

***“VASIL LEVSKI” NATIONAL MILITARY UNIVERSITY,
“ARTILLERY, AIR DEFENSE AND CIS” FACULTY, SHUMEN, BULGARIA
MILITARY TECHNICAL ACADEMY “FERDINAND I”, ROMANIA
“HENRY COANDA” AIR FORCE ACADEMY, BRASOV, ROMANIA
WAR STUDIES UNIVERSITY, WARSAW, POLAND
MILITARY UNIVERSITY OF TECHNOLOGY, WARSAW, POLAND
„SPIRU HARET“ UNIVERSITY BUCHAREST, ROMANIA,
POLISH AIR FORCE UNIVERSITY, DEMBLIN, POLAND
REZEKNE ACADEMY OF TECHNOLOGIES, REZEKNE, REPUBLIC OF LATVIA***

ARTILLERY, AD AND CIS FACULTY



DEFENSE TECHNOLOGY FORUM 2025

AGENDA

DEFENSE TECHNOLOGY FORUM 2025 SHUMEN

SEPTEMBER 24–25, 2025

Shumen, Bulgaria

ORGANIZING COMMITTEE

GENERAL CO-CHAIRS

- Brig. Gen. Eng. Stancho KAYKOV, Rector and Commandant of “Vasil Levski” National Military University, Bulgaria
- Brig. Gen. Prof. Eng. Iulian-Constantin VIZITIU, PhD, Rector and Commandant of Military Technical Academy “Ferdinand I”, Romania
- Brig. Gen. Assoc. Prof. Marius ȘERBESZKI, PhD, Commandant - Rector of “Henry Coanda” Air Force Academy, Romania
- Brig. Gen. Prof. DSc. Przemysław WACHULAK, Rector and Commandant of Military University of Technology, Poland
- Gen. (ret.) Mieczysław GOCUŁ, PhD, Rector of War Studies University, Warsaw
- Prof. Gheorghe DUDA, PhD, Erasmus+ Institutional Coordinator - “Spiru Haret” University, Romania
- Brig. Gen. Eng. Pilot Krzysztof CUR, PhD, Commandant Rector of Polish Air Force University, Demblin, Poland

CONFERENCE CO-CHAIRS

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- Col. (AF) Prof. Eng. Cristian-Emil MOLDOVEANU, PhD, Military Technical Academy “Ferdinand I”, Bucharest, Romania
- Col. Assoc. Prof. Eng. Laurian GHERMAN, PhD, “Henry Coanda” Air Force Academy, Brasov, Romania
- LTC Assoc. Prof. Eng. B. BIERNACIK, PhD, War Studies University, Poland
- Brig. Gen. DSc. Eng. Przemysław WACHULAK, PhD, Military University of Technology, Poland
- Col. Eng. Jarosław GAŚSIOR, PhD, Military University of Technology, Poland
- Prof. Gheorghe DUDA, PhD, “Spiru Haret” University, Romania
- Lt Col. Daniel MICHALSKI, PhD, of the Polish Air Force University, Demblin, Poland

PROGRAM COMMITTEE

CHAIR

- Col. Assoc. Prof. Eng. V. GANEV, PhD, Vice Dean of Artillery, Air Defense and CIS Faculty, “Vasil Levski” National Military University

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- LTC Assis. Prof. Eng. B. BIERNACIK, PhD, WSU, Poland
- LTC Cristian ENE, “Henry Coanda” Air Force Academy, Romania
- DSc, Eng. prof. Zbigniew LECIEJEWSKI, PhD, MUT, Poland
- Prof. Grigore ALBEANU, PhD, Dean of the Faculty of Engineering and Computer Science, “Spiru Haret” University, Romania

Defense Technology Forum Shumen 2025 Wednesday 24th September 2025	
08:30 - 10:00	Registration
10:00 – 10:30	Opening Ceremony / Artillery, Air Defense, Communication and Information Systems Faculty-Shumen Room 08211, Block 08, II floor
10:30 – 10:50	Plenary Session 1: CPT. Asst. Prof. Eng. Florin-Marian DIRLOMAN , PhD Octavian GRIGOROIU, Adrian-Nicolae ROTARIU, Cristian-Emil MOLDOVEANU, Dana Andreea Alexandra PÎRVOI, Mădălina-Gabriela BUTNARU, Octavian CHIRIAC Military Technical Academy “Ferdinand I”, Bucharest, Romania <i>Experimental and Computational Fluid Dynamics Simulations for Water Jet Propulsion using Explosive Energy Optimisation</i>
10:50 – 11:20	Plenary Session 2: Lt.Col. Bartosz BIERNACIK, PhD Eng. War Studies University, Warsaw, Poland <i>Artificial Intelligence in Military Decision Making Process&Threat or Opportunity</i>
11:20 – 11:40	Plenary Session 3: LtCol. Assoc. Prof. Linko Nikolov, PhD Artillery, Air Defense, Communication and Information Systems Faculty, Shumen, National Military University „Vasil. Levski” <i>Challenges for the cybersecurity education in the defence and security field</i>
11:40– 12:10	Coffee Break
12:10– 12:20	Company exhibition - "Cloud hosting services from Max1 Cloud - Shumen"
12:20– 12:30	Company exhibition - from 8Cell
12:30– 13:40	Company exhibition - Telepol
12:40– 12:50	Company exhibition - Scientific Research Technological Institute
12:50– 13:00	Company exhibition - Arsenal AD
13:00 – 14:00	Lunch Break – pre ordered only

14:00 – 15:00	International Scientific Conference – Workgroup Sessions: • Defense and Security - Section work • Weapons, Technologies, Logistics - Section work • Communication and Computer Technologies - Section work • Cybersecurity - • Geodesy - Section work • Social studies - Section work
15:00 – 15:15	Coffee Break
15:15 – 18:00	Section work
19:00	Official Dinner Grand Hotel Shumen- pub
Thursday 25th September	
09:00 – 13:00	Section work • Defense and Security • Weapons, Technologies, Logistics • Communication and Computer Technologies • Cybersecurity • Geodesy • Social studies
10:30 – 10:45	Coffee Break
10:45 – 13:00	Section work • Defense and Security • Weapons, Technologies, Logistics • Communication and Computer Technologies • Cybersecurity • Geodesy • Social studies
13:00 – 14:30	Lunch Break
14:30 – 17:30	Section work • Defense and Security • Weapons, Technologies, Logistics • Communication and Computer Technologies • Cybersecurity • Geodesy • Social studies
17:30	Closing Ceremony

WORKGROUP SESSION
SECTION
DEFENSE AND SECURITY

Chairman: Col. Assoc. Prof. Stoyan N. Chanev, PhD

Location: Room 08401, Block 08, IV floor

Wednesday 24th September 2025

- 14.00-14.20 *1. DEFENCE FROM DRONES*
Radina Boteva Ivanova
Faculty of Artillery, Air Defense and Communication and Information Systems, National Military University, Shumen, Bulgaria,
- 14.20-15.25 *Question and discussion*
- 14.25-15.55 *1 HISTORY OF THE DEVELOPMENT OF ANTI-TANK GUIDED MISSILES*
2 CAUSES AND FACTORS FOR THE OCCURENCE OF WATER CONFLICT IN THE WORLD
3 BASIC REQUIREMENTS FOR JET ARTILLERY IN MODERN OPERATIONS
4 ARTILLERY AND AIRCRAFT BATTERIES HIT THE ENEMY IN A COUNTER-BATTERY FIGHT
5 PROTECTION OF WATER RESOURCES DURING ARMED CONFLICT
Veliko P. Petrov
Faculty of Artillery, Air Defense and Communication and Information Systems,
National Military University, Shumen, Bulgaria
- 15.55-16.00 *Question and discussion*
- 16.00-16.20 *COLLECTIVE DEFENSE IN THE ERA OF EMERGING THREATS*
Viktor Danielov Popov, Kristian Krasimirov Hristov
Artillery, Air Defense, Communication and Information Systems Faculty, Shumen, National Military University „Vasil. Levski”
- 16.20-16.25 *Question and discussion*
- 16.25-16.45 *ALGORITHM FOR SERVICING REQUESTS FROM A MULTISENSOR SYSTEM*
Matey K. Kirov
Department of Air Defense, Artillery, Air Defense and CIS Faculty at the Vasil Levski National Military University,, Shumen, Bulgaria
- 16.45-16.50 *Question and discussion*
- 16.50-16.55 *THE ROLE OF DRONES IN THE WAR IN UKRAINE AND LESSONS FOR MODERN MILITARY STRATEGY*
Teodor I. Dzhunov

GBAD unit, Pleven, Bulgaria

16.55-17.00 *Question and discussion*

17.00-17.20 RESEARCH AND SELECTION OF EXISTING METHODS AND FORMS FOR DESCRIPTION, ANALYSIS AND EVALUATION OF COMMAND AND CONTROL SYSTEMS

Ivo G. Radulov

Rakovski National Defence College, Defence Advanced Research Institute, 1504 Sofia, Bulgaria, 82 Evlogi i Hristo Georgievi Blvd

17.20-17.25 *Question and discussion*

17.25-17.45 LOSS OF RUSSIAN NAVAL SHIPS IN THE RUSSIAN-UKRAINIAN WAR: ANALYSIS OF CAUSES AND CONSEQUENCES

Krasimir S. Angelov

Faculty of Navigation, Nikola Vaptsarov Naval Academy, Varna, Bulgaria

17.45-17.50 *Question and discussion*

Thursday 25th September

09.00-09.20 LEGAL AND REGULATORY FRAMEWORK IN THE FIELD OF CORPORATE SECURITY

Desislava D. Georgieva

Faculty of Technical Sciences, Shumen University Bishop Konstantin Preslavski, Shumen, Bulgaria

09.20-09.25 *Question and discussion*

09.25-10.25 1 OPPORTUNITIES FOR REMOTELY PILOTED AIRCRAFT SYSTEMS' EMPLOYMENT FOR COUNTER-BATTERY WARFARE

2 EXPERIMENTAL RESEARCH OF THE POSSIBILITIES FOR INCREASING THE EFFECTIVENESS OF RECONNAISSANCE IN THE INTEREST OF COUNTER-BATTERY WARFARE USING UAVS.

3 COUNTER-BATTERY WARFARE IN THE CONTEXT OF FIRE SUPPORT IN CONTEMPORARY LAND OPERATIONS

Ivelin G. Katsev

Faculty of Artillery, Air Defense and Communication and Information Systems, National Military University, Shumen, Bulgaria, katsev.i@abv.bg

10.25-10.30 *Question and discussion*

10.30-10.45 *Coffee Break*

10.45-11.25 1 COMBAT FUNCTIONS AND KEY FACTORS FOR THE EFFECTIVENESS OF AMPHIBIOUS OPERATIONS IN THE CONDITIONS OF THE MODERN OPERATING ENVIRONMENT

2 A NEW PARADIGM FOR AMPHIBIOUS OPERATIONS: A RISK ASSESSMENT ALGORITHM IN THE MULTI-DOMAIN ENVIRONMENT

Ivaylo I. Hinov

*"G. S. Rakovski" National Defence College, "Command and Staff" Faculty ,
Department "Land Forces"*

11.25-11.30 *Question and discussion*

11.30-11.50 METHODOLOGY FOR RESEARCHING INFORMATION SECURITY
RISKS IN TECHNOLOGICAL SYSTEMS

Hristo A. Desev

*National Military University "V. Levski", Artillery, "Air Defense and
CIS" Faculty Shumen*

11.50-11.55 *Question and discussion*

11.55-12.15 THE MILITARY LEADER AND ARTIFICIAL INTELLIGENCE

Kaloyan A. Iliev, Alexandra K. Vladova

*Faculty of Artillery, Air Defense and Communication and
Information Systems, National Military University, Shumen,
Bulgaria*

12.15-12.20 *Question and discussion*

12.20-12.35 COUNTER-BATTERY WARFARE – A FACTOR FOR FIRE
SUPERIORITY

Kaloyan A. Iliev, Ivan K. Vladov

*Faculty of Artillery, Air Defense and Communication and
Information Systems, National Military University, Shumen,
Bulgaria*

12.35-12.40 *Question and discussion*

12.40-12.55 UAV IN THE BATTLEFIELD

Linko Nikolov, Nikola Petrov, Vladislava Georgieva

*Faculty of Artillery, Air Defense and Communication and
Information Systems, National Military University, Shumen,
Bulgaria*

12.55-13.00 *Question and discussion*

13.00-14.00 *Lunch Break*

14.00-14.20 THE EUROPEAN UNION AND MODERN STRATEGIC COMPETITION
– DESIRE AND REALITY

Stoyn Stoychev

University of Library Studies and Information Technologies

14.20-14.25 *Question and discussion*

14.25-14.45 NEW OPPORTUNITIES FOR STRATEGIC DETERRENCE -
CHALLENGES AND PROSPECTS

Totko Simeonov Simeonov

University of Library Studies and Information Technologies

14.45-14.50 *Question and discussion*

14.50-15.10 ROBUSTNESS AND RESILIENCE – FEASIBILITY IN MILITARY FIELD

Kalin V. Gradev

*"G. S. Rakovski" National Defence College, "Command and Staff"
Faculty, Department "Land Forces"*

15.10-15.15 *Question and discussion*

15.15-15.55 *1 POSSIBILITIES FOR INTEGRATION OF UNMANNED AIRCRAFT
SYSTEMS INTO ARTILLERY REGIMENT*

*2 SOME PROBLEMS IN THE BULGARIAN ARTILLERY AT THE
BEGINNING OF THE 21ST CENTURY*

Ivaylo Zh. Bozov

*Faculty of Artillery, Air Defense and Communication and
Information Systems, National Military University, Shumen*

15.55-16.00 *Question and discussion*

16.00-16.20 *ANALYSIS OF THE PRINCIPLES OF RESPONSE AND PREVENTION OF
EMERGENCIES ON THE TERRITORY OF THE REPUBLIC OF BULGARIA*

Ivan K. Vladov

*Faculty of Artillery, Air Defense and Communication and
Information Systems, National Military University, Shumen*

16.20-16.25 *Question and discussion*

16.25-16.45 *SECURITY IN COMPLEX ORGANIZATIONAL SYSTEMS. HYBRID AND
DYNAMIC THREATS*

Tsvetelina I. Metodieva

*Faculty of Technical Sciences, Department of Communication and
Computer Engineering and Security Technologies, Konstantin
Preslavsky University of Shumen, Shumen, Bulgaria*

16.45-16.50 *Question and discussion*

16.50-17.05 *ADAPTIVE AND INTELLIGENT MODELS IN THE CONTEXT OF
ORGANIZATIONAL SECURITY*

Yasen M. Vichkov, Yavor R. Luchanski Vanya H. Zarkova

*Faculty of Technical Sciences, Department of Communication and
Computer Engineering and Security Technologies, Konstantin
Preslavsky University of Shumen, Shumen, Bulgaria*

17.05-17.10 *Question and discussion*

17.10-11.25 *HIGH-ENERGY LASERS: MODERN SOLUTIONS FOR AIR DEFENSE*

Georgi Orlinov Georgiev

*Air Defence Department, National Military University "Vasil Levski", Shumen,
Bulgaria,*

17.25-17.30 *Question and discussion*

17.30 *Departure*

WORKGROUP SESSION SECTION

WEAPONS, TECHNOLOGIES, LOGISTICS

Chairman: Col. Eng. Assoc. Prof Conuy G. Conev, Ph.D.

Location: Room 08106, Block 8, floor I

Wednesday 24th September 2025

14.00-14.20 *PYROTECHNIC COMPOSITIONS IN ILLUMINATING AIRBOMBS AND FLARE PARACHUTE TARGETS—COMPOSITION EXAMINATION AND APPLICATION*

Ivelina Ivanova Angelska
NITI SHS Kazanlak, Bulgari

14.20-14.25 *Question and discussion*

14.25-14.45 *DIGITAL AND INFORMATIC TOOLS FOR BALLISTICS EDUCATION*

Cristian-Emil Moldoveanu, Pamfil Şomoiaş, Andrada-Livia Cîrneanu, Alin-Constantin Sava
Military Technical Academy “Ferdinand I”, Bucharest, Romania

14.45-14.50 *Question and discussion*

14.50-15.10 *COMPARATIVE ANALYSIS OF SHAPED CHARGE AND WATER JETS: THE INFLUENCE OF SHOCK IMPEDANCE ON TARGET RESPONSE*

Dana Andreea Alexandra Pîrvoi, Liviu-Cristian Matache, Mădălina-Gabriela Butnaru, Florin-Marian Dîrloman, Pamfil Şomoiaş
Military Technical Academy “Ferdinand I”, Bucharest, Romania

15.10-15.15 *Question and discussion*

15.15-15.30 *Coffee Break*

15.30-15.50 *EXPERIMENTAL ASSESSMENT OF HANDGUN DYNAMICS UNDER DIFFERENT PROPELLANT CHARGES*

Lavinu Octavian Haller , George Dobrin, Mădălina-Gabriela Butnaru
Military Technical Academy “Ferdinand I”, Bucharest, Romania

15.50-15.55 *Question and discussion*

15.55-16.15 *MANUFACTURING AND TESTING OF A SMALL SIZE EXPLOSIVE CHARGE USED TO PROPELL STEEL BALLS ARRANGED IN PLANAR DOUBLE LAYERS*

Alexandru Enache, Adrian-Nicolae Rotariu, Liviu-Cristian Matache, Florin-Marian Dîrloman, Florina Bucur, Alexandra-Ioana Dan, Octavian Chiriac

Military Technical Academy "Ferdinand I", Bucharest, Romania

16.15-16.20 *Question and discussion*

16.20-16.40 *NEW BEGINNING WITH OLD PROBLEMS IN IMPLEMENTING A LOGISTICS INFORMATION SYSTEM*

Svetozar B. Botev

Logistic Support Command Sofia, sitenaz@abv.bg

16.40-16.45 *Question and discussion*

16.45-17.15 *1 UNCONVENTIONAL STORAGE STRATEGIES IN LOGISTICS*

2 LOGISTICS STRATEGIES FOR ORGANIZING TRANSPORT AND WAREHOUSE ACTIVITIES

Andrey I. Bogdanov, Krasimir G. Kalev

Konstantin Preslavski University Of Shumen, Shumen 9712, 115 Universitetska Str National military university "V. Levski", Artillery, Air Defense And Communication Systems Faculty - Shumen ,

17.15-17.20 *Question and discussion*

17.20-17.40 *SYSTEM FOR PROCESSING PET WASTE WITH APPLICATION IN FDM TECHNOLOGIES*

Martin G. Dimitorov

Faculty "Artillery, Airforce defense and CIS" faculty, National military university "Vasil Levski", Shumen, Bulgaria

17.40-17.45 *Question and discussion*

Thursday 25th September

09.00-09.15 *OPTIMISATION OF EXISTING MECHANICAL COMPONENTS THROUGH TOPOLOGICAL DESIGN AND REVERSE ENGINEERING*

Kristian Krasimirov Hristov, Viktor Danielov Popov

Faculty of Artillery, Air Defense and Communication and Information Systems, National Military University, Shumen, Bulgaria

09.15-09.20 *Question and discussion*

09.20-09.35 *SNIPER SYSTEMS - ROLE AND DEVELOPMENTS IN THE 21ST CENTURY*

Petya Nikolaeva Stefanova, Kristian Krasimirov Hristov, Kristiyan Hristov Kostadinov

Faculty of Artillery, Air Defense and Communication and Information Systems, National Military University, Shumen, Bulgaria

09.35-09.40 *Question and discussion*

09.40-10.10 *1 INVESTIGATION OF THE USE OF 3D-PRINTED MAGAZINES FOR THE "KALASHNIKOV" ASSAULT RIFLE AS AN ALTERNATIVE TO METALLIC*

MODELS

2 MECHANISM OF BRITTLE FRACTURE OF METAL SHELLS AT CRYOGENIC TEMPERATURES

Miroslav Dimitrov

Faculty of Artillery, Air Defense and Communication and Information Systems, National Military University, Shumen, Bulgaria

10.10-10.15 *Question and discussion*

10.15-10.30 *Coffee Break*

10.30-10.45 3D PRINTING IN THE MILITARY INDUSTRY - THE FUTURE OF REPAIR AND PRODUCTION

Petya Nikolaeva Stefanova, Viktor Danielov Popov, Kristiyan Hristov Kostadinov

Faculty of Artillery, Air Defense and Communication and Information Systems, National Military University, Shumen, Bulgaria

10.45-10.50 *Question and discussion*

10.50 – 11.05 ARE DRONES WITH OPTICAL FIBER SUPERIOR TO FOURTH-GENERATION ANTI-TANK MISSILE SYSTEMS

Atanas St. Atanasov

“G. S. Rakovski” National Defence College, “Command and Staff” Faculty, Department “Land Forces”

11.05-11.10 *Question and discussion*

11.10– 11.25 RISK ASSESSMENT IN THE OPERATION OF BOILERS AND PRESSURE EQUIPMENT IN DOMESTIC AND INDUSTRIAL CONDITIONS

Aleksandra P. Docheva¹, Daniel R. Denev²

Faculty of Technical Sciences, Department of Communication and Computer Engineering and Security Technologies, Konstantin Preslavsky University of Shumen, Shumen, Bulgaria,

11.25-11.30 *Question and discussion*

11.30-11.35 INDUSTRIAL ENGINEERING AND LOGISTICS IN THE CONTEXT OF EDUCATION

Yordanka I. Yankova-Yordanova¹, Tsvetoslav S. Tsankov²

¹Faculty of Technical Sciences, Department of Engineering Logistics, Konstantin Preslavsky University of Shumen, Shumen, Bulgaria

²Faculty of Technical Sciences, Department of Communication and Computer Engineering and Security Technologies, Konstantin Preslavsky University of Shumen, Shumen, Bulgaria

11.35-11.40 *Question and discussion*

11.40-11.55 AUTOMATED PARKING SYSTEM WITH ARTIFICIAL INTELLIGENCE IN URBAN INFRASTRUCTURE WITH APPLICATION IN THE CITY OF

SHUMEN

Tsveta a. Zhekova¹, Tsvetoslav S. Tsankov²

¹Faculty of Architecture, Department of Architecture and Urban Planning, Varna Free University "Chernorizets Hrabar", Varna, Bulgaria

²Faculty of Technical Sciences, Department of Communication and Computer Engineering and Security Technologies, Konstantin Preslavsky University of Shumen, Shumen, Bulgaria

11.55-12.00 *Question and discussion*

12.00-12.15 TECHNOLOGICAL DEVELOPMENT AND INNOVATIONS IN CONCEALED FIRING SYSTEMS FOR URBAN COMBAT

Zornitsa N. Mladenova-Angelova¹, Tsvetoslav S. Tsankov²

Faculty of Technical Sciences, Department of Communication and Computer Engineering and Security Technologies, Konstantin Preslavsky University of Shumen, Shumen, Bulgaria

12.15-12.20 *Question and discussion*

12.20-12.35 AUTONOMOUS VEHICLES IN DRIVER TRAINING AND TESTING

Silviya H. Nikolova, Tsvetoslav S. Tsankov

Faculty of Technical Sciences, Department of Communication and Computer Engineering and Security Technologies, Konstantin Preslavsky University of Shumen, Shumen, Bulgaria

12.35-12.40 *Question and discussion*

12.40-12.55 LONG-HAUL TRUCK WITH AI-BASED DRIVER ASSISTANCE SYSTEMS FOR EUROPEAN TRANSPORT CORRIDORS

Silviya H. Nikolova, Ekaterina M. Hristova

Faculty of Technical Sciences, Department of Communication and Computer Engineering and Security Technologies, Konstantin Preslavsky University of Shumen, Shumen, Bulgaria

12.55-13.00 *Question and discussion*

13.00-14.00 *Lunch Break*

14.00-14.15 LIGHTWEIGHT AND OPTIMIZED BOLT CARRIER GROUP IN THE KALASHNIKOV ASSAULT RIFLE

Hristo An. Hristov, Tsvetoslav S. Tsankov

Faculty of Technical Sciences, Department of Communication and Computer Engineering and Security Technologies, Konstantin Preslavsky University of Shumen, Shumen, Bulgaria

14.15-14.20 *Question and discussion*

14.20-14.50 *1 ASPECTS OF THE DEVELOPMENT OF MILITARY STRATEGIC CAPABILITIES IN THE BLACK SEA REGION*

2 OPERATIONS ASSESSMENT

Danko D. Farazov

Rakovski National Defence College, Sofia, Bulgaria

<u>14.50-14.55</u>	<i>Question and discussion</i>
<u>14.55-15.25</u>	1 COMPARATIVE ANALYSIS OF THE VARIATION IN THE BALLISTIC CHARACTERISTICS OF 7.62×39 MM AND 7.62×54 MM AMMUNITION WITH MODIFIED PROJECTILE GEOMETRY DURING FLIGHT IN AIR 2 TOLERANCES AND ASSEMBLIES IN CAD/CAM SYSTEMS Rosen N. Lazarov Department "Armament and technology for design", National Military University "Vasil Levski", Shumen, Bulgaria
<u>15.25-15.30</u>	<i>Question and discussion</i>
<u>15.30-15.45</u>	INNOVATIONS AND DIRECTIONS IN THE DEVELOPMENT OF AMMUNITION FOR UNMANNED COMBAT AERIAL VEHICLES Krasimir G. Kaley National military university "V. Levski", Artillery, Air Defense And Communication Systems Faculty –Shumen
<u>15.45-15.50</u>	<i>Question and discussion</i>
<u>15.50-16.05</u>	CIVIL-MILITARY INTERACTION: MILITARY AND CIVIL ASPECTS Milen N. Kisiov Rakovski National Defence College, Sofia, Bulgaria
<u>16.05-16.20</u>	<i>Question and discussion</i>
<u>16.20-16.35</u>	INFORMATION SYSTEMS FOR MANAGEMENT OF THE ACTIVITIES OF A LOGISTICS SYSTEM FOR STRATEGIC DATABASES Petar Petrov PhD student, Doctoral program: „Engineering Logistics“ Shumen University „Episkop Konstantin Preslavski“,
<u>16.35-16.40</u>	<i>Question and discussion</i>
<u>16.40-17.10</u>	1 CAVITATION WEAR – DEFINITION, MECHANISM, AND NATURE OF MANIFESTATION 2 WEAPONRY RESEARCH: CONCEPTS AND METHODS Yana D. Dimitrova, Rosen N. Lazarov Artillery, Air Defense and CIS Faculty, "Vasil Levski" National Military University, Shumen, Bulgaria
<u>17.10-17.15</u>	<i>Question and discussion</i>
<u>17.15-17.30</u>	GUIDELINES FOR THE DEVELOPMENT OF EUROPEAN UNION POLICIES FOR PROTECTION OF THE RIGHTS OF CITIZENS WHO HAVE LEFT THEIR COUNTRY DUE TO MILITARY CONFLICT Georgi Ivanov Dzhurkov Defense Headquarters, Logistics Directorate, Republic of Bulgaria
<u>17.30-17.35</u>	<i>Question and discussion</i>
<u>17.35</u>	<i>Departure</i>

WORKGROUP SESSION SECTION

COMMUNICATION AND COMPUTER TECHNOLOGIES

Chairman: LtCol. Assoc. Prof. Krasimir Ognyanov Slavyanov, PhD

Location: Room 25106, Blok 25, floor I

Wednesday 24th September 2025

14.00-14.20

PERFORMANCE ANALYSIS OF HYBRID DESIGN AND CODING TECHNIQUES FOR ERROR REDUCTION IN MISSION-CRITICAL COMMUNICATION SYSTEMS

Stanimir H. Parvanov, Deyan N. Dimitrov

Air Defense Department, Artillery, Air Defense Communication and Information Systems Faculty, National Military University „V. Levski”, Shumen, Bulgaria

14.20-14.25

Question and discussion

14.25-14.45

MIRROR COMPONENT ANALYSIS ABOUT REREFLECTION BY SPREAD SURFACE

Vencislav M. Vasilev, Todor G. Peshev

Air Defense Department, Artillery, Air Defense Communication and Information Systems Faculty, National Military University „V. Levski”, Shumen, Bulgaria

14.45-14.50

Question and discussion

14.50-15.10

ELECTRONIC NEUTRALIZERS FOR COUNTER UNMANNED AERIAL SYSTEMS

Deyan N. Dimitrov

Department of Air Defense, Artillery, Air Defense and CIS Faculty at the Vasil Levski National Military University,, Shumen, Bulgaria

15.10-15.15

Question and discussion

15.15-15.30

Coffee Break

15.30-15.50

CONDITIONS FOR THE INDEPENDENT PERFORMANCE OF OPTIMAL SPATIOTEMPORAL SIGNAL PROCESSING WHEN DETECTING A USEFUL SIGNAL AGAINST THE BACKGROUND OF EXTERNAL INTERFERENCE

Ivan i. Iliev, Georgi A. Kozarev

Faculty of Artillery, Air Defense and Communication and Information Systems, National Military University, Shumen, Bulgaria

15.50-15.55

Question and discussion

- 15.55-16.15 FORMATION DIRECTIVITY DIAGRAM BY METRIC RADAR
Georgi P. Iliev
Faculty of Artillery, Air Defense and Communication and Information Systems, National Military University, Shumen, Bulgaria
- 16.15-16.20 *Question and discussion*
- 16.20-16.20 APPLICATION OF THE MONTE CARLO METHOD FOR PARTICLE FILTERING AS A TECHNIQUE FOR TRACKING THE TRAJECTORY OF A SINGLE FLYING OBJECT
Deyan A. Atanasov, Matey K. Kirov, Nikolay Z. Kulev
Artillery, Air Defense Faculty, Vasil Levski National Military University, Shumen, Bulgaria
- 16.40-16.45 *Question and discussion*
- 16.45-17.05 INTELLIGENT SYSTEM FOR REMOTE CONTROL AND VISUALIZATION OF MULTIMEDIA OBJECTS THROUGH AUTOMATED NETWORK ARCHITECTURE
Emili K. Dimitrova¹, Daniel R. Denev², Veselka Stoyanova³
¹Faculty of Mathematics and Computer Science, Department of Computer Informatics, Konstantin Preslavsky University of Shumen, Shumen, Bulgaria
²Faculty of Technical Sciences, Department of Communication and Computer Engineering and Security Technologies, Konstantin Preslavsky University of Shumen, Shumen, Bulgaria
³National Military University, Faculty of Artillery, AAD and KIS, Shumen, Bulgaria
- 17.05-17.10 *Question and discussion*
- 17.10-17.30 INTELLIGENT GARAGE DOOR CONTROL SYSTEM VIA PLC WITH BUILT-IN SAFETY SENSORS
Aleks Ya. Danev, Daniel R. Denev
Faculty of Technical Sciences, Department of Communication and Computer Engineering and Security Technologies, Konstantin Preslavsky University of Shumen, Shumen, Bulgaria
- 17.30-17.35 *Question and discussion*

Thursday 25th September

- 09.00-09.20 OPTIMIZATION OF CONTROL IN SOFTWARE-DEFINED NETWORKS THROUGH COMBINED MACHINE LEARNING MODELS
Ekaterina M. Hristova, Ivaylo I. Petrov
Faculty of Technical Sciences, Department of Communication and Computer Engineering and Security Technologies, Konstantin Preslavsky University of Shumen, Shumen, Bulgaria
- 09.20-09.25 *Question and discussion*

09.25-09.45 RESEARCHING THE PERFORMANCE OF SOFTWARE-DEFINED NETWORKS THROUGH THE APPLICATION OF HYBRID MODELS FOR PREDICTIVE ANALYSIS

Ekaterina M. Hristova¹, Petar G. Sotirov²

Faculty of Technical Sciences, Department of Communication and Computer Engineering and Security Technologies, Konstantin Preslavsky University of Shumen, Shumen, Bulgaria

09.45-09.50 *Question and discussion*

09.50-10.10 TRENDING CLOUD-BASED SOLUTIONS

Damyan Enchev, Miroslav Cholakov

Max 1 Cloud

10.10-10.15 *Question and discussion*

10.15-10.35 STUDY OF THE POSSIBILITY OF USING A MISMATCHED FILTER IN THE PASSIVE RADAR RECEIVER

Yosif V. Yosifov

Faculty of Artillery, Air Defense and Communication and Information Systems, National Military University, Shumen, Bulgaria

10.35-10.40 *Question and discussion*

10.40-11.00 *Coffee Break*

11.00-11.40 1 CONTEMPORARY TECHNOLOGIES FOR INTEGRATED NAVIGATION SYSTEMS IN UNMANNED AERIAL VEHICLES

2 NEURAL NETWORK APPLICATIONS IN KALMAN FILTER PROCESSING

Vladislav M. Genoff

Department "Computer Systems and Technologies", "Artillery, Air defense and CIS" Faculty, "Vasil Levski" National Military University, Shumen, Shumen, Bulgaria

11.40-11.45 *Question and discussion*

11.45-12.40 1 MODERN ARTIFICIAL INTELLIGENCE TECHNOLOGIES FOR RECOGNITION MILITARY OBJECTS IN OPTICAL IMAGES: A COMPUTER EXPERIMENT WITH NEURAL NETWORKS IN MATLAB.

2 MODERN ARTIFICIAL INTELLIGENCE TECHNOLOGIES FOR DETECTION AND RECOGNITION OF PARTIALLY VISIBLE MILITARY OBJECTS IN OPTICAL IMAGES

3 MODERN ARTIFICIAL INTELLIGENCE TECHNOLOGIES FOR DETECTING AND RECOGNIZING PARTIALLY VISIBLE OBJECTS WITH MILITARY PURPOSE IN OPTICAL IMAGES: A COMPUTER EXPERIMENT WITH TRANSFER LEARNING IN MATLAB

Lyubomir E. Manov

Department "Computer Systems and Technologies", "Artillery, Air defense and CIS" Faculty, "Vasil Levski" National Military University, Shumen, Shumen, Bulgaria

<u>12.45-12.50</u>	<i>Question and discussion</i>
<u>12.50-13.10</u>	NETWORK TOPOLOGY OF A SIMULATION TRAINING ENVIRONMENT FOR INDUSTRIAL CYBERSECURITY RESEARCH <i>Krasimir O. Slavyanov</i> Department "Computer systems and technologies", National Military University "Vasil Levski", Shumen, Bulgaria
<u>13.10-13.55</u>	<i>Question and discussion</i>
<u>13.55-14.15</u>	CYBERSECURITY ASPECTS OF TECHNICAL INFRASTRUCTURE IN CLOSED CORPORATE NETWORKS NOT CONNECTED TO INTERNET <i>Peter I. Radev, PhD Yavor Z. Dechev</i> Department "Computer systems and technologies", National Military University "Vasil Levski", Shumen, Bulgaria
<u>14.15-14.20</u>	<i>Question and discussion</i>
<u>14.30</u>	<i>Departure</i>

WORKGROUP SESSION
SECTION
CYBERSECURITY

Chairman: LtCol. Assoc. Prof. Linko Nikolov, PhD

Location: Room 08303, Blok 8, floor III

Wednesday 24th September 2025

14.00-15.00

1 SOCIAL ENGINEERING – REVEALING THE PSYCHOLOGY BEHIND CYBERATTACKS AND HOW TO PROTECT OURSELVES

2 ADVANCED TECHNIQUES FOR DETECTING DDOS ATTACKS AND APPROACHES IN PREVENTIVE MITIGATION SYSTEMS

3 METHODS AND MEANS FOR RECORDING, PRESERVING, AND PROTECTING CRITICAL INFORMATION

Damyan Kushev, Vladimir Kostadinov, Daniel Mitich

Artillery, Air Defense, Communication and Information Systems Faculty, Shumen, National Military University „Vasil. Levski”

15.05-15.10

Question and discussion

15.10-15.30

COMPUTER PROGRAM FOR CRYPTOGRAPHIC PROTECTION OF SENSITIVE INFORMATION OF A SMALL COMPANY USING KEY DISTRIBUTION VIA THE DIFFIE-HELLMAN PROTOCOL

Julian D. Dimitrov, Vladislava S. Georgieva, Georgi O. Georgiev, Kristian K. Hristov

Communication Networks and Systems Department, Artillery, Air Defense, Communication and Information Systems Faculty, National Military University „V. Levski”, Shumen, Bulgaria

15.30-15.35

Question and discussion

15.35-16.50

Coffee Break

15.50-16.10

MODERN APPROACHES AND METHODS TO ANALYSIS AND PREVENTION OF MALICIOUS EMAILS USING MACHINE LEARNING AND AUTOMATION

Petar Dimitrov, Tsvetelina Mateeva, Elena Karadzhova

Artillery, Air Defense, Communication and Information Systems Faculty, Shumen, National Military University „Vasil. Levski”

16.10-16.15

Question and discussion

16.15-16.35

ALGORITHM FOR CYBER THREAT INTELLIGENCE UTILIZING THE MITRE ATT&CK FRAMEWORK

Radostin S. Dimov, Zhaneta N. Savova

Computer Systems and Technologies Department, Vasil Levski

National Military University, Shumen, Bulgaria

16.35-16.40 *Question and discussion*

16.40-17.00 INTEGRATING ARTIFICIAL INTELLIGENCE FOR AUTONOMOUS TRAFFIC MANAGEMENT IN INDUSTRIAL NETWORKS AND AUTOMATION SYSTEMS

Ilker A. Hatib, Daniel R. Denev

Faculty of Technical Sciences, Department of Communication and Computer Engineering and Security Technologies, Konstantin Preslavsky University of Shumen, Shumen, Bulgaria

17.00-17.05 *Question and discussion*

17.05-17.25 ARTIFICIAL INTELLIGENCE AND COMPUTER VISION FOR AUTONOMOUS VEHICLES AND ROAD SAFETY

Aleksandar O. Uzunov¹, Galin P. Peychev²

Faculty of Technical Sciences, Department of Communication and Computer Engineering and Security Technologies, Konstantin Preslavsky University of Shumen, Shumen, Bulgaria

17.25-17.30 *Question and discussion*

17.30-17.50 PROTECTING UAVS AGAINST CYBER INTRUSIONS

Nikolay K. Kolev

Faculty of Artillery, Air Defense and Communication and Information Systems, National Military University, Shumen, Bulgaria

17.50-18.00 *Question and discussion*

Thursday 25th September

09.00-09.20 OPPORTUNITIES AND SOLUTIONS FOR IMPROVING DOCUMENT FLOW IN THE BULGARIAN ARMY, BASED ON ARTIFICIAL INTELLIGENCE

Stamen I Antonov *Mariela L Antonova **

* National Military University "Vasil Levski", Artillery, AAD and CIS Faculty

** "Konstantin Preslavsky" University of Shumen

09.20-09.25 *Question and discussion*

09.25-09.45 MALICIOUS NETWORK TRAFFIC OPTIMIZATION VIA DNN-AUTOENCODERS

Angela R. Borisova

Faculty of Artillery, Air Defense and Communication and Information Systems, National Military University, Shumen

09.45-09.50 *Question and discussion*

10.00 *Departure*

WORKGROUP SESSION
SECTION
SOCIAL

Chairman: Col. Eng. Assoc. Prof. Milena H. Lambeva, Ph.D.

Location: Room 25105, Block 25, floor I

Wednesday 24th September 2025

- 14.00-14.30 NON-VERBAL COMMUNICATION – A MANIFESTATION OF POWER
Valya M. Simeonova
Logistic Support Command Sofia
- 14.30-14.40 *Question and discussion*
- 14.40-14.50 GENERATIONS “X Y Z” – HOW TO TRAIN THEM
Teodora Penkova Chalakova
Ministry of Defence of the Republic of Bulgaria, Sofiq
- 14.50-15.00 *Question and discussion*
- 15.00-15.10 *Coffee break*
- 15.10-15.40 SUPPLY MANAGEMENT IN CRISIS CONDITIONS
Petya Nikolaeva Stefanova, Kristian Krasimirov Hristov, Kristiyan Hristov Kostadinov
Faculty of Artillery, Air Defense and Communication and Information Systems, National Military University, Shumen, Bulgaria
- 15.40-15.50 *Question and discussion*
- 15.50-16.20 MODELING A DECISION SUPPORT SYSTEM FOR EMPLOYEE SELECTION USING FUZZY LOGIC METHODS
Elena Karadzhova, Petar Dimitrov, Nikoleta Pehlivanova
Faculty of Artillery, Air Defense and Communication and Information Systems, National Military University, Shumen, Bulgaria
- 16.20-16.30 *Question and discussion*
- 16.30-16.50 A GRAPH-BASED APPROACH FOR MODELING THE SPREAD OF FAKE NEWS
Milena H. Lambeva
Faculty of Artillery, Air Defense and Communication and Information Systems, National Military University, Shumen, Bulgaria
- 16.50-17.00 *Question and discussion*

Thursday 25th September

09.00-09.30 AUTOMATION AND CONSTRUCTION OF INFORMATION SYSTEMS
FOR OPTIMIZATION OF SOCIO-PEDAGOGICAL ACTIVITIES

Stefaniya M. Chervenкова¹, Daniel R. Denev²

¹Faculty of Education, Department of Special and Social Pedagogy, Konstantin Preslavsky University of Shumen, Shumen, Bulgaria,

²Faculty of Technical Sciences, Department of Communication and Computer Engineering and Security Technologies, Konstantin Preslavsky University of Shumen, Shumen, Bulgaria

09.30-09.40 *Question and discussion*

09.40-10.10 THE VIRTUAL CADET

Viktor T. Dobrev

Department of Information Security, Faculty of Artillery, Air Defense and CIS, Vasil Levski National University of Science and Technology, Shumen, Bulgaria

10.10-10.20 *Question and discussion*

10.20-10.45 *Coffee break*

10.45-11.15 THE PAST AS RISK – MEDIA, MEMORY, AND SECURITY IN THE BALKANS

Kaloyan K. Ganchev

Department of History and Archeology, Konstantin Preslavsky University of Shumen, Shumen, Bulgaria

11.15-11.25 *Question and discussion*

11.25-11.55 DISCIPLINARY LIABILITY – A COMPARATIVE LEGAL ANALYSIS OF CADETS, MILITARY PERSONNEL, AND STUDENTS.

Yanitsa Neynska

Faculty of Artillery, Air Defense and Communication and Information Systems, National Military University, Shumen, Bulgaria

11.25-11.35 *Question and discussion*

11.35-12.05 PONEROGENESIS IN AN ARMY ENVIRONMENT

Victor Dobrev

Faculty of Artillery, Air Defense and Communication and Information Systems, National Military University, Shumen, Bulgaria

12.05-12.15 *Question and discussion*

12.30 *Departure*

WORKGROUP SESSION

SECTION

GEODESY

Chairman: Prof. Andrey Ivanov Andreev, DSc

Location: Room 39203, Blok 39 floor II

Wednesday 24th September 2025

14.00-14.20 AN APPROACH FOR DETERMINING THE GEODETIC COORDINATES OF OBJECTS USING TWO UNMANNED AERIAL VEHICLES

Monika B. Bedzheva

NMU "Vasil Levski", Faculty of "Artillery, AD and CIS",
Department "Geodesy", Shumen, Bulgaria

14.20-14.25 *Question and discussion*

14.25-14.45 STUDYING THE INFLUENCE OF LIGHT IN AERIAL PHOTOGRAMMETRY WITH DIGITAL CAMERA

Marin R. Rusev, Alexandra P. Zidarova

NMU "Vasil Levski", Faculty of "Artillery, AD and CIS",
Department "Geodesy", Shumen, Bulgaria

14.45-14.50 *Question and discussion*

14.50-15.10 INTEGRATED TECHNIQUES FOR EARTH DEFORMATION ANALYSIS USING DINSAR AND GNSS

Vesela R. Petrova, Evgeni Gr. Stoykov

"Konstantin Preslavsky" University of Shumen, Faculty of
Technical Sciences, Department of Geodesy

15.10-15.15 *Question and discussion*

15.15-15.30 *Coffee Break*

15.30-15.50 MAIN ASPECTS OF THE PHYSICAL AND GEOGRAPHICAL DESCRIPTION OF THE AREA AS A COMPONENT OF SITUATIONAL ASSESSMENT IN COMBAT OPERATIONS PLANNING

Kateryna V. Kazhukalo, Natalia I. Lytvynenko

Military Institute of Taras Shevchenko National University, Kyiv,
Ukraine

15.50-15.55 *Question and discussion*

15.55-16.15 APPLICATION OF PHOTOGRAMMETRY AND REMOTE SENSING METHODS FOR IMAGE INTERPRETATION OF OPEN AREAS AND FORESTS STANDS IN FOREST TERRITORIES

Stanimira St. Stoyanova

Department "Forest management and management", University of

forestry, Sofia, Bulgaria

16.15-16.20 *Question and discussion*

16.20-16.40 INTEGRATION OF GEODESY AND ARTIFICIAL INTELLIGENCE FOR MONITORING AND ANALYSIS OF CLIMATE CHANGE AND NATURAL DISASTERS

Hristiyan G. Georgiev

Department "Geodesy", NMU "Vasil Levski", Shumen, Bulgaria

16.40-16.45 *Question and discussion*

16.45-17.05 INTEGRATION OF GEODESY AND ARTIFICIAL INTELLIGENCE FOR CONSTRUCTION OF LARGE-SCALE STRUCTURES

Daniel P. Draganov

Department "Geodesy", NMU "Vasil Levski", Shumen, Bulgaria

17.05-17.10 *Question and discussion*

17.10-17.30 INTEGRATION OF IOT TECHNOLOGIES AND GEODETIC NETWORKS FOR DEFORMATION MONITORING OF BUILDINGS AND CIVIL ENGINEERING STRUCTURES

Hristiyana H. Koleva

Department "Geodesy", NMU "Vasil Levski", Shumen, Bulgaria

17.30-17.35 *Question and discussion*

Thursday 25th September

09.00-09.25 METHODS FOR INVESTIGATING HORIZONTAL DEFORMATIONS

Tsvetelina T. Mateeva, Vladimir M. Petrov

Department "Geodesy", NMU "Vasil Levski", Shumen, Bulgaria

09.25-09.30 *Question and discussion*

09.30-09.55 GEODESY AND ITS IMPORTANCE FOR EVERYDAY SAFETY

Mariya L. Tsendova

Department "Geodesy", NMU "Vasil Levski", Shumen, Bulgaria

09.55-10.00 *Question and discussion*

10.00-10.25 HYDROGRAPHIC MEASUREMENTS IN THE BULGARIAN SECTION OF THE DANUBE RIVER

Tanislav H. Tanev

Faculty of Artillery, Air Defense and Communication and Information Systems, National Military University, Shumen, Bulgaria

10.25-10.30 *Question and discussion*

10.30-10.45 *Coffee Break*

<u>10.45-11.10</u>	SURVEYING AND MAINTENANCE OF THE PRIMARY-CLASS POINTS OF THE STATE GPS NETWORK OF THE REPUBLIC OF BULGARIA Georgi H. Tanev Faculty of Artillery, Air Defense and Communication and Information Systems, National Military University, Shumen, Bulgaria
<u>11.10-11.15</u>	<i>Question and discussion</i>
<u>11.15-11.40</u>	ON THE CREATION OF A GENERALIZED MODEL OF THE GEOID (QUASIGEOID) OF BULGARIA Andrey I Andreev¹, Petina A. Andreeva¹, Gergana A. Dimova² ¹Department Geodesy, Air Defense and Communication and Information Systems faculty - Shumen / NMU "Vasil Levsky" ²Department of Foreign Language Training - Shumen / NMU
<u>11.40-11.45</u>	<i>Question and discussion</i>
<u>11.45-12.10</u>	INVESTMENT DESIGN – PART "GEODESY", OF THE OBJECT: "REPAIR OF A CINEMA IN THE FACULTY OF "ARTILLERY, AIR DEFENSE AND AIRCRAFT" TOWN OF SHUMEN" Petina A. Andreeva, Hristina Rumenova Department Geodesy, Air Defense and Communication and Information Systems faculty - Shumen / NMU "Vasil Levsky"
<u>12.10-12.15</u>	<i>Question and discussion</i>
<u>12.15-12.40</u>	GEOINFORMATION TECHNOLOGY FOR MAKING CHANGES TO THE CADASTRAL MAP AND CADASTRAL REGISTERS WITH A CADASTRAL INFORMATION SYSTEM Petina A. Andreeva, Venelin Kozhuharov Department Geodesy, Air Defense and Communication and Information Systems faculty - Shumen / NMU "Vasil Levsky"
<u>12.40-12.45</u>	<i>Question and discussion</i>
<u>12.45-14.00</u>	<i>Lunch Break</i>
<u>14.00-14.50</u>	1 RISK MANAGEMENT FOR LANDSCAPES, COLLAPSES AND LANDSLIDES 2 FLOOD RISK MANAGEMENT 3 GENERAL PRINCIPLES APPLIED IN NATURAL DISASTER RISK MANAGEMENT Gergana A. Dimova Department of Foreign Language Training - Shumen / NMU "Vasil Levsky"
<u>14.50-15.00</u>	<i>Question and discussion</i>
<u>15.00</u>	<i>Departure</i>