



Transilvania  
University  
of Brasov

FACULTY OF CIVIL ENGINEERING

Academy of  
Sciences and Arts of  
Bosnia and Herzegovina

# **Advanced Research Workshop Countering Hybrid Threats Against Critical Infrastructures**

**21-23 May 2024, Braşov, Romania**

## **EVENT PROGRAM**



Advanced Research Workshop

Countering Hybrid Threats Against Critical Infrastructures, 21-23 May 2024, Braşov, Romania

# EVENT PROGRAM

Advanced Research Workshop  
Countering Hybrid Threats Against  
Critical Infrastructures  
21-23 May 2024, Braşov, Romania

Organized by:

Faculty of Civil Engineering, Transilvania University of Braşov

Academy of Technical Sciences and Arts of Bosnia and Herzegovina



*This workshop  
is supported by:*

The NATO Science for Peace  
and Security Programme



## Advanced Research Workshop

Countering Hybrid Threats Against Critical Infrastructures, 21-23 May 2024, Braşov, Romania

### EVENT PROGRAM - CONCISE

#### Monday, 20<sup>th</sup> of May

20:00	Welcome Reception	Lobby restaurant
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#### Tuesday, 21<sup>st</sup> of May

08:00-09:00	Registration of the participants	Conference rooms hallway
09:00-09:50	Opening Session	Europa 3
10:00-13:20	Session I. Critical Infrastructure Protection	Europa 3
13:30	<i>Lunch</i>	Lobby restaurant
15:00-17:00	Session II. Risk assessment and Mitigation	Europa 1
17:00-17:20	Panel and working group formation	Europa 1
17:20-18:30	Working group discussions – Session 1	Europa 1 & 3
19:00	<i>Dinner</i>	

#### Wednesday, 22<sup>nd</sup> of May

09:00-12:20	Session III. Structural monitoring and assessment	Europa 3
13:00	<i>Lunch</i>	Lobby restaurant
15:00-16:20	Session IV. Counter-terrorism for infrastructure applications	Europa 1
16:30-17:30	Working group discussions – Session 2	Europa 1 & 3
17:45	<i>Walking tour – sightseeing Braşov old town</i>	
19:00	<i>Dinner</i>	

#### Thursday, 23<sup>rd</sup> of May

09:00-11:00	Session V. Solutions for critical infrastructure protection	Europa 1
11:00-11:20	ARW Proceedings: Details and logistics	Europa 1
11:20-12:00	WG Feedback and Presentations by the leads	Europa 1
12:00-12:40	Feedback session	Europa 1
12:40-13:00	Conclusions, recommendations, and future cooperation	Europa 1
13:00-13:40	Lessons learned	Europa 1
	Closing remarks and ARW summary	
14:00	<i>Lunch</i>	
19:00	<i>Gala Dinner</i>	Horizon restaurant



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# EVENT PROGRAM – DETAILED

## Monday, 20<sup>th</sup> of May

20:00	Welcome Reception	Lobby restaurant
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## Tuesday, 21<sup>st</sup> of May

08:00-09:00	Registration of the participants	Conference rooms hallway
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09:00-09:50	Opening Session ARW Co-directors Assoc. Prof. Dorin Radu and Prof. Mirsada Hukić	Europa 3
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10:00-13:20	<b>Session I. Critical Infrastructure Protection</b> Chairs: Prof. Ashok Vaseashta and Prof. Konstantinos Papatheodorou	Europa 3
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10:00-10:40	Lt. Alexandru Cristian Hudişteanu, NATO MARSEC COE, Türkiye
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*Surveillance from Space of Maritime Critical Infrastructure*

10:40-11:20	Prof. Gor Gevorgyan, Academy of Sciences of Armenia, Armenia
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*Protecting Water and Wastewater Critical Infrastructure from Hybrid Threats*

11:20-12:00	Prof. Ashok Vaseashta, International Clean Water Institute, Manassas, USA
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*Framing scope of Hybrid threats and challenges associated with Critical Infrastructures,*

12:00-12:40	Prof. Anatolie Sidorenko, Technical University of Moldova
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*Functional Nanostructures for Superconducting Spintronics*

12:40-13:20	Prof. Dejan Vasović, University of Niš, Serbia
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*Advancing the Critical Infrastructure Resilience to Hybrid Threats throughout System Approach, Standardization and MCDA*

13:30	<i>Lunch</i>
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15:00-17:00	<b>Session II. Risk assessment and Mitigation</b> Chairs: Assoc. Prof. Dorin Radu and Prof. Alina Bărbulescu	Europa 1
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- 15:00-15:40 Prof. Konstantinos Papatheodorou, International Hellenic University, Greece  
*Empowering Communities: Education for improving Public Awareness and Response Capacity in Earthquake Emergencies*
- 15:40-16:20 Prof. Carmen Maftai, Transilvania University of Braşov  
*Flood Hazard Analysis for Casimcea River (Romania)*
- 16:20-17:00 Prof. Hukić, BiH Academy of Sciences and Arts, Bosnia and Herzegovina  
*Forecasting and Mitigating Epidemic Spread During Natural Disasters Triggered by Seismic Events*

- 17:00-17:20 **Panel and working group formation**
- WG 1** - Hybrid threats, risk assessment and vulnerabilities  
Lead by Prof. Ashok Vaseashta and Prof. Carmen Maftai
- WG 2** - Technology Innovations to Counter Threat Vectors  
Lead by Prof. Konstantinos Papatheodorou and Assoc. Prof. Radu Muntean
- WG 3** - Risk assessment  
Lead by Prof. Alina Bărbulescu and Assoc. Prof. Dorin Radu

- 17:20-18:30 **Working group discussions – Session 1**  
Questions will be distributed for discussion

Europa 1 & 3

- 19:00 *Dinner*

## Wednesday, 22<sup>nd</sup> of May

- 09:00-12:20 **Session III. Structural monitoring and assessment**  
Chairs: Prof. Mirsada Hukić and Prof. Carmen Maftai

Europa 3

- 09:00-09:40 Prof. Ashok Vaseashta, International Clean Water Institute, Manassas, USA  
*AIoT, IoB, and TENG in Critical Infrastructure Protection*

- 09:40-10:20 Prof. Radu Băncilă, Politehnica University Timișoara, Romania  
*Criteria for the Assessment of Existing Steel Bridges - Case Studies*



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- 10:20-11:00 Assoc. Prof. Dorin Radu, Transilvania University of Braşov  
*Engineering Critical Assessment of the Existing Steel Structures*
- 11:00-11:40 Prof. Arezki Benfdila, Université Mouloud Mammeri de Tizi Ouzou, Algeria  
*Nanoelectronics Based Sensors and Applications*
- 11:40-12:20 Prof. Alina Bărbulescu, Transilvania University of Braşov  
*Assessing the Impact of the Dams Inception on the River Discharge*

13:00 *Lunch*

### 15:00-16:20 **Session IV. Counter-terrorism for infrastructure applications**

Chairs: Prof. Benfdila Arezki and Prof. Yuri Dekhtyar

Europa 1

15:00-15:40 Prof. Yuri Dekhtyar, Riga Technical University, Latvia  
*Functionalisation of nano/micro Systems Against Microbiological Threats in Water*

16:40-16:20 Prof. Metodi Hadji-Janev (BG), Military Academy, Skopje, North Macedonia  
*Strategic and Legal Aspects of Countering Hybrid and Cyber-based Threats to Critical Infrastructures in South East Europe*

### 16:30-17:30 **Working group discussions – Session 2**

Europa 1 & 3

17:45 *Walking tour – sightseeing Braşov old town*

19:00 *Dinner*

## Thursday, 23<sup>rd</sup> of May

### 09:00-11:00 **Session V. Solutions for critical infrastructure protection**

Chairs: Prof. Nimet Karagülle and Dr. Ilija Djugumanov

Europa 1

09:00-09:40 Prof. Álvaro Rocha, University of Lisbon, Portugal  
*Cybersecurity Maturity Models: a Systematic Literature Review*



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09:40-10:20	Prof. Nimet Karagülle, Mersin University, Türkiye <i>Future of Electrospun Nanofibrous Systems for Decontamination and Protection Against Chemical and Biological Threats</i>	
10:20-11:00	Assoc. Prof. Karlo Emmanuel Nyarko, Josip Strossmayer University of Osijek, Croatia <i>From Phantoms to Firewalls: Securing Critical Infrastructures in the Age of Hybrid Threats</i>	
11:00-11:20	ARW Proceedings: Details and logistics, Prof. Ashok Vaseashta	Europa 1
11:20-12:00	WG Feedback and Presentations by the leads	Europa 1
12:00-12:40	Feedback session	Europa 1
12:40-13:00	Conclusions, recommendations, and future cooperation	Europa 1
13:00-13:40	Lessons learned Closing remarks and ARW summary	Europa 1
14:00	<i>Lunch</i>	
19:00	<i>Gala Dinner</i>	Horizon restaurant

All the events will take place at the ARO-Palace hotel.



*Note: The program may be slightly adjusted. Please use the QR code to find the latest version on the event website.*

