

R O M A N I A
MINISTRY OF NATIONAL DEFENCE



**“NICOLAE BĂLCESCU”
LAND FORCES ACADEMY
OF SIBIU**



**ACADEMY
OF ROMANIAN SCIENTISTS
MILITARY SECTION**

**THE 3rd INTERNATIONAL
SCIENTIFIC CONFERENCE**

**EMERGING AND DISRUPTIVE TECHNOLOGIES’
IMPACT ON GLOBAL SECURITY**

P R O G R A M M E

**March 15, 2024
SIBIU**

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EDT 2024 Programme

Friday, March 15	
08.30-09.00	Registration of Participants
09.00-11.00	<p style="text-align: center;">Opening Remarks/“Nicolae Bălcescu” Auditorium, Bldg. D</p> <ul style="list-style-type: none"> • Message of BG Prof.Eng. Ghiță BÂRSAN, PhD, Rector of “Nicolae Bălcescu” Land Forces Academy (<i>5 min</i>) • Message of General (ret.) Prof. Teodor FRUNZETI, PhD, President of the Military Sciences Section of the Academy of Romanian Scientists (<i>5 min</i>) • Message of General (ret.) Ion OPRÎȘOR, Presidential Adviser, Head of the Department of National Security within the Presidential Administration (<i>10 min</i>) • Message of Prof.Eng. Adrian Alexandru BADEA, PhD, President of the Academy of Romanian Scientists (<i>10 min</i>) <p style="text-align: center;">Invited Papers in Plenary</p> <ul style="list-style-type: none"> • Mrs. Maria-Mihaela GURĂU, PhD, Euro-Atlantic Resilience Centre, Bucharest, Romania – <i>On the darker side of the story: when EDTs meet malicious actors (15 min)</i> • COL Eng. Tiberius TOMOIAGĂ, PhD, Deputy Manager for Scientific Research, Military Equipment and Technologies Research Agency (METRA), Bucharest, Romania – <i>Exploring the Vulnerabilities of Emerging Technologies in Defence (15 min)</i> • Prof. Doina PÎSLĂ, PhD, Technical University of Cluj-Napoca, Romania – <i>Innovation in medical robotics (15 min)</i> • LTC Prof. Adi MUSTAȚĂ, PhD, “Carol I” National Defense University, Bucharest, Romania – <i>Using ChatGPT in military decision-making (15 min)</i> • Mr. Eugen SOTIR, Defence Manager, EasyDo Digital Technologies, Bucharest, Romania – <i>The use of drones in hybrid conflicts (10 min)</i>

	<ul style="list-style-type: none"> • Mr. Cătălin PASCALE, Mr. Mihai Victor PRICOP, INCAS, Bucharest, Romania – <i>Romanian drones (10 min)</i> • Mr. Florin DEHELEAN, PhD Student, Technical University of Cluj-Napoca, Romania – <i>The first electric car manufactured in Romania (10 min)</i>
11.00-11.20	Group Photo/The Parade Ground of the Institution
11.20-11.40	Equipment Exhibitions/The Parade Ground of the Institution <ul style="list-style-type: none"> • <i>The first electric car manufactured in Romania – Mr. Adrian DONCA, Business Development Manager, AROBS Transilvania Software, Cluj-Napoca, Romania, Mr. Florin DEHELEAN, PhD Student, Technical University of Cluj-Napoca, Romania</i>
11.40-13.00	<p style="text-align: center;">Services, Product and Demonstrative Presentations / “Nicolae Bălcescu” Auditorium, Bldg. D</p> <ul style="list-style-type: none"> • <i>The Tundra 2 Drone and Military Payloads – Mr. Eugen SOTIR, EasyDo Digital Technologies, Bucharest, Romania, COL (ret.) Ilie MINCIU, Mr. Bogdan PUCHEANU, Mr. Claudiu ZAHARIA, S. Carfil SA, Braşov, Romania</i> • <i>Romanian Drones – Mr. Cătălin PASCALE, Mr. Mihai Victor PRICOP, INCAS, Bucharest, Romania</i> • <i>Exploring Virtual and Augmented Realities, Transforming Education through Technology. (VBS4-Virtual Battlespace Software, HoloLens 2 Devices) – LTC Claudiu VESA, “Nicolae Bălcescu” Land Forces Academy, Sibiu, Romania</i> • <i>Flexible Cartridge Sorting Cell Using Parallel Robot “BulletSort TOPCODPET” – Std. 3rd year Tudor Cătălin CODREANU, Std. 1st year Cristian CASAPU, “Nicolae Bălcescu” Land Forces Academy, Sibiu, Romania</i> • <i>Sensor-Controlled Moving Targets on Impact with Laser Waves “SwiftMark – Laser Trainer” – Std. 3rd year Tudor Cătălin CODREANU, Std. 1st year Cristian CASAPU, “Nicolae Bălcescu” Land Forces Academy, Sibiu, Romania</i>

CONFERENCE PAPERS

THE IMPACT OF EMERGING AND DISRUPTIVE TECHNOLOGIES ON SOCIETY

1. *Novel Materials and Additive Manufacturing in Relation to Global Security*, **Adrian DUMITRACHE**, University POLITEHNICA of Bucharest, Romania
2. *Enhancing Financial Security in the Digital Age: Mitigating Risks of Virtual Currencies through Regulation and Institutional Mechanisms*, **Teodor FRUNZETI, Alexandru-Cosmin DUMITRU**, “Carol I” National Defence University, Bucharest, Romania
3. *Harmonizing Virtual Currency Use in the EU: The Evolution and Impact of MiCA Regulation*, **Teodor FRUNZETI, Alexandru-Cosmin DUMITRU**, “Carol I” National Defence University, Bucharest, Romania
4. *Emerging and Disruptive Technologies – A Bibliometric Analysis*, **Gabriel MĂNESCU, Tiberiu GIURGIU**, “Nicolae Bălcescu” Land Forces Academy, Sibiu, Romania
5. *Security Ontology in a Virtual University*, **Loredana MOCEAN***, **Miranda-Petronella VLAD****, *Babeş-Bolyai University, Cluj-Napoca, Romania, **“Dimitrie Cantemir” Christian University, Bucharest, Romania
6. *Socio-Ethical and Behavioural Aspects of Exoskeleton Implementation in Specific Military Missions*, **Maria-Lucia TALMAȚCHI, Ioan VIRCA, Tiberiu GIURGIU, Ioan-Dan POPA**, “Nicolae Bălcescu” Land Forces Academy, Sibiu, Romania

THE ROLE OF EMERGING AND DISRUPTIVE TECHNOLOGIES ON MILITARY AFFAIRS

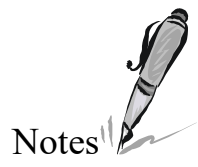
1. *Virtual Reality (VR), Augmented Reality (AR) and Mixed Reality (MR), A Necessity of the Modern Diving Technology*, **Adriana-Georgiana AGAPE, Daniel STOENCIU, Cosmin-Constantin CHIRCU**, Diving Centre, Constanța, Romania
2. *Emerging Technologies in Conflict: The Impact of Starlink in the Russia-Ukraine War*, **Lavinu BOJOR***, **Tudorică PETRACHE***, **Cristian CRISTESCU****, **“Nicolae Bălcescu” Land Forces Academy, Sibiu, Romania*, ***The 2nd “Sarmizegetusa” Mountain Troops Brigade, Brașov, Romania*
3. *Overview on Sea Drones Evolution and Their Use in Modern Warfare*, **Andrei BURSUC, Cristian MUNTEANU, Simona RUS**, Diving Centre, Constanța, Romania
4. *The Evolution of Warfare – Biotechnological Advancements in Military Operations*, **Sandra-Maria CEPIȘCA, Alin-Ionuț CÎRDEI**, *“Nicolae Bălcescu” Land Forces Academy, Sibiu, Romania*
5. *The Role of Explosive Ordnance Disposal (EOD) Divers in Eliminating the Danger Generated by Naval Mines*, **Adrian ONȚICĂ, Alexandra GORDEȘ**, Diving Centre, Constanța, Romania
6. *The Future of Warfare in the Volatility, Uncertainty, Complexity and Ambiguity (VUCA) Context*, **Sorin TOPOR**, National Institute for Research and Development in Informatics – ICI, Bucharest, Romania

ARTIFICIAL INTELLIGENCE IN ACHIEVING TECHNOLOGICAL EDGE

1. *The Emerging and Disruptive Technologies – A Risk-Based Approach*, **Marin-Marian COMAN***, **Claudiu-Vasile KIFOR****, **“Nicolae Bălcescu” Land Forces Academy, Sibiu, Romania*, *“Lucian Blaga” University of Sibiu, Romania*, ***“Lucian Blaga” University of Sibiu, Romania*
2. *Humanity at the Crossroads: To “Unplug” Artificial Intelligence or to Invest More in Artificial Intelligence*, **Anca DINICU**, **Dumitru IANCU**, *“Nicolae Bălcescu” Land Forces Academy, Sibiu, Romania*
3. *Artificial Intelligence – Evolution, Challenge or Threat*, **Constantin MINCU***, **Dorin ALEXANDRESCU****, **Academy of Romanian Scientists, Bucharest, Romania*, ***“Nicolae Bălcescu” Land Forces Academy, Sibiu, Romania*

EMERGING AND DISRUPTIVE TECHNOLOGIES AND TECHNOLOGICAL SUPERIORITY

1. *The Integral Role of Research and Development in Naval Forces amidst Emerging and Disruptive Military Technologies*, **Octavian-Gabriel CHIRIAC, Andreea ROSTOGOL, Adriana-Georgiana AGAPE, Fănel RĂDULESCU**, Diving Centre, Constanța, Romania
2. *Methods Regarding the Emerging Technological Phenomena of Modern Security in Nonlinear Dynamic Systems. Application Studies and Identifications Methods*, **Ștefan-Gabriel GEORGESCU**, University POLITEHNICA of Bucharest, Romania
3. *The Use of Drones in Tactical Military Operation in the Integrated and Cybernetic Battlefield*, **Laurențiu GRIGORE, Cristian CRISTESCU**, “Nicolae Bălcescu” Land Forces Academy, Sibiu, Romania
4. *Characteristic Elements of Combat Drones in Military Actions. Unmanned Aerial Vehicles Procured by Romanian Armed Forces*, **Gheorghe MINCULETE***, **Veronica PĂSTAE****, * “Nicolae Bălcescu” Land Forces Academy, Sibiu, Romania, ** “Carol I” National Defense University, Bucharest, Romania
5. *Essential Approaches to the Future Soldier’s Necessity to Use the Passive Exoskeleton*, **Gheorghe MINCULETE, Ioan VIRCA**, “Nicolae Bălcescu” Land Forces Academy, Sibiu, Romania
6. *Flexible Cartridge Sorting Cell Using Parallel Robot “BulletSort TOPCODPET”*, **Ionuț-Cristian ȚOPA***, **Tudor-Cătălin CODREANU****, **Silviu-Mihai PETRIȘOR****, * “Lucian Blaga” University of Sibiu, Romania, ** “Nicolae Bălcescu” Land Forces Academy, Sibiu, Romania







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