



14th CMDR COE ANNUAL CONFERENCE ON CRISIS MANAGEMENT AND DISASTER RESPONSE
4th INTERNATIONAL CONFERENCE ON ENVIRONMENTAL PROTECTION AND DISASTER RISKS
01 June – 03 June 2026
Conference Programme

EET / Sofia Local	Hall	01 June 2026
13:00 – 13:45	CMDR COE	Registration & Welcome Coffee
13:45 – 14:00	Brussels Hall	Opening of the Event <i>COL Orlin NIKOLOV, PhD, Director of CMDR COE</i>
14:00 – 15:00	Brussels Hall	Key Note Speakers/Discussion Panel <i>Moderator: COL Orlin NIKOLOV, PhD, CMDR COE Director</i> <ul style="list-style-type: none"> • <i>Irina NOVAKOVA, NATO HQ</i> • <i>Major General DEMCHUK, Deputy Head of the State, Emergency Service of Ukraine - ONLINE</i> <u>Organizing forest fire suppression in a hybrid warfare environment</u> • <i>Tore BADE, Interoperability & Defence Planning Advisor, NATO Representation to Ukraine</i> <u>NRU support to SESU in Ukraine, achieving NATO Interoperability in practice.</u>
15:00 – 15:15	Brussels Hall	QA session https://cmdrcoe.org/ Ask your lecturer Password: 000000
15:15 – 15:45	Brussels Hall	Key Note Speakers/Discussion Panel <i>Moderator: COL Orlin NIKOLOV, PhD, CMDR COE Director</i> <ul style="list-style-type: none"> • <i>Miglena KUZMANOVA, Esri Bulgaria</i> <u>Standards-based living Digital Twins for Defense and Intel systems</u>
15:45 – 16:00	CMDR COE	Coffee Break
16:00 – 17:45	Brussels Hall	Key Note Speakers/Discussion Panel <i>Moderator: COL Orlin NIKOLOV, PhD, CMDR COE Director</i> <ul style="list-style-type: none"> • <i>Steve RECCA, Pacific Disaster Center</i> <u>Reducing Uncertainty through Risk Intelligence</u> <ul style="list-style-type: none"> • <i>Lindon PRONTO, European Forest Institute</i>

		<p><u>Reimagining Fire Management on Contaminated Lands: Introducing a New Toolbox</u> <u>How Collaboration in Technology and Innovation is Offering Hope for an Explosive Global Problem.</u></p> <ul style="list-style-type: none"> Bella NESTOROVA, Directorate-General for European Civil Protection and Humanitarian Aid Operations (DG ECHO) of the European Commission - ONLINE <p><u>Advancing integrated wildfire risk management in Europe</u></p> <ul style="list-style-type: none"> Assoc. Prof. Petya TRIFONOVA PhD, BAS, BGR <p><u>Advancing Environmental Risk Research Through the EPOS ERIC Infrastructure and Data Portal</u></p>
17:45 – 18:00	Brussels Hall	<p>QA session https://cmdrcoe.org/ Ask your lecturer Password: 111111</p>
18:00 – 18:15	Brussels Hall	Family Photo
18:15 – 19:30	CMDR COE	Icebreaker – hosted by CMDR COE

EET / Sofia Local	Hall	02 JUNE 2026	
Panel: High Performance Computing, Modeling & Simulations Moderator: Stefka Fidanova			Submission
09:00 – 09:15	Brussels Hall	<p><u>Generalized Net for post-Earthquake Assistance to People on Hemodialysis</u> Stefka Fidanova, Nadya Bozakova and Veselin Ivanov</p>	9
09:15 – 09:30	Brussels Hall	<p><u>Ground Deformation Analysis Through Bayesian Ensemble Modelling of PS-InSAR Time Series</u> Ioana Igrét, Delia Teleaga, Stefan Toma, Valentin Poncos and Daniela Zaharie</p>	26
09:30 – 10:00	Brussels Hall	<p><u>Simulation-Based ECG Training Using HRV Digital Twins in Disaster Scenarios</u> Yordanka Boneva and Veronika Ivanova</p>	29
10:00 – 10:15	Brussels Hall ONLINE	<p><u>A Conceptual Framework for Integrating ESP into Simulation-Based Disaster Crisis Communication Training</u> Seçil Emeklioğlu and Oya Erenoğlu</p>	30
10:15 – 10:30	Brussels Hall	<p>QA session https://cmdrcoe.org/ Ask your lecturer Password: 222222</p>	
10:30 – 10:45	CMDR COE	Coffee Break	
Panel: High Performance Computing, Modeling & Simulations Moderator: Nina Dobrinkova			Submission
10:45 – 11:00	Brussels Hall	<p><u>Rainfall-Induced Debris Flows and Rockfalls in the Kresna Gorge: Empirical Thresholds and Hazard Assessment</u> Nikolai Dobrev, Antoaneta Frantzova, Nina Dobrinkova, Plamen Ivanov and Aglaida Toteva</p>	62
11:00 – 11:15	Brussels Hall	<p><u>IT solution for increasing the usability of AI-based platforms in healthcare</u> Rostislav Kostadinov, Mariya Georgieva, Fares Ezeldin and Kiril Atliev</p>	36

11:15 – 11:30	Brussels Hall	<u>Artificial Intelligence Methods for Monitoring Physiological Stress during Environmental and Disaster Events Using ECG Signals</u> Galya Georgieva-Tsaneva, Yoan-Aleksandar Tsanev, Veronika Ivanova and Borislava Kostova	38
11:30 – 11:45	Brussels Hall	<u>Enhanced Slowness Estimation for Seismic Event Monitoring via Seismic Arrays: Robust Computational Framework</u> Alexander Varypaev	39
11:45 – 12:00	Brussels Hall	QA session https://cmdrcoe.org/ Ask your lecturer Password: 333333	
Panel: Climate Change Challenges and Security Implications / Ecology / Disaster Medicine /Risk Management and Assessment Moderator: Nina Dobrinkova			Submission
09:00 – 09:15	Sofia Hall	<u>Rapid and Automated Risk Assessment of Microbiological Water Safety at Remote Locations and During Disasters</u> Dan Angelescu, Emilie Vilana, Patrick Ea, David Abi-Saab, Tobias Kerkmann and Simon Gutzeit	13
09:15 – 09:30	Sofia Hall	<u>Electrical Resistivity Tomography (ERT) as a tool for geotechnical risk assessment in an underground mining environment</u> Bogdana Milenkovic and Maya Tomova	7
09:30 – 10:00	Sofia Hall	<u>Preliminary Results from the Application of Bias Correction on Temperature and Precipitation Data from Multiple EURO-CORDEX Models</u> Hristo Chervenkov and Kiril Slavov	8
10:00 – 10:15	Sofia Hall	<u>Is eutrophication a current environmental risk for the Black Sea ecosystem?</u> Valentina Doncheva, Snejana Moncheva, Nadezhda Drumeva, Radka Mavrodieva, Ogniana Hristova, Boryana Dzurova, Nataliya Slabakova, Elitsa Stefanova, Selen Kyazim and Kremena Stefanova	43
10:15 – 10:30	Sofia Hall	QA session https://cmdrcoe.org/ Ask your lecturer Password: 444444	
10:30 – 10:45	CMDR COE	Coffee Break	
Panel: Climate Change Challenges and Security Implications / Ecology / Disaster Medicine /Risk Management and Assessment Moderator: Stefka Fidanova			Submission
10:45 – 11:00	Sofia Hall ONLINE	<u>Exploratory Research on the Management Of Acute Health Problems Associated with Smoke Exposure during Wildfires</u> Emine Sevinc Postaci and Canan Akman	51
11:00 – 11:15	Sofia Hall	<u>Behavior Changes in Bos Taurus as a Biological Indicator for Early Warning of Earthquakes: Biophysical Mechanisms in Bos Taurus and an Integrated Bio-Sensor System For Earthquake Prediction</u> Nadya Bozakova, Veselin Ivanov and Stefka Fidanova	47
11:15 – 11:30	Sofia Hall	<u>Impact of COVID-19 Pandemic in the European Air Transport Command: a retrospective descriptive study</u> Martin Gascón, Jacopo Frassini and Pierre-Yves Pegaz	24
11:30 – 11:45	Sofia Hall	<u>PM EMISSIONS IN WALNUTS OXIDATION</u>	4

		<i>Iliyana Naydenova, Ognyan Sandov and Lyudmila Krasteva</i>	
11:45 – 12:00	Sofia Hall	QA session https://cmdrcoe.org/ Ask your lecturer Password: 555555	
12:00 – 13:00	CMDR COE	Lunch Break – hosted by CMDR COE	
Panel: Air Pollution and Health and Soil and Waste Management Moderator: Stefka Fidanova			Submission
13:00 – 13:15	Brussels Hall	<u>Relationship between the PM10 Mean Daily Concentration and Meteorological Parameters in Bulgaria for the Period 2021-2025</u> <i>Georgi Tsekov and Elena Hristova</i>	12
13:15 – 13:30	Brussels Hall	<u>Spatial and Seasonal Co-Variability of Atmospheric Pollution and COVID-19 Incidence Based on Satellite and Ground Observations in Bulgaria</u> <i>Maria Dimitrova, Plamen Trenchev, Georgi Jelev, Mokhamad Cahyadi and Lachezar Filchev</i>	54
13:30 – 13:45	Brussels Hall	<u>Spatio-Temporal Urban Air Pollution in Sofia Dynamics: A case study for Sofia for the period 2021–2024</u> <i>Petar Zhivkov, Silvi-Maria Gurova and Svetlozar Yordanov</i>	16
13:45 – 14:00	Brussels Hall	<u>Numerical simulation of the wind field over the city of Plovdiv – first results and comments</u> <i>Hristo Chervenkov and Tsvetan Dimitrov</i>	17
14:15 – 14:30	Brussels Hall	QA session https://cmdrcoe.org/ Ask your lecturer Password: 666666	
14:30 – 14:45	CMDR COE	Coffee Break	
Panel: Air Pollution and Health and Soil and Waste Management Moderator: CMDR-COE personnel			Submission
14:45 – 15:00	Brussels Hall	<u>Observation and Data Analysis of Fine Particle Concentrations on the Territory of Bulgaria</u> <i>Nikolay Kochev, Atanas Terziyski, Evgeniy Marinov, Gergana Tancheva and Lyudvika Radeva</i>	21
15:00 – 15:15	Brussels Hall	<u>Multi-Source Data Integration for Urban Health: Leveraging Copernicus Earth Observation Assets in the Smart4COV19 Framework</u> <i>Lachezar Filchev, Maria Dimitrova, Plamen Trenchev, Georgi Jelev, Milen Chanev and Mokhamad Cahyadi</i>	55
15:15 – 15:30	Brussels Hall	<u>GEOPHYSICAL STUDY OF TORANICA HYDRO-TAILINGS POND</u> <i>Vasil Bodurov and Maya Tomova</i>	6
15:30 – 15:45	Brussels Hall	<u>Complex geophysical investigation of an Integrated Mine Waste Storage Facility (IMWSF) using ERT and MASW</u> <i>Atanas Kisyov, Christian Tzankov and Maya Tomova</i>	18
15:45 – 16:00	Brussels Hall	QA session https://cmdrcoe.org/ Ask your lecturer Password: 777777	

Panel: Wildfire and Resilience, Water Resources and Flooding, and Business Continuity Management (BCM) Moderator: LTC Dimitrios DALAKOURAS			Submission
13:00 – 13:15	Sofia Hall	<u>Wildfire ignitions from power lines in Greece: data gaps, case studies, and prevention strategies</u> Elena Palenova	60
13:15 – 13:30	Sofia Hall	<u>Methodological Framework for Wildfire Prevention Measures Analysis and Modernization: A Case Study of Brač, Croatia</u> Ljiljana Šerić, Darko Brlečić, Zoran Gorički, Jasna Molc and Jakov Zlatar	33
13:30 – 13:45	Sofia Hall	<u>Forest Fire Dynamics in Lithuania Under Recent Climate Variability</u> Sadig Zeynalov and Gediminas Brazaitis	15
13:45 – 14:00	Sofia Hall	<u>Integrated Satellite-Based Assessment of Fire Radiative Energy and Burn Severity in Major Bulgarian Wildfires (2025)</u> Kadir Alperen Coskuner, Nina Dobrinkova and Ismet Harman	11
14:15 – 14:30	Sofia Hall	QA session https://cmdrcoe.org/ Ask your lecturer Password: 888888	
14:30 – 14:45	CMDR COE	Coffee Break	
Panel: Wildfire and Resilience, Water Resources and Flooding, and Business Continuity Management (BCM) Moderator: LTC Dimitrios DALAKOURAS			Submission
14:45 – 15:00	Sofia Hall	<u>Wildfire Simulation Challenges in Bulgaria: Evaluating Meteorological Inputs, Fuel Models, and Available DEMs for FlamMap Simulations</u> Nina Dobrinkova, Davis Dinkov, Atanas Kitev and Desislava Hristova	41
15:00 – 15:15	Sofia Hall	<u>The Gaza Litmus Test: Why Human Rights and Deterrence by Norms Fail to Constrain State Behavior</u> Mihail Mishev	61
15:15 – 15:30	Sofia Hall	<u>Integrated Monitoring of River-Groundwater-Soil Interactions in the Ogosta River Floodplain (NW Bulgaria)</u> Velimira Stoyanova and Tsvetan Kotsev	42
15:30 – 15:45	Sofia Hall	<u>Floods and climate variations: modelling extreme hydrological events</u> Silviya Stoyanova, Georgy Koshinchanov, Vesela Stoyanova and Valeriya Yordanova	56
15:45 – 16:00	Sofia Hall	QA session https://cmdrcoe.org/ Ask your lecturer Password: 999999	
16:00	End of day 2		

EET / Sofia Local	Hall	3 June 2026	
Panel: Natural and Human-Induced Hazard Moderator: Petya TRIFONOVA			Submission
09:00 – 09:15	Brussels Hall	<u>Remote Sensing of Ionising Gases in the Lower Troposphere Using Electromagnetic Wave Propagation Measurements up to 6 GHz</u> <i>Atanas Terziyski, Nikolay Kochev, Ludmil Tsankov, Petya Trifonova, Stoyan Tenev and Metodi Metodiev</i>	19
09:15 – 09:30	Brussels Hall	<u>Hybrid Operations at the World's End: China's Rising Presence in Antarctica</u> <i>Borislav Bankov</i>	57
09:30 – 10:00	Brussels Hall	<u>Time History Analysis of Soil-Retaining Wall Interaction on a Construction Site in Sofia, Bulgaria using Accelerograms – Data Selection and Pre-processing</u> <i>Maria Topalska and Mihaela Kouteva-Guentcheva</i>	27
10:00 – 10:15	Brussels Hall	<u>Assessment and Analysis of Flood Risk Perception in Vulnerable Areas: A Case Study of Burgas Municipality</u> <i>Sabina Nedkova, Plamena Atanasova, Galina Baycheva, Tanya Baycheva-Merger, Colin A. Meghoo and Simon Gutzeit</i>	28
10:15 – 10:30	Brussels Hall	QA session https://cmdrcoe.org/ Ask your lecturer Password: 111111	
10:30 – 10:45	CMDR COE	Coffee Break	
Panel: Natural and Human-Induced Hazard Moderator: Petya TRIFONOVA			Submission
10:45 – 11:00	Brussels Hall	<u>Analysis of 19th-century earthquake sequences in the Sofia Basin using Coulomb stress transfer models</u> <i>Emil Oynakov, Radan Ivanov, Irena Aleksandrova and Mariya Popova</i>	32
11:00 – 11:15	Brussels Hall	<u>Advancing Geomagnetic Time Series and Hazard Event Analysis Through 1-Second Data Acquisition at the Panagyurishte (PAG) Observatory</u> <i>Metodi Metodiev, Petya Trifonova, Maria Chamati and Borislav Andonov</i>	31
11:15 – 11:30	Brussels Hall	<u>The minor geomagnetic storm on February 3-4, 2022, and Pi2 geomagnetic pulsations at middle latitudes</u> <i>Maria Chamati, Borislav Andonov, Petya Trifonova and Metodi Metodiev</i>	40
11:30 – 11:45	Brussels Hall	<u>Distribution and composition of floating marine macro-litter along the Bulgarian Black Sea coast based on line-transect visual surveys</u> <i>Krasimira Slavova and Violeta Slabakova</i>	44
11:45 – 12:00	Brussels Hall	<u>Preliminary results from the assessment of the severity of recent wet snowstorms and comparison with some old records</u> <i>Dimitar Nikolov, Cvetan Dimitrov and Radoslav Evgeniev</i>	46
12:00 – 12:15	Brussels Hall	<u>Energy supply chains transformation in scope of resilience and deterrence in NATO operations</u> <i>Jarostaw Gryz, Dariusz Majchrzak and Krzysztof Król</i>	53
12:15 – 12:30	Brussels Hall	QA session https://cmdrcoe.org/ Ask your lecturer Password: 222222	

Panel: Risk Management and Assessment Moderator: Steve RECCA			Submission
09:00 – 09:15	Sofia Hall	<u>Utilizing UAS/UAV in seismic risk mitigation at different scales</u> <i>Lyubka Pashova, Mihaela Kouteva-Guentcheva, Yana Lipiyska and Tsvetelina Atanasova-Evdenova</i>	20
09:15 – 09:30	Sofia Hall	<u>Comparison of Polish and Ukrainian Experience in communication between authorities and local community residents in crisis situations</u> <i>Oksana Erdeli, Yaroslava Hlushchenko, Olena Korohodova and Natalya Chernenko</i>	50
09:30 – 09:45	Sofia Hall	<u>Spatial and Temporal Variations of Radon (222Rn) Concentrations in the Atmospheric Surface Layer: Insights from Bulgaria</u> <i>Emil Oynakov, Atanas Terziyski, Irena Aleksandrova and Petya Trifonova</i>	14
09:45 – 10:00	Sofia Hall ONLINE	<u>Artificial Intelligence in Disaster Risk Management: Strategic Integration, Governance Challenges, and Resilience Transformation</u> <i>Ebru Sultan Goksu and Ebru Caymaz</i>	25
10:00 – 10:15	Sofia Hall ONLINE	<u>Enhancing human security and disaster resilience through integrated cbrn-e risk management framework</u> <i>Ebru Caymaz, Sedat Kocaman and Ahmet Topcu</i>	23
10:15 – 10:30	Sofia Hall	QA session https://cmdrcoe.org/ Ask your lecturer Password: 333333	
10:30 – 10:45	CMDR COE	Coffee Break	
Panel: Risk Management and Assessment Moderator: Steve RECCA			Submission
10:45 – 11:00	Sofia Hall	<u>Seismic safety of existing buildings in the context of performance based engineering</u> <i>Krasimir Boshnakov and Vasil Kardjiev</i>	35
11:00 – 11:15	Sofia Hall	<u>A highly accurate calculation of the difference between geocentric and geodetic latitude in flight</u> <i>Anastas Madzharov and Stefan Hristozov</i>	37
11:15 – 11:30	Sofia Hall	<u>Reflection of global changes on the cave environment and Modern karstogenesis</u> <i>Petar Stefanov, Dilyana Stefanova, Peter Nojarov and Karel Turek</i>	45
11:30 – 11:45	Sofia Hall	<u>Researching the appropriate altitude for conducting rescue operations using an unmanned aerial vehicle equipped with a thermal camera</u> <i>Hristo Hristov and Kalin Dimitrov</i>	49
11:45 – 12:00	Sofia Hall	<u>A model of gravity on the surface of the Earth's ellipsoid using an accurate analytical relationship between geocentric and geodetic latitudes</u> <i>Anastas Madzharov, Stefan Hristozov and Ivan Gaidarski</i>	22
12:00 – 12:30	Sofia Hall	QA session https://cmdrcoe.org/ Ask your lecturer Password: 444444	
12:30	End of day 3		