



THE 12th CMDR COE ANNUAL CONFERENCE ON CRISIS MANAGEMENT AND DISASTER RESPONSE
3rd INTERNATIONAL CONFERENCE ON ENVIRONMENTAL PROTECTION AND DISASTER RISKS

04 June – 06 June 2024

Conference Programme

04 June 2024	
09:00 – 10:00	Registration & Welcome Coffee
10:00 – 10:20	Opening of the Event <ul style="list-style-type: none"> • <i>COL Orlin NIKOLOV, PhD, Director of CMDR COE</i> • <i>Assoc. Prof. Nina DOBRINKOVA PhD, BAS</i>
10:20 – 11:50	Key Note Speakers/Discussion Panel Moderator: <i>COL Orlin NIKOLOV, PhD, CMDR COE</i> <ul style="list-style-type: none"> • <i>Assoc. Prof. Petya TRIFONOVA PhD, BAS, BGR</i> • <i>Chief Commissioner Alexander DZHARTOV, Director of the General Directorate of Fire Safety and Civil Protection, Ministry of Interior, BGR</i> • <i>Irina NOVAKOVA, NATO HQ</i> • <i>Ms. Swathi VEERAVALLI, Director for Climate Security and Adaptation in the National Security Council's Climate & Energy directorate in the White House, USA</i> • <i>Dr. ARAFAT, Ministry of Internal Affairs, ROU</i>
11:50 – 12:00	Family Photo
12:00 – 13:00	Lunch Break

	<u>In-Person Panel</u>	<u>Online Panel</u>
	<p><u>Topic: Flooding and Wildfire</u></p> <p>Moderators: Assoc. Prof. Nina DOBRINKOVA PhD,BAS LTC Dimitrios DALAKOURAS, PhD, CMDR COE</p> <p>Panelists:</p>	<p><u>Topics: Waste Management Water Resources</u></p> <p>Moderators: Prof. Stefka FIDANOVA, D. Sc. BAS COL Kamen IVANOV, CMDR COE</p> <p>Panelists:</p>
13:00 – 13:15	<p>Forest Fire Management in Türkiye Assoc. Prof. Dr. Kadir Alperen COSKUNER, Ertugrul Bilgili</p>	<p>Geophysical methods for optimizing mining waste management Atanas Kisyov, Maya Tomova and Ivailo Koprev</p>
13:15 – 13:30	<p>Preliminary Results of Crown Fuel Load Estimation using Handheld Mobile Laser Scanning in Turkish Red Pine (Pinus brutia Ten.) Stands Kadir Alperen Coskuner, Can Vatandaslar, Murat Ozturk, Ismet Harman, Uzay Karahalil, Tolga Berber, Esra Tunc Gormus and Ertugrul Bilgili</p>	<p>Intelligent Waste Management System: Deep Learning Enabled Sorting with Bin-Fill Sensor Integration Aleksandar Petrovski, Marko Radovanovic, Aner Behlic, Kristijan Ilievski and Sofija Ackovska</p>
13:30 – 13:45	<p>Overview of the forest fires protection system in Romania Adrian Lorent, Marius Petrilă, Bogdan Apostol, Florin Capalb, Cristiana Marcu and Nicolae Ovidiu Badea</p>	<p>Risk assessment in integrated mining waste storage facility with geophysical methods Atanas Kisyov</p>
13:45 – 14:00	<p>Accessibility of Slovenian forests for firetrucks Jaša Saražin</p>	<p>A Treatise on Climate Change Risk Reduction through adoption of Circular Economy Practices Israel Dunmade</p>
14:00 – 14:15	<p>Extreme hydrological events – floods in Bulgaria Snezhanka Balabanova, Georgy Koshinchanov, Silviya Stoyanova, Vesela Stoyanova and Valeriya Yordanova</p>	<p>Investigation of the presence of cyanotoxins, nutrients and composition of phytoplankton communities in the Bistritsa dam in the period 2017-2020</p>

		<i>Vera Pavlova, Mariya Mitreva, Vesela Georgieva, Krasimira Vasileva, Stanimira Arsova, Milena Rachinska, Antoaneta Lazarova and Tzveta Georgieva</i>
14:15 – 14:30	Data accuracy challenges in wildland fire simulations <i>Vassil Vassilev, Nadya Tsvetkova, Assoc. Prof. Nina Dobrinkova PhD</i>	Trends in the use of water resources in Bulgaria <i>Kalin Seymenov and Krasya Kolcheva</i>
14:30 – 14:45	ICT tools optimizing field response in cases of natural hazards <i>Assoc. Prof. Nina Dobrinkova PhD</i>	SWAT model calibration, validation and parameter sensitivity analysis using SWAT-CUP, SUFI-2 for the watershed of the Rusenski Lom River, Bulgaria <i>Milena Mitova</i>
14:45 – 15:00	QA session	QA session
15:00 – 15:15	Coffee Break	
	<p><u>Topics:</u> Natural and Human Induced Hazard Disaster Medicine Risk Management and Assessment Air Pollution and Health</p> <p>Moderators: <i>Assoc. Prof. Petya TRIFONOVA PhD, BAS</i> <i>Steeve RECCA, PDC</i> <i>LTC Mihai ILIE, CMDR COE</i></p> <p>Panelists:</p>	<p><u>Topic:</u> Climate Change Challenges and Security Implications</p> <p>Moderators: <i>Assoc. Prof. Krasya Kolcheva PhD, BAS</i> <i>MAJ Ralitsa BAKALOVA, CMDR COE</i></p> <p>Panelists:</p>
15:15 – 15:30	Geomagnetic Models Versus Real Measurements – An Example from the Bulgarian Territory <i>Metodi Metodiev, Petya Trifonova and Ivaylo Radev</i>	Preliminary Results from the Exploration of the Wind Model Windninja on the Local Scale over Bulgaria <i>Tsvetan Dimitrov and Hristo Chervenkov</i>
15:30 – 15:45	Some lessons from the Kahramanmaras Earthquake Sequence of 2023 relevant to the	Remote Sensing of Climate Change Research <i>Lachezar Filchev and Milen Chanev</i>

	Bulgarian construction practice for industrial buildings <i>Tzvetan Georgiev</i>	
15:45 – 16:00	Fine particulates from agricultural bio-mass combustion <i>Franz Winter, Iliyana Naydenova, Ognyan Sandov and Tsvetelina Petrova</i>	Mitigating Security Challenges in the Mediterranean Sea: Leveraging Space Technology for Effective Solutions <i>Walter David</i>
16:00 – 16:15	Injured and Died in an Earthquake <i>Stefka Fidanova, Leonid Kirilov, Marcin Paprzycki and Veselin Ivanov</i>	
16:15 – 16:30	A Study on the Relationship Between Radon Volume Activity in the Surface Atmosphere and Seismic Activity in the Year 2022 Using METER.AC Open Network Data <i>Emil Oynakov, Atanas Terziyski and Irena Alexandrova</i>	
16:30 – 16:45	QA session	QA session
16:45 – 17:00	Wrap-up Day 1	Wrap-up Day 1
	05 June 2024	
	<u>Online Panel</u>	
	Topic: Natural and Human-Induced Hazard <i>Moderators: Assoc. Prof. Petya TRIFONOVA PhD, BAS LTC Mihai ILIE, CMDR COE</i>	
	Panelists:	
09:00 – 09:15	Fog forecast occurrence stochastic models development for Sofia NIMH station and Sofia Airport <i>Neyko Neykov, Anastasiya Stoycheva, Ilian Gospodinov, Nadya Neykova, Orlin Gueorguiev and Kiril Slavov</i>	
09:15 – 09:30	Environmental impact of the 7 June 2023 moderate earthquake in Plovdiv and Asenovgrad area, Bulgaria. <i>Maria Chamati and Mariya Popova</i>	
09:30 – 09:45	Natural hazards of the Northern Bulgarian Black Sea coast – A review and new discoveries <i>Boyko Ranguelov</i>	

09:45 – 10:00	<i>Influence of local soil conditions on damages in Kahramanmaras during the 2023 Turkey Earthquake</i> <i>Nikolay Milev, Takashi Kiyota, Tetsuo Tobita, Juan Briones, Othon Briones, Ozer Cinicioglu, Gokce Tonuk and Seda Torisu</i>
10:15 – 10:30	<i>Global changes and tourism in show caves in Bulgaria – hazards and relationships</i> <i>Petar Stefanov, Peter Nojarov, Karel Turek and Dilyana Stefanova</i>
10:30 – 10:45	<i>Approaches for earthquake damage reduction of aged reinforced concrete structures in Bulgaria</i> <i>Vassil Kardjiev and Krasimir Boshnakov</i>
10:45 – 11:00	Coffee Break
11:00 – 11:15	<i>Seismic retrofit of buildings in Bulgaria for efficient seismic risk reduction</i> <i>Krasimir Boshnakov, Vassil Kardjiev and Mihaela Kouteva-Guentcheva</i>
11:15 – 11:30	<i>Effects of the Fault Parameters on the Focal Mechanism Solutions: A Case Study of the 1928 Chirpan and Plovdiv Earthquakes</i> <i>Lyuba Dimova, Elitza Pandurska and Reneta Raykova</i>
11:30 – 11:45	<i>Climatology of Freezing Precipitation in Bulgaria</i> <i>Dimitar Nikolov, Tzvetan Dimitrov, Tania Marinova and Radoslav Evgeniev</i>
11:45 – 12:00	<i>Methodology for assessment and improving the seismic behaviour of a class of non-engineering designed and executed buildings.</i> <i>Peter Pavlov, Ognjan Ganchev and Radoslav Nikolov</i>
12:00 – 12:15	<i>Evolution analysis of core-periphery structure of emergency organization network</i> <i>Bo Zhang, Zebin Zhao and Rui Cheng</i>
12:15 – 12:30	QA session
12:30 – 13:30	Lunch Break
	<i>Topics: Disaster Medicine Risk Management and Assessment</i> <i>Moderators: Assoc. Prof. Petya TRIFONOVA PhD, BAS Steeve RECCA, PDC</i> <i>Panelists:</i>
13:30– 13:45	<i>Multi-Hazard Event: Interconnected Occurrence of High Ozone, PM10, High Temperature, and Desert Dust Intrusion</i> <i>Hristina Kirova, Anastasiya Stoycheva and Emilia Georgieva</i>

13:45 – 14:00	Risk assessment for the city of Veliko Tarnovo <i>Dimitar Stefanov, Dimcho Solakov, Stela Simeonova and Plamena Raykova-Tsankova</i>
14:00 – 14:15	Study of Short-term Effects of Air Pollution on Hospital Admissions in Bulgarian Cities Sofia, Plovdiv and Varna <i>Stoyan Georgiev, Angel Dzhambov and Reneta Dimitrova</i>
14:15 – 14:30	Integration of a kinematic seismic early warning system to Bg-Alert – possibilities and difficulties <i>Boyko Rangelov, Garo Mardirossian, Petar Getzov, Nikolay Zagorski and Edelways Spassov</i>
14:30 – 15:00	Preliminary results on measurement of Black carbon concentration in the ABL by aerological sounding <i>Georgi Tsekov and Elena Hristova</i>
15:15 – 15:30	QA session
15:30 -16:00	Wrap-up Day 2
	06 June 2024
	<u>In-Person Panel</u>
	<u>Topic:</u> High-Performance Computing, M&S, GIS for environmental monitoring and AI <i>Moderators: COL Kostadin LAZAROV, CMDR COE Assoc. Prof. Nina DOBRINKOVA PhD, BAS</i> Panelists:
09:00 – 09:15	HPDA service for estimating the brown bear (<i>Ursus arctos L.</i>) population in Bulgaria <i>Todor Gurov, Emanouil Atanassov, Svetlozar Yordanov, Ruslan Serbezov, Silvi-Maria Gurova, Nikolai Spassov and Radoslav Stanchev</i>
09:15 – 09:30	Application of ICT in interactive learning environments in emergency situations <i>Ava Chikurteva, Denis Chikurtev, Elena Blagoeva and Nina Bogdanova</i>
09:30 – 09:45	Socio-Cyber-Physical Systems in Risk, Crisis and Disaster Management. Some Open Issues <i>Stoyan Poryazov, Emiliya Saranova and Velin Andonov</i>
09:45 – 10:00	Leveraging Social Media data and Artificial Intelligence for improving earthquake response efforts <i>Kalin Kopanov, Velizar Varbanov and Tatiana Atanasova</i>
10:15 – 10:30	QA session
10:30 – 10:45	Coffee Break

10:45 – 11:00	<i>Double-Stranded Differential Evolution and Particle Swarm Optimization with LibreOffice Nonlinear Programming Solver</i> <i>Gergana Mateeva, Ivan Blagoev, Kalin Kopanov, Velizar Varbanov and Todor Balabanov</i>
11:00 – 11:15	<i>Design Accelerograms Derivation for Dynamic Analysis of Retaining Walls</i> <i>Maria Topalska and Mihaela Kouteva-Guentcheva</i>
11:15 – 11:30	<i>Interseismic Monitoring via DInSAR Methodology in the Dzherman Fault Zone</i> <i>Dilyana Hristova</i>
10:45 – 11:00	<i>Monitoring organic einkorn yields with Sentinel-2 data</i> <i>Milen Chaney, Bogdan Bonchev, Darina Valcheva and Lachezar Filchev</i>
11:00 – 11:15	<i>Comparative analysis of topographic conditions for hydraulic flood modelling using different spatial resolution digital terrain models: A case study from the Ogosta River, Bulgaria</i> <i>Davis Dinkov and Desislava Hristova</i>
11:15 – 11:30	<i>QA session</i>
11:30 – 12:00	<i>End of the Conference</i>