

Natural Hazards and Climate Change Szeged, 23-24. March 2023 Conference Program



18:00-20:00 Registration and Ice Breaking

Thursday, 23 rd March			
8:30-10:00	Registration		
10:00-10:20	Opening Ceremony Main Lecture Hall (Földtudományi Nagyelőadó)		
10:20-11:20	Plenary Session 1 Main Lecture Hall (Földtudományi Nagyelőadó)		
	Session 1	Session 2	
11:30-13:10	Hydrological Hazards	Vegetation and Landscape Change	
	Main Lecture Hall Jakucs László Lecture Room		
13:10-14:20	Lunch – Campus Beer and More		
	Session 3	Session 4	
14:20-16:00	Geophysical and Geomorphological	The social perspective	
14.20-16.00	Hazards	Jakucs László Lecture Room	
	Main Lecture Hall		
16:00-17:20	Poster session + Coffee Break – Department Meeting Room and Corridor		
17:20-17:40	Book Presentation – Jakucs László Lecture Room		
	Session 5	Session 6	
17:40-19:00	Human Health	Environmental Hazards	
	Jakucs László Lecture Room	Miháltz István Lecture Room	
20:00-	Conference Dinner – Campus Beer and More		

Friday 24th March			
8:30-9:00	Registration		
9:00-10:00	Plenary Session 2 – Main Lecture Hall (Földtudományi Nagyelőadó)		
10:00-11:40	Session 7 Hydrological Hazards Main Lecture Hall Session 8 Climate change and Meteorological Hazards Jakucs László Lecture Room		
11:40-12:00	Coffee Break – Department Meeting Room		
12:00-13:10	Panel Discussion – Main Lecture Hall (Földtudományi Nagyelőadó)		
13:10-14:30	Lunch – Campus Beer and More		
14:30-1630	EUGLOHRIA Meeting and Workshop Jakucs László Lecture Room	Hydrological Hazards Workshop Department Meeting Room	

Detailed Program

Wednesday 2	2th March		
18:00-20:00	Registration and Ice Breaking		
Thursday, 23 ^r	^d March		
8:30-10:00	Registration		
10:00-10:20	Opening Ceremony		
10:20-11:20	Plenary Session 1		
10:20-10:50	Climate Futures - New (compound) extremes and challenges for water management	Ralf Ludwig, Andrea Böhnisch, Magdalena Mittermeier, Alexander Sasse, Raul Wood	Ludwig-Maximilans- Universitaet Muenchen, Germany
10:50-11:20	Children's disaster preparedness: Insights from Turkey's recent earthquake and other case studies	Ayse Yildiz	University of Leicester, UK
11:30-13:10	Hydrological Hazards 1. (Chair: Mihai Niculita)	1	
11:30-11:50	Flood Exposure - Towards Flood Risk Assessment and Management Plans (Case Study Serbia)	Jelena Kovačević-Majkić, Ana M. Petrović	Serbian Academy of Sciences and Arts, Serbia
11:50-12:10	Gully erosion susceptibility mapping using machine learning algorithm	Fatemeh Nooshin Nokhandan, Erzsébet Horváth	Eötvös Loránd University, Hungary
12:10-12:30	ArcGIS Based Multi – DEM Urban Flood Resilience Assessment: A Case Study of Gyor City	Ibrar Ullah, Gábor Kovács, Tibor Lenner	Eötvös Loránd University, Hungary
12:30-12:50	Advances in satellite based inland excess water monitoring	Boudewijn van Leeuwen, Balázs Kajári, Zalán Tobak	University of Szeged, Hungary
12:50-13:10	Ground-based and Remote sensing monitoring of water resources and infrastructures	Sagynbek Zh. Orunbaev Baktyiar D. Asanov	American University of Central Asia, Kyrgyzstan
11:30-13:10	Vegetation and Landscape Change (Chair: Péter	Szilassi)	
11:30-11:50	Wildfire Occurrence and Risk Factors in	Péter Debreceni ¹ , Balázs	¹ National Food Chain Safety
	Hungary: A Spatial Analysis of Fire Records from 2011 to 2022	Duray ²	Office, Hungary ² University of Szeged, Hungary
11:50-12:10	Pine plantation verges are important for small and poor disperser Orthotptera species in a fragmented landscape	Botond Magyar ¹ , Róbert Gallé ² , Attila Torma ^{1,2}	¹ University of Szeged, Hungary ² Centre for Ecological Research, Hungary
12:10-12:30	Stand scale palynology helps to reveal the role of forest exploitation and climate change in the current distribution of Fagus sylvatica in the NE Pannonian Basin (Hungary)	Abigail A. Ofosu-Brakoh ¹ , Réka Csorba ¹ , Ákos Bede-Fazekas ^{1,2} , Tibor Standovár ³ , Zsuzsanna Pató ³ ,Enikő K. Magyari ^{1,2}	¹ Eötvös Loránd University, Hungary ² Centre for Ecological Research, Hungary
12:30-12:50	Potential future microrefugia in changing	Zoltán Bátori, Kata Frei,	University of Szeged,
12:50-13:10	landscapes	Gábor Li, Csaba Tölgyesi	Hungary
12.50-13:10	Investigating the usability of databases with different spatial characteristics for the occurrence of invasive plant species: a Hungarian scale analysis	Georgina V. Visztra ¹ , Kata Frei ¹ , Alida A. Hábenczyus ¹ , Anna Soóky ¹ , Zoltán Bátori ¹ , Annamária Laborczi ² , Nándor Csikós ² , Gábor Szatmári ² , Péter Szilassi ¹	¹ University of Szeged, Hungary ² Centre for Agricultural Research, Hungary
13:10-14:20	Lunch		
13.10-14.20	Luncii		

14:20-16:00	Geophysical and Geomorphological Hazards (Ch	nair: Tin Lukic)	
14:20-14:40	EGMS full resolution processing for slow moving landslides monitoring	Niculiță Mihai, Necula Nicușor	Alexandru Ioan Cuza University of Iasi, Romania
14:40-15:00	Analysis of Tsunami Wave Potential from Gela Nappe Fault Displacement in Southern Sicily, Italy based on Earthquake Focal Mechanism Since 1970	FX Anjar Tri Laksono ¹ , Laura Borzi ² , Salvatore Distefano ² , Salvatore Urso ²	1University of Pécs, Hungary 2University of Catania, Italy
15:00-15:20	Seismotectonic hazard map of Hungary - the result of collaboration between geomorphologists, geophisicists and arcitects	Kovács Gábor ^{1,2} , Koroknai Balázs ¹ , Győri Erzsébet ³ , Németh Viktor ¹ , Balázs László ^{1,2} , Czecze Barbara ³ , Bondár István ³ , Wórum Géza ¹ , Szabó Gergely ² , Orsolya Kegyes-Brassai ⁴ , Tóth Tamás ¹	¹ Geomega Ltd, Hungary ² Eötvös Loránd University, Szombathely, Magyarország ³ Institute of Geophysics and Earth Sciences, Hungary ⁴ University of Győr, Hungary
15:20-15:40	Satellite radar observations in monitoring hazards and for sustainable development	Gyula Grenercy, Péter Farkas, Sándor Frey	Geo-Sentinel Ltd. , Hungary
15:40-16:00	Snow avalanche synchronicity detected by a multi-path tree-ring based approach in the Făgăraș Mountains, Southern Carpathians	Patrick Chiroiu, Alexandru Onaca, Florina Ardelean, Adrian C. Ardelean, Oana Berzescu, Petru Urdea	West University of Timişoara, Romania

14:20-16:00	The social perspectives (Chair: Petru Urdea)		
14:20-14:40	Green transition and climate change in the EU - aspects for a more sustainable and healthy future	Gyula Nagy	University of Szeged, Hungary
14:40-15:00	Formal Education on Natural Disasters	Marko V. Milošević, Jelena Ćalić, Milena Panić	Serbian Academy of Sciences and Arts, Serbia
15:00-15:20	Analysis of Building Damage Caused by the Effects of Natural Hazards	László Teknős, Gergő Érces	University of Public Service, Hungary
15:20-15:40	Ensuring science is useful, usable and used in disaster risk reduction – recommended actions for natural hazard scientists	Solmaz Mohadjer ¹ , Joel C. Gill ²	¹ Max Planck Institute for Intelligent Systems, Germany ² Cardiff University, UK
15:40-16:00	Assessment of climate-related impacts and risks on the tourism sector	Attila Kovács	University of Szeged, Hungary

16:00-17:20	Poster session + Coffee Break
17:20-17:40	Book Presentation

17:40-19:00	Human Health (Chair: György Sipos)		
17:40-18:00	Future prediction of heat wave periods with	Árpád Fekete	University of Public Service,
	Markov chain analysis		Hungary
18:00-18:20	Heat Health Nexus: A U.S. perspective	Michael Allen	Towson University, USA
18:20-18:40	Human comfort research in the service of climate adaptation	Ágnes Gulyás, Márton Kiss	University of Szeged, Hungary
18:40-19:00	Foucauldian perspecitives on covid and their	Lajos Boros, Tamás Kovalcsik	University of Szeged,
	geographical relevance		Hungary

17:40-19:00	Environmental Hazards (Chair: Alexandru Onaca)		
17:40-18:00	Last glacial atmospheric environment of the Carpathian Basin	György Varga ^{1,2} , Adrienn Csávics ^{1,2} , Ágnes Rostási ^{3,4} , Fruzsina Gresina ^{1,2}	¹ Research Centre for Astronomy and Earth Sciences, Hungary ² Eötvös University, Hungary ³ MTA-PE Air Chemistry Research Group, Hungary ⁴ University of Pannonia, Hungary
18:00-18:20	Spatio-temporal variability of the connection between spatial characteristics of the transportation networks and PM10 air pollution: a European scale analysis	Seyedehmehrmanzar Sohrab ¹ , Nándor Csikos ² , Péter Szilassi ¹ ,	¹ University of Szeged, Hungary ² Centre for Agricultural Research, Hungary
18:20-18:40	It is not only about the climate - Landslide at Stari Slankamen (Serbia) loess palaeosol sequence	Tin Lukić¹, Milica Radaković¹, Milivoj Gavrilov¹, Rastko Marković², Petar Krsmanović¹, Jelena Kolundžija¹, Milan Josić¹, Qingzhen Hao³, Velibor Spalević⁴, Slobodan B. Marković¹	¹ University of Novi Sad Faculty of Sciences, Serbia ² University of Niš, Serbia ³ Chinese Academy of Sciences, China ⁴ University of Montenegro ⁵ Serbian Academy of Sciences and Arts, Serbia
18:40-19:00	Energy production and meteorological extremes	Zsolt Hetesi	University of Public Service, Hungary
20:00-	Conference Dinner		

Friday, 24 rd March				
8:30-09:00	Registration			
9:00-10:00	Plenary Session 2			
9:00-09:30	Modelling the spatio-temporal dynamics of the pandemic	Gergely Röst	University of Szeged, Hungary	
9:30-10:00	Socioeconomic factors behind the inequalities of morbidity and mortality during the COVID-19 pandemic	Beatrix Oroszi	Semmelweis University Epidemiology and Surveillance Center, Hungary	

10:00-11:40	Hydrological Hazards 2. (Chair: Ralf Ludwig)		
10:00-10:20	Mapping of flood prone areas in the lower Timiş Basin	Fabian Timofte, Raluca Văduva, Petru Urdea, Larisa Bordiciuc	West University of Timișoara, Romania
10:20-10:40	Dynamic geomorphometric study of the erosion of the Zagyvarona spoil tip using digital photogrammetry	Máté Dániel Petróczy, Boudewijn van Leeuwen, Zalán Tobak, Dávid Molnár, József Szatmári	University of Szeged, Hungary
10:40-11:00	Digital Twin Application for Monitoring the Impact of Climate Change on the Eutrophication and Biofiltration of the Danube River Waters in the St. George Branch	Eden Mamut, Maria Paraschiv, Manuela Sidoroff, Andreea Presura	Black Sea Universities Network, Romania
11:00-11:20	River management induced increased flood hazard on the Lower Tisza, Hungary	Tímea Kiss¹, István Fehérvári²	¹ University of Szeged, Hungary ² Lower Tisza District Water Directorate, Hungary
11:20-11:40	Are extreme floods on Danube getting more frequent? Case study Bratislava station	Igor Leščešen ¹ , Biljana Basarin ¹ , Dragoslav Pavić ¹ , Minučer Mesaroš ¹ , Manfred Mudelsee ² , Pavla Pekarova ³	¹ University of Novi Sad Faculty of Sciences, Serbia ² Climate Risk Analysis, Germany ³ Slovak Academy of Sciences, Slovakia

10:00-11:40	Climate Change and Meteorological Hazards (Chair: Michael Allen)		
10:00-10:20	lanos: a severe medicane in Greece	Dávid Hérincs, Zsuzsanna Dezső	Eötvös Loránd University, Hungary
10:20-10:40	Potential risks related to heat load, energy demand and water balance based on EURO-CORDEX climate projections in the broader Carpathian region	Nóra Skarbit, János Unger, Tamás Gál	University of Szeged, Hungary
10:40-11:00	Comparison of drought damage risk/intensity and the use of damage prevention tools in the Lower Tisza catchments	Péter Kozák, Balázs Benyhe, István Fehérváry, Károly Fiala, Attila Nagy	Lower Tisza District Water Directorate, Hungary
11:00-11:20	Comparison of the Standardized Precipitation- Evapotranspiration Index values calculated using various evapotranspiration models	Jovana Bezdan ¹ , Atila Bezdan ¹ , Boško Blagojević ¹ , Monika Marković ² , Öner Çetin ³ , Andrea Salvai ¹	¹ University of Novi Sad, Faculty of Agriculture, Serbia ² Josip Juraj Strossmayer University of Osijek, Croatia ³ Dicle University, Turkey
11:20-11:40	Using remote sensing tools to assess the impact of climate change on freshwater scarcity in North Africa.	Moemen Gaigi	Eötvös Loránd University, Hungary

11:40-12:00	Coffee Break		
12:00-13:10	Panel Discussion		
13:10-14:30	Lunch		
14:30-16:30	EUGLOHRIA Meeting and Workshop	Hydrological Hazards Workshop	

Poster Session (Thursday, 23 rd March 16:00-17:20)		
Vegetation Cover Change in an agricultural area in Mongolia: A case study in Shaamar soum, Darkhan-Uul Province	Badam Ariya	University of Szeged, Hungary
Analysis of the spatio-temporal occurrence of five common Eurasian invasive species in different land cover (habitat) types	Márton Bence Balogh, Kata Frei, Alida Anna Hábenczyus, Anna Soóky, Zoltán Bátori, Péter Szilassi	University of Szeged, Hungary
Climate change - a palaeontologist's perspective	László Bujtor	Eszterházy Károly Catholic University, Hungary
A multi-scenario comparison of climate change in European regions based on the IPCC Interactive Atlas	Ferenc Tamás Divinszki, Rita Pongrácz, Anna Kis	Eötvös Loránd University, Hungary
Assessment of ecosystem service in floodplain areas	Johanna Ficsor, György Varga, Gábor Keve	University of Public Service, Hungary
Monitoring the Impacts of Urbanization on Land use Land cover in Ethiopia Using Remote Sensing and GIS Technique	Yohannes Gebregziabhir, Florent Demelezi	Hungarian University of Agriculture and Life Sciences, Hungary
Flash floods and stormwater management on the example of Kecskemét	Edit Hoyk ¹ , Krisztián Szórát ²	¹ John von Neumann University, Hungary ² Bács-Kiskun County Government Office, Hungary
The Influence of the Drava River on the Danube River's Discharge at Bogojevo Gauging Station Based on Extreme Discharge Values from 1931 to 2012	Milan Josić , Natalija Nikolić	University of Novi Sad Faculty of Sciences, Serbia
Application of Sentinel-1 SAR imagery for near real-time flood mapping	Ghahraman Kaveh	Eötvös Loránd University, Hungary
Rainfall Erosivity in the Western Balkans – Towards a Sustainable Soil Erosion Evaluation and Control	Tin Lukić ^{1,2} , Tanja Micić Ponjiger ¹ , Robert L.Wilby ³ , Slobodan B. Marković ¹ , Milivoj B.Gavrilov ¹ , Biljana Basarin ¹ , Velibor Spalević ⁴ , Cezar Morar ⁵	¹ University of Novi Sad, Serbia ² University of Belgrade, Serbia ³ Loughborough University, UK ⁴ University of Montenegro, Montenegro ⁵ University of Oradea, Romania
Adapting to Changing Hydro-Climatic Patterns: Evaluating Future Climate Scenarios for the Problem of Waterlogging in the Pannonian Basin	Minucsér Mészáros	University of Novi Sad Faculty of Sciences, Serbia
The impact of land use and climate change on Syria	Nour Naaouf, Csaba Zsolt Torma, István Elek, Balázs Székely	Eötvös Loránd University, Hungary
Evaluation and prediction of climate change conditions using the Mann-Kendall test and LarsWG model in Gorganrood Basin, Iran	Arman Niknam, Mehrnoosh Tahrizadeh, Gábor Mezősi	University of Szeged, Hungary
On the way to create an age-depth model for the penultimate and ultimate glacial cycles preserved in the Süttő loess-paleosol sequence	Ágnes Novothny ¹ , György Sipos ² , Gábor Újvári ³ , Dávid Filyó ² , Gergely Surányi ⁴ , Tamás Végh ¹ , Diána Csonka ¹ , Tamás Bartyik ² , Gergő Magyar ² , Erzsébet Horváth ¹	¹ Eötvös Loránd University, Hungary ² University of Szeged, Hungary ³ Institute for Geological and Geochemical Research, Hungary ⁴ Wigner Research Centre for Physics, Hungary

Anthropocene rivers - case study in NW Romania	Ioana Persoiu, Aurel Persoiu	"Ştefan cel Mare" University, Romania
		"Emil Racoviță" Institute of
		Speleology, Romania
Comparative evaluation of the material of the	Diaa Sheishah ^{1,2} , György	¹ University of Szeged,
artificial levees: a case study along the Tisza and	Sipos ¹ , Károly Barta ¹ , Enas	Hungary
Maros Rivers, Hungary	Abdelsamei ^{1,2} Alexandru	² National Research Institute
	Hegyi ³ , Alexandru Onaca ³ ,	of Astronomy and Geophysics,
	Abbas M. Abbas ²	Egypt
		³ West University of Timisoara,
		Romania
Investigation of the spatial changes in overbank	Péter Tóth	Middle Tisza District Water
floodplains on the pilot reach of the Middle-Tisza		Directorate; University of
		Public Service, Hungary
Suburbanization within City Limits - Hidden land	Gábor Vasárus	Centre for Economic and
use changes	József Lennert	Regional Studies, Institute for
		Regional Studies, Hungary
The effects of an extreme water scarcity period	Dávid Béla Vizi	Middle Tisza District Water
on the water supply of the Middle Tisza region		Directorate; University of
		Public Service, Hungary
Nature-based solutions for improving drainage	Milica Vranešević, Atila	University of Novi Sad Faculty
systems in Vojvodina, Serbia	Bezdan	of Agriculture, Serbia