The Use Of Digital Tools Can Reduce The Environmental And Economic Risks In Agriculture: The Case Of Wallonia	*Alice Ncube* Towards sustainable resilience: The gendered Covid-19 impact on African migrants' livelihoods in South Africa			*Andre Samberg* A Framework for Assessing Complex Disruptions and Mixed Challenges for the Global Supply Chains During Post-Covid-19 and the War in Ukraine 2022
	Muneta Yokomatsu A Growth Model of Natural Hazard and Distribution: Focusing on Liquidity and Human Capital Investment				

Program

19:20	**Break**				
19:30	**Topic Session 6** **Chiar: Gavrilescu Maria**	**Special Session 6** **Chair: Rob Testelmans**	**Special Session 7** **Chair: Stefan Hochrainer**		
	Disaster risk governance (with a special focus on Central and South-Eastern Europe)	Macro-regional approach for disaster management in the Danube River Region	New advances in Multi-Hazard and Multi-^Risk Analysis and Management		
	Joanne Bayer Governance for wicked disaster policy issues	*Zsolt Keleme*n Volunteering in disaster management - insights into macro-regional approaches from the Danube River and Baltic Sea Region	*Stefan Hochrainer-Stigler* Challenges of Instruments that should tackle Multi-Hazard and Multi-Risk Situations: An Assessment of the Recent Reforms of the European Solidarity Fund		
	Eric Barbay Collective intelligence experience in crisis management	*Taina Hanhikoski*	*Robert Sakic Trogrlic* From single to multi- and systemic risk assessment a management: six steps MYRIAD-EU framework		
	Dogeanu Marius How to face the unthinkable? A case study of resilience from the perspective of civil protection in Romania		*Julius Schlumberger* Towards a Disaster Risk Management pathways framework for complex and dynamic multi-risk		
	Dragos Tataru Romanian contribution to enhancing disaster management through an interdisciplinary multi-hazard European Partnership		*Roxana Ciurean* Building consensus on multi-hazard, multi-risk terminology and concepts: initial findings from the MYRIAD-EU project		
			Alessia Matanó The dynamics of risk during drought to flood events		
21:30	**Break**				
21:40	**Keynote Speech 2** "Prioritization of disaster risk management investments: connecting to broadr policy goals" *Dr. Stephane Hallegatte,* Lead Economist of the World Bank Climate Change Group				
22:10	**Break**				
22:20	Break	**Special Session 8** **Chair: Norio Okada**			
23:00	**Topic Session 7** **Chair: Manas Chatterji**	Implementation Gaps Are Persistent Phenomena In Disaster Risk Management: Can They Guide the Develo			
	Economic impacts of disas	*Norio Okada* *Robert Goble* *Guoyi Han*			
	Adam Rose Behavioral Economic Consequences of Disasters: A Basis for Inclusion in Benefit-Cost Analysis	*Ana Maria Cruz* *Miranda Dandoulaki* *Ilan Chabay* *Yoshiyuki Yama*			

	Juan Machado The Impact of COVID-19 Fiscal Stimulus on the U.S. Economic Recovery				
	Mahmood Hosseini The Role of Business Syndicates in Capacity Building for Earthquake Disaster Management				
	Huan Liu Estimating production capacity loss rate in industrial sectors after disasters: A case study of 2016 Kumamoto Earthquakes				
	Philippe Burny The war between Russia and Ukraine hardly impacts the world agricultural markets				
	DAY 2 : 22 September				
15:00	**Topic Session 8 - Part 1** **Chair: Monik Meltzer**	**Special Session 9** **Chair: Hitomu Kotani**	**Special Session 10** **Chair: Mika Shimizu**		
16:00	Risk communication and risk perception studies	Minority communities in DRR	A Resilience Approach for Systemic Challenges in SDGs: Addressing Missing Links in Natural-Human-Social Systems and Macro-Misro Levels	**Special Session 11** **Chair: Subhajyoti Samaddar**	
	Sarra Kasri How do governance models influence risk prevention? The case of Saint Martin (Sint Marteen) Island	*Mari Tamura* Mosque as a COVID-19 vaccination site for ethnic minorities: A Case Study in Kanagawa, Japan	1. *Mika Shimizu*	Community Participation in DRR worldwide: Emic and Etic Perspectives	
	Irene Petraroli TBD	*Hitomu Kotani* Potential of mosques to serve as evacuation shelters for foreign Muslims during disasters: A case study in Gunma, Japan	2. *Ilan Chabay*	1. *Kaori Kitagawa* Widening community participation in preparing for climate-related disasters	
	Adrian Aguilar Exploring Albayanos Narratives: A Sociocultural Study on Disaster Risk Communication	*Yusuke Katsura* Disaster Response of two Mosques in Osaka, Japan	3. *Norio Okada*	2. Yoshiyuki Yama	
	Vicente Sandova Integrated (and Systemic) Disaster Risk Management from an International Perspective: Ideas for Indicators and Progress		4. *Hidenori Nakamura*	3. Subhajyoti Samaddar	
				4. Bushra Shahriar	

	Katarína Hollá Potential of Using mixed reality in the teaching of Crisis Management Professionals, Rescue Services and Students			5: Uttam Kumar Roy	
	Monika Meltzer Exploring common themes of risk-communication-related messages posted on Facebook: a Romanian case study				
17:00	Break				
17:10	**Young Scientist Session**				
	Group I **Chair: Mark Ashley Parry**	**Group II** **Chair: Muneta Yokomatsu**	**Group III** **Chair: Dimitrios Tzioutzios**	**Group IV** **Chair: Lucrina Stefanescu**	
	Padmanav Pallavi Perception of Fishers' community on Risks of Climate Change and Environmental degradation on coastal Ecosystem services and products: A case study on Mumbai, India	*Yuan Fang* Assessment of Economic Loss Ripple Effect Caused by Disaster Considering Industry Adaptability	*Yasutaka Ozaki* Citizens' Social Participation to Implement SDGs Future Cities of Japan : A Review and Challenges	*Debkalpa Basudas* Creating Awareness on Eco-feminism through Theatre at a Village in Purulia District of West Bengal, India	
	Chanthingla Horam Climate change and risk perception and adaptation decisions in response to climate variability of Himalayan indigenous farmers in Manipur, India.	*Ruiying Ja* Assessing Economic Ripple Effect of Flood Disasters Considering Recovery Process : Insights from An Agent-Based Model Approach	*Satomi Tsukagoshi* A Conceptual Model of Ideological Transition Under the COVID-19 Pandemic	Mahek Kotecha Interlinking Lakes: Decision support tool for sustainable lake ecosystem in Ahmedabad, India	
	Aki Kogachi Understanding the linkage between climate security and development challenges in Africa borderland community through the application of Sustainable Livelihood approach	*Yan Liu* Updating survival analysis parameters of enterprise recovery based on Bayesian methods and latest field survey data	*Hiromi Katsui* Disaster risk reduction role of local government of Nepal after federalism was introduced	*D.H.M.K.S. Thalgaskotuwa* Heterogeneity of pre-disaster residential location choices problem: Do survivors need more time or incentives?	
	Josep Pastrana Huguet A case study of mitigation of the effects of climate change in coastal areas: The Strategy for the Protection of the Coast in the Balearic Islands	*Xinge Wang* Assessment of ripple effect based on SCGE model considering transportation network disruption--A case study on flood disaster in Hubei Province	*Brazao Mendes Mario Domingos* Making Community-based Early Warning System Work: A Case Study of CBEWS for Flood Management along Licungo River Basin, in Mozambique.	*Nombulelo Kitsepile Ngulube* Citizen Engagement in Post-Disaster Recovery and Reconstruction. Lessons from Kamaishi: Unosumai, 11 years after the Great East Japan Earthquake. A community perspective	

	Ionut-Alexandru Spanu A Comparative View of Agri-Environmental Indicators and Stakeholders' Assessment of Their Quality	*Xiaotong Wang* Study on economic loss and recovery of flood disaster considering government subsidy policy -- Insights from an agent-based model	*Ramona Leordean* Risk communication and risk perception studies and strategies	Victor Pérez-Segura Analysis and Construction of Social Vulnerability Indexes for the 5 Most Severe Natural Disasters in Spain in 2021.	
	Deepak Rawat Landslide Early Warning System for North-West	*Siriporn Darnkachatarn* Long-term Changes in Flood Risks in the Industrial Sector in the Bangkok Metropolitan Areas, Thailand	*Valeria Pop-Bob* The role of the media in shaping people's risk perception of microplastics	*Shono Fujita* Collapsed Building Detection Using Multiple Object Tracking from Aerial Videos and Analysis of Effective Filming Techniques of Drones	
	Alexandru Mereuta Earth observations as support tools for disaster response	*Koki Eguchi* Estimation of Road Restoration Function Based on Road Regulation Data:A Case Study of Torrential Rain in Japan in 2018	*Lina Parra* Landslide-Triggered Natech on Oil and Gas Transmission Pipelines in Colombia: Identification and Analysis of Past Events	*Trevor Girard Girard* Entry points for operationalizing pathways toward integrated disaster risk management	
	Irankunda Elisephane AERMOD and ISCST3 Air Dispersion Model: Comparison between Modelling Results and In-Situ Monitoring Data for PM10 Pollutant: Study Case, Closed Moldova Nouã Tailing Pond, Romania	*Xinyi Lei* Assessment of economic impact of Hubei province under the dual background of flood and COVID-19:an integration of econometrics survey and Mixed-MRIO modeling	*Namulun Borjigin* Managers' motivation in protecting supply chain disruptions from flood-related Natech accidents: the case of the chemical industry in Colombia	*Chrioni Tshiswaka Tshilumba* Unlocking Urban Resilience Finance in Fragile And Conflicts - Affected Countries: "Understanding Compound Risk Context Of Goma City By Extending Pressure And Release Model	
	Alberto Fresolone A model-based policy exercise to examine climate migration policy in Europe	*Chen Han* Research on the impact of the Covid-19 on investor confidence	*Sirri Akongnwi Neba Nforsoh* High impact-low probability, black swan events and Natech (technological accidents triggered by natural hazards) risk assessments in the process industries (case study: a refinery in Romania).	*Mai Zhang* A Study of Mutual Assistance System among Local Governments to Cope with large-scale Disasters in Japan	
	Satoki Masuda Evacuation choice modeling using reinforcement learning based on the multi-armed bandit problem	*Ariyaningsih Ariyaningsih* How Urban Environmental Quality Contributes to Covid-19 Spread	*Deepti Kumari Dwivedi* Dhauliganga, Uttarakhand, India Coalescent Natural Disaster: A Geo-informatics Perspective	*Collins Muhame* Integrating disaster risk reduction within areas beyond the urban edge and the peri-urban area. Khayalitsha in-situ informal settlement upgrading case study; South Africa.	
	Haris Rahadianto Formulating Evacuation Plans under the Cascading Impacts of Volcanic Ash Hazards in Large Eruptions	*Ariyaningsih Ariyaningsih* Integrating Local Adaptation to City Planning System : Case Study on Flooding and Covid-19 Spread	*Yiwen Pan* Risk Management or Emergency Management, how to make the decision in Natech scenario: Lessons learned from the Baijiu spill caused by the Luxian Earthquake	*Tlou Raphela* Evaluating the resilience of hospitals during COVID-19 pandemic	
	Jeffrey De Vries Assessing Potential Disruptions From Earthquakes In The Historical Peninsula In Istanbul Using 3d Modelling	*Cristina Savu* Job performance through work engagement of healthcare professionals under COVID-19 pandemic conditions. Case study: Romania	*Su Song* Developing a methodology to determine oil pipeline failure probability due to debris flow impact	*Guribosutan Kinugawa* Statistical comparison of extreme natural disaster events in various countries	

Program

18:50	**Break**		
19:00	**Young Scientist Interactive Session**		**Poster Session** **Chair: Subhajyoti Samaddar**
	Group I		*Akiyoshi Takagi* Analysis of evacuation behavior using eXplainable AI (XAI)
	Group II		*Maiku Abe* Trial of information visualization methods for disaster recovery policy-making of livestock diseases
	Group III		*Rose Noggle* Developing a Spatial Decision Support Tool for Planning Tsunami Evacuation Shelter Locations
	Group IV		*Tai-Young Yi* Method of developing human resources to support disaster prevention activities in local communities
			Tatsuya Sugimoto Long-term changes in the spatial distribution of economic activity due to increased flood risk
			Yasamin O. Izadkhah Exploring the Cultural Barriers Facing Women in Disasters
			Yoshinobu Mizui Analysis of Disaster Volunteer Workload Considering Damage Classification in Flood Damage
			Cristina Modoi Assessment of the risks generated by the improper management of the e-waste in Romania
			Yongbin Bao The pine caterpillars (Dendrolimus spp.), a forest pest susceptibility assessment and analysis for Shandong Province, China: a multivariate model
			Kerekes Zsuzsanna The effect of textiles as a fire nest on building fires in high-rise buildings.
20:00	**Break**		
20:10	**Keynote Speaker 3** "Practitioner's Challenge to Overcome Disasters and Countinue to Creative Livable Communities - Creating an Open Community through Interaction with the outside and Supporting Human Resource Development" *Dr. Fumihiko Inagak*i, Vice Secretary of Nonprofit Organization “Hito-Frusato Kaiki” Support Center (U-turn Career Development Support Center)		
20:40	**Break**		
21:00	**IDRiM General Assembly**		
22:00	**Keynote Speaker 4** " Role of Scientists in Addressing Resilience and Efficiency in Post-COVID Societies" *Dr. Igor Linkov*, Senior Science and Technology Manager with the US Army Engineer Research and Development Center (ERDC)		

	Madhumita Chatterji Curriculum Development and Delivery Design with reference to Covid 19 and Management Education	*Norio Okada*		
	Bijayanand Misra The Importance of Risk Governance and Resilience: Building In DRR With Special Reference To Covid 19 And Management Education	*Masafumi Onishi*		
	Manas Chatterji Disaster Management and Developing Countries & COVID-19	*Ching-Yuen*		
		Shinji Kajitani		
	DAY 3 - 23 September			
9:00	**Topic Session 8 - Part II Chair: Katsuya Yamori**	**Topic Session 9 Chair: Hirokazu Tatano**	**Special Session 14 Chair: Xinyu Jangl Qian Ye**	
	Yoko Saito A comparative study on cooperation system between the government and volunteer organizations in times of disaster in Italy and Japan	*Yongsheng Yang* Agent-based modeling for societal impact estimation and countermeasure analysis due to infrastructure disruptions	*Xinyu Jang* Spatial and Temporal Correlation in Disaster Risk Assessment:Challenges between Geographic and Economic perspectives	
	Dimitrios Tzioutzios Developing and Evaluating a Serious Game for Risk Awareness and Information Disclosure about Natech Risks	Lalith Maddegedara Seamless high resolution simulation of earthquake disasters and national economy	*Lijiao Yang* A spatial computable general equilibrium model for the ripple effect of economic loss assessment of Hubei province in the early stage of COVID-19	
	Hideyuki Shiroshita What language do experts employ to facilitate community members' disasters preparedness?	Michinori Hatayama Road Recovery Priority Assessment in Huge Disaster	*Zhengtao Zhang* Cumulative effect of global cross-boundary economic ripple loss of catastrophe cluster"	
	Yamori Katsuya Integrating research on mitigation/preparedness and recovery/reconstruction from a narrative-theory perspective	Kohin Hirano Interactive WebGIS Tool for Immediate Estimation of Flood Inundation	*Weijiang Li* Assessing disaster propagation and induced losses in industrial network: a fine-scale perspective	
	Ryohei Miyamae Photograph of "lacuna:" the case of remembering and seeing unphotographed things in a tsunami-damaged photo		*Si Ha* Coastal Flood Risk Assessment in Osaka Bay under SSP-RCP Scenarios	
			Jnglu Song Geo-physical, socio-cultural, politico-institutional, and techno-economic context affect communities' resilience competency to disasters	
			Ying Guo Joint Analysis of Drought and Heat Events During Maize (Zea mays L.) Growth Periods Using Copula and Cloud Models: A Case Study of Songliao Pl	

Program

11:00	**Break**			
	Topic Session 8 - Part III **Chair: Yoko Matsuda**	**Topi Session 10** **Chair: Hideyuki Shiroshita**	**Topic Session 11** **Chair: James Goltz**	**Special Session 15** **Chair: Hamilton Bean**
	Carlos Rodrigo Garibay Rubio Could we use nontraditional indicators like information seeking strategies on the web, announcements of changes in public policies, trends in mobility or statistics of the pandemic to estimate future pressures on mental health systems under disaster situations? Mexico City study case (Covid - 19)	*Mohammad Moinuddin* COVID Crisis and the Higher Educational Institution Response to the Internationalization and Students' Mobility	*Arunabh Mitra* A systemic risk view of disaster risk management	1. Ana Maria Cruz 2. Dimitrios Tzioutzios 3. Robert Goble 4. Norio Okada 5. Mika Shimizu 6. Ilan Chabay
	Shoko Miyagawa Pitfalls in Building a Disaster Relief Information System: An Example of Business Analysis of Private Sector Assistance	*Kensuke Takenouchi* Long-Term Verification of Disaster Prevention Education: Based on the Case of Nakajima Elementary School in Ise City	*Masamitsu Onishi* Designing the Collaborative Process between Residents and Experts for Risk Governance: A Case Study on the Construction of a Wide-Area Evacuation System for the Sakurajima Large-Scale Eruption	**Topic**: When should researchers seeking to affect change consider shifting from a strategy of engagement to a strategy of activism using vigorous public campaigning or other forms of advocacy?
	Kiyomine Terumoto Factors in tourism workers' perceptions of tourists' evacuation assistance	*Genta Nakano* Cultural tuning of a disaster education tool: values, norms and procedures	*Shakti P.C.* An assessment of quick flood inundation mapping product for better disaster management	
	Ryohei Nakatsu The Effect of Art Content on Mental State Improvement: Insights for Disaster Situations	*Hideyuki Shiroshita* Why did disaster education commence around 2000?	*Takashi Sugiyama* Development of an Analysis Tool for Pre-evacuation Using Special Early Warning Information for Nankai Trough Earthquake	
	Yoko Matsuda Lessons learned in voluntary water level measurement: following the metaphor of anthropometry	*Muhammed Sulfikar* Formulating risk informed school evaluation tool: A case study of Gandhinagar, India	*Nobuhito Ohtsu* Pre-evacuation Times and Evacuation Behaviors of Vulnerable People during the Flood-triggered Factory Explosion as a Natech	
			James D. Goltz Operational Earthquake Forecasting and Planning for Response to “Special Early Warning Information” in the Nankai Region of Japan	
13:10	**Break**			
13:20	**Closing Ceremony**			
	IDRiM Award Ceremony			
	YSS Award Ceremony			

Scientific Committee

Adam Rose, University of Southern California, USA
Adriana Keating, IIASA, Austria
Ágoston RESTÁS, National University of Public Service, Budapest, Hungary
Alexandru Ozunu, Babes-Bolyai University, Cluj-Napoca, Romania
Ana Maria Cruz, DPRI, Kyoto University, Japan
Andrew Collins, Northumbria University, UK
Aniello Amendola, IIASA, Austria
Bijay Anand Misra, School of Planning & Architecture, New Delhi, India
David Alexander, UCL, UK
Elisabeth Krausmann, EC-JRC, Italy
Emmanuel Garnier, University of Besançon, France
Funda Atun-Girgin, Univesity of Twente, Enschede, Nethlerlands
Guoyi Han, Stockholm Environment Institute, Sweden
Hamilton Bean, University of Colorado Denver, USA
Hirokazu Tatanok, DPRI, Kyoto University, Japan
Ilan Chabay, IASS, Germany
Ilan Noy, Victoria University of We4Ilington, New Zealand
Irasema Alcantara Ayala, National Autonomous University of Mexico, Mexico
James Goltz, University of Colorado, USA
Junko Mochizuki, IIASA, Austria / Worldbank
Kaori Kitagawa, Institute of Education, UCL, UK
Katsuya Yamori, DPRI, Kyoto University
Manas Chatterji, State University of New York, Binghamton, USA
Maria GAVRILESCU, Gheorghe Asachi University, Lasi, Romania
Miranda Dandoulaki, Region of Attica, Greece
Mohsen Ashtiany, IIEES, Iran
Myriam Merad, CNRS, France
Nicolae Ajtai, Babes-Bolyai University, Cluj-Napoca, Romania
Norio Okada, Emeritus Professor, Kyoto University, Japan
Ortwin Renn, IASS, Germany
Peijun Shi, Beijing Normal University, China
Rajib Shaw, Keio University, Japan
Stefan Hochrainer, IIASA, Austria
Toshio Fujimi, DPRI, Kyoto Univesity
Vincent Lemiale, CSIRO, Australia
Yoko Matsuda, Nagaoka University of Technology, Japan
Yoshiyuki Yama, Kwansei Gakuin university, Japan
Zoltan Torok, Babes-Bolyai University, Cluj-Napoca, Romania

Organizing Committee

Adam Rose, University of Southern California, USA
Alexandru Ozunu, Babes-Bolyai University, Cluj-Napoca, Romania
Ana Maria Cruz, DPRI, Kyoto University, Japan
Andrew Collins, Northumbria University, UK
Elisabeth Krausmann, EC-JRC, Italy
Haris Rahadianto. Kyoto University, Japan
Hitomu Kotani, Kyoto University, Japan
Hirokazu Tatanok, DPRI, Kyoto University, Japan
Mark Ashley Parry, Northumbria University, UK
Muneta Yokomatsu, IIASA, Austira
Mohsen Ashtiany, IIEES, Iran
Norio Okada, Emeritus Professor, Kyoto University, Japan
Subhajyoti Samaddar, DPRIU, Kyoto University, Japan
Zoltan Torok, Babes-Bolyai University, Cluj-Napoca, Romania

During the Session

IDRiM2022 Summary

Participants
225

States/ Regions
31

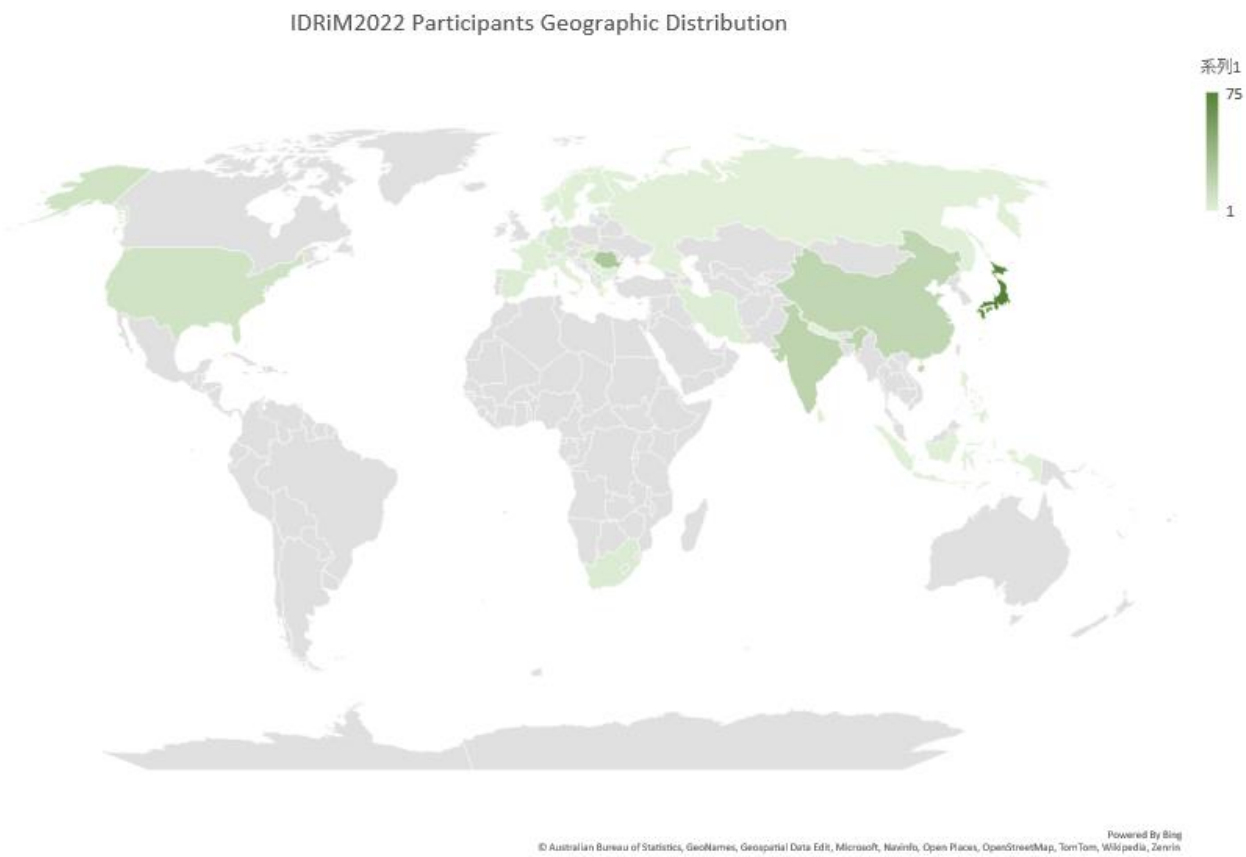
Topic/Special Session
122
Presentations In total

Topic Session
11

Special Session
15

YSS Session
47
Presentations

Geographic Distribution of Participants



IDRiM Award / YSS Award

IDRiM Award	Research Award	Igor Linkov, US Army Engineer Research on Development Center, USA
	Implementation Science Award	Rajib Shaw, Keio University, Japan
	Service Award	Xinyu Jiang, Wuhan University of Techonology, China Hitomu Kotani, Kyoto Univesity, Japan Hamilton Bean, University of Colorado, Boulder, USA
YSS Award	Gold Prize	Alberto Fresolone, IIASA, Austria
	Silver Prize	Jeffrey de Vries, University of Twente, Netherlands
	Bronze Prize	Nombulelo Ngulube, DPRI, Kyoto University, Japan

Closing Ceremony