

MILCON' 26

International Scientific Conference

JUNE 25TH, 2026

PROCEEDINGS



Proceedings of Papers

**3rd International Scientific Conference MILCON'26,
Skopje**



June, 2026

Editor-in-Chief: Nenad Taneski

Technical Editor: Monika Kachurova

Publisher: Military Accademy “General Mihailo Apostolski” – Skopje

CIP - Каталогизација во публикација
Национална и универзитетска библиотека "Св. Климент Охридски", Скопје
355.45(062.552)

INTERNATIONAL Scientific Conference MILCON'26 (2026; Skopje)
Proceedings of papers [Електронски извор] / 3rd International
Scientific Conference MILCON'26, Skopje; [editor Nenad Taneski]. -
Skopje: Military academy "General Mihailo Apostolski", 2026

Начин на пристапување (URL): milcon26_zbornik-final-24.06.2026-1_0.pdf.
- Текст во PDF формат, содржи 541 стр., илустр. - Наслов преземен од
екранот. - Опис на изворот на ден 25.06.2026. - Фусноти кон текстот. -
Библиографија кон трудовите

ISBN 978-9989-134-36-4

а) Национална безбедност -- Собири

COBISS.MK-ID 69023237

MILCON'26 International Scientific Conference is supported by:



The Conference is organized by the Military Academy “General Mihailo Apostolski” – Skopje, associated member of the University “Goce Delcev” – Shtip.

The Conference has been immensely supported by the Ministry of Defence and the Army.

Preface

Respected readers,

In front of you is the thematic Proceedings, as a collection of papers presented at the 3rd MILCON'26 Conference, organized in 2026, by the Military Academy "General Mihailo Apostolski" – Skopje, associated member of the University "Goce Delcev" – Shtip.

The objective of the Conference was to gather educators, researchers, and practitioners from different countries to promote scientific exchange and cooperation within all aspects of defense, security, information technology, and related domains.

The papers published in the Proceedings are written by eminent scholars as well as by members of the security system participating in the educational and research process of the army and other security services from different countries. Each paper has been reviewed by experts competent for the field to which the paper is related.

The data and information gained with empirical research, as well as theoretical thoughts and comparative analyses in the Proceedings will give a significant contribution to the development of knowledge in defense and security sciences.

We wish to extend our gratitude to all authors and participants to the Conference, as well as to all those who contributed to, or supported the Conference and the Ministry of Defense and the Army for their immense support of the Conference.

Skopje, 2026

From the Minister of Defense



"The MILCON'26 International Scientific Conference serves as a vital testament to the unbreakable link between scientific innovation and practical defense policies within a rapidly transforming global security environment.

From an institutional and state perspective, the Ministry of Defense highly values this publication as a rigorous repository of evidence-based strategies that directly advance robust strategic cyber resilience, the modernization of military capabilities, and the development of effective responses to sophisticated hybrid threats.

Through deep examinations of civil-military cooperation, smart defense technology, and military diplomacy, these pages provide invaluable insights that support national security interests while solidifying our ongoing contributions to NATO's collective defense framework.

The Ministry proudly endorses this conference, confident that the methodologies and conclusions presented by the contributing domestic and international authors will serve as a lasting resource for the advancement of modern defense systems and the preservation of long-term stability."

Vlado Misajlovski
Minister of Defense

From the Dean



„This volume of the MILCON International Scientific Conference, organized under the auspices of the Military Academy 'General Mihailo Apostolski - Skopje, associate member of University Goce Delcev, Stip', stands as a significant cornerstone of contemporary academic achievements in defense and security.

MILCON has long evolved beyond traditional, isolated boundaries of security, establishing itself as a premier regional conference that bridges the most critical pillars of our contemporary digital and defense ecosystems. The peer-reviewed papers compiled within this edition reflect a comprehensive academic spectrum—spanning from advanced computer networks and systems that form the backbone of modern connectivity, to the cutting-edge integration of artificial intelligence and automated smart risk management frameworks.

In an era of rapid technological acceleration, this volume underscores the critical necessity for cybersecurity, digital forensics, and countermeasures against hybrid threats to tightly interlock with modern military and defense technologies to protect critical infrastructure and drive meaningful digital transformation.

We remain fully confident that the insights and solutions published herein will inspire profound academic discourse and foster impactful, long-term international research collaborations. “

*Prof. Dr.Sc. Col. Nenad Taneski
Dean, Military Academy "General Mihailo Apostolski" - Skopje*

Conference Chair

NENAD TANESKI
MKD

Keynote Speakers

WILLIAM F. LYONS
USA

KRASIMIR ANGELOV
BGR

International Scientific Committee

JUGOSLAV ACHKOSKI
MKD

NEVEN TRAJCHEVSKI
MKD

ALEKSANDAR GRIZHEV
MKD

ZDENKA STOJANOVSKA
MKD

GJORGJI DIMOV
MKD

ANA NIKODINOVSKA KRSTEVSKA
MKD

MAX KILGER
USA

BLERTON ABAZI
KOS

ASHOK VASEASHTA
USA

AMMAR BATHICH
MYS

TONY MULLIS
USA

ANDRZEJ PAWLIKOWSKI
POL

NARESH KSHETRI
USA

ARTUR ZIELICHOWSKI
POL

KALIN KALINOV
BGR

AGATA KLECZKOWSKA
POL

NIKOLAI STOIANOV
BGR

ANGELO VIGLIANISI FERRARO
ITA

YAVOR KRASIMIROV TODOROV
BGR

MARKO MEZA
SVN

PETAR GOSPODINOV MARINOV
BGR

MARKO HÖLBL
SVN

RUMEN ANGELOV MARINOV

BGR

NITISH KUMAR OJHA

IND

PRIYANKA CHANDANI

IND

GALIT M. BEN

ISR

SERHII O. HNATIUK

UKR

NOBUO HAYASHI

SWE

CEZAR VASILESCU

ROU

DAN MONEA

ROU

EMILIANO BUIS

ARG

LUKA MIHANOVIC

HRV

ANDRIJA KOZINA

HRV

ROBERT KOPAL

HRV

ALEX PIROH

UKR

JOSEPH HENRY ANAJEMBA

UAE

SABINA BARAKOVIC

BIH

MICHAIL CHALARIS

GRC

SÁNDOR SZABÓ

HUN

SNEZHANA CIRIC KOSTIC

SRB

Organizing Committee

BILJANA KAROVSKA-ANDONOVSKA

MKD

KIRE JAKIMOSKI

MKD

SLAVKO ANGELEVSKI

MKD

ALEKSANDAR GLAVINOV

MKD

ANDREJ ILIEV

MKD

DRAGE PETRESKI

MKD

ALEKSANDAR GRIZHEV

MKD

ORCE POPOVSKI

MKD

ZORAN JOVANOVSki

MKD

ELENIOR NIKOLOV

MKD

ALEKSANDAR PETROVSKI

MKD

LJUPCHO SHOSHOLOVSKI

MKD

DIMITAR BOGATINOV

MKD

NIKOLA MANEV

MKD

OLIVER ANDONOV
MKD

NEVENA SERAFIMOVA
MKD

VESNA POPOSKA
MKD

PETAR BOGOJESKI
MKD

BOJAN MIKLOSH
MKD

LAZAR GJUROV
MKD

SASHO DANEVSKI
MKD

MILCON 2026 Reviewers

NENAD TANESKI
MKD

METODI HADZI-JANEV
MKD

DIMITAR BOGATINOV
MKD

NIKOLA MANEV
MKD

VASKO NAUMOSKI
MKD

ANITA GLIGOROVA
MKD

EMIL DIMITRIEV
MKD

METODIJA DOJCHINOVSKI
MKD

ALEKSANDAR GRIZHEV
MKD

LAZAR GJUROV
MKD

BOJAN MIKLOSH
MKD

TANJA MILOSHEVSKA
MKD

ALEKSANDAR NACEV
MKD

OLIVER ILIEV
MKD

ZORAN MARKOV
MKD

JUGOSLAV ACHKOSKI
MKD

PETAR BOGOJESKI
MKD

NEVEN TRAJCHEVSKI
MKD

ZORAN JOVANOVSKI
MKD

VESNA POPOSKA
MKD

ELENIOR NIKOLOV
MKD

DRAGE PETRESKI
MKD

BILJANA STOJCHEVSKA
MKD

IGOR LAZOV
MKD

NEVENA SERAFIMOVA
MKD

ZORAN GACOVSKI
MKD

ALEKSANDRA ZHEZHOVA
MKD

SLAVHO CHUNGURSKI
MKD

SASHO GELEV
MKD

SLAVKO ANGELEVSKI
MKD

ALEKSANDAR PAVLESKI
MKD

Conference Secretariat

ELENA TRAJANOVSKA
MKD

SASHA SMILESKI
MKD

REDZEP MUSTAFOVSKI
MKD

NATALI MITROVA
MKD

EVA ILIEVSKA
MKD

DAMJAN KOLEVSKI
MKD

NATALIJA KOCHOSKA
MKD

MONIKA KACHUROVA
MKD

DEJAN BOGATINOV
MKD

STEFAN KOLEV
MKD

MARTINA PAVLOVSKA
MKD

DAVID SLAVEVSKI
MKD

MARIJA NEDEVA
MKD

Contact Information:

milcon@mod.gov.mk
+389 2 3283-603

All rights reserved. This book, or parts thereof, may not be reproduced in any form or by any means, electronic, or mechanical, including photocopying or any information storage and the retrieval system not known or to be invented, without written permission from the Publisher.

Table of Contents

A WEB PLATFORM FOR SOCIAL INTERACTION: DESIGN, ARCHITECTURE AND DEVELOPMENT	16
THE EVOLVING ROLE OF MILITARY ATTACHÉS IN CONTEMPORARY SECURITY ARCHITECTURE FROM TRADITIONAL DIPLOMACY TO STRATEGIC INFORMATION AND DEFENSE COOPERATION	32
ECONOMIC SANCTIONS AS A FACTOR OF SECURITY DESTABILIZATION	45
FROM PASSIVE ARMOR TO INTEGRATED PROTECTION SYSTEMS: ADAPTING ARMORED COMBAT VEHICLES TO CONTEMPORARY THREATS	54
EMPOWERING DIGITAL SECURITY: IMPLEMENTATION AND PERFORMANCE ANALYSIS OF LOCAL AI MODELS FOR HATE SPEECH DETECTION IN HYBRID WARFARE	70
HUMAN SECURITY AS A FRAMEWORK FOR ADVANCING HUMAN DEVELOPMENT	80
DESIGN AND IMPLEMENTATION OF A REAL TIME DATA TRANSMISSION SYSTEM USING UNMANNED AERIAL VEHICLES	94
TRANSITIONAL JUSTICE APPROACHES: EXPERIENCES FROM SELECTED POST-CONFLICT AND POST-AUTHORITARIAN COUNTRIES	116
GEOSPATIAL ANALYSIS OF THE KRIVOLAK MILITARY TRAINING AREA USING GEOGRAPHIC INFORMATION SYSTEMS (GIS)	129
BETWEEN SERMON AND SENTENCE: LEGAL GAPS IN COUNTERING RELIGIOUS EXTREMISM IN NORTH MACEDONIA	145
EMOTIONAL INTELLIGENCE AND DECISION-MAKING STYLES IN SECURITY AND DEFENSE CONTEXTS: A CORRELATIONAL STUDY	155
COMPARATIVE EVALUATION OF DQN-BASED TCP CONGESTION CONTROL ALGORITHM ACROSS MULTIPLE TCP VARIANTS IN NS-3 WIRED NETWORKS	171
THE CRISES OF DEMOCRATIC PEACE AND THE RISE OF AUTOCRACIES: IMPLICATIONS FOR INTERNATIONAL SECURITY	185
MILITARY SIMULATION METHODOLOGIES IN CIVIL CRISIS MANAGEMENT	198
FINANCING OF THE ARMY AS ONE OF THE PILLARS OF NATIONAL SECURITY	216
REINTEGRATION AFTER PEACEKEEPING MISSIONS: PSYCHOLOGICAL STABILITY AND SOCIAL INTEGRATION	229

MODELING AND ASSESSMENT OF SECURE COMMUNICATION IN SOFTWARE – DEFINED NETWORKS	241
CYBERSECURITY OF NATIONAL CRITICAL INFRASTRUCTURE IN NORTH MACEDONIA: SECTORAL RISK ASSESSMENT AND INSTITUTIONAL MODEL PROPOSAL.....	249
A CONCEPTUAL FRAMEWORK FOR IMPLEMENTING AI-ENHANCED BIOMETRIC TECHNOLOGIES FOR AIRPORT IDENTIFICATION AND SECURITY VERIFICATION IN THE REPUBLIC OF NORTH MACEDONIA.....	264
THE ROLE OF DECEPTION TECHNOLOGY IN IMPROVING THE SECURITY OF NETWORK INFRASTRUCTURES	273
DEFENSE AND SECURITY IN A CHANGING GLOBAL ENVIRONMENT: STRATEGIC CYBER RESILIENCE AND THE CHALLENGE OF SMALL-STATE ADAPTATION	286
INTEGRATED PLATFORM FOR CYBER RISK ASSESSMENT WITH DYNAMIC RISK UPDATING AND PREDICTION.....	297
FROM REACTION TO FORECASTING: TRANSFORMING COUNTERTERRORISM STRATEGIES IN THE ERA OF HYBRID THREATS	313
PARLIAMENTARY OVERSIGHT OF THE SECURITY AND INTELLIGENCE SECTOR IN THE REPUBLIC OF NORTH MACEDONIA: FROM FORMAL SETUP TO SUBSTANTIAL EFFECTIVENESS	325
POLLUTANT TRANSPORT DYNAMICS - A CHEMICAL RISK ASSESSMENT FOR WATER SUPPLY SYSTEMS	342
SECURING THE UNMANNED EDGE: AUTOMATED DETECTION AND RESPONSE TO MAVLINK PROTOCOL EXPLOITATION	353
FROM GOVERNANCE ISSUE TO SECURITY THREAT: THE SECURITIZATION OF CORRUPTION IN NORTH MACEDONIA	368
GLOBALIZATION AS A CATALYST IN DEVELOPMENT OF HYBRID WARFARE	377
SECURITY OF API PROTOCOLS IMPLEMENTED ON A WEBPAGE'S FRONT-END THROUGH NEXT.JS	388
SOCIAL ENGINEERING PENETRATION TESTING AS A DEFENCE MECHANISM AGAINST HYBRID CYBER THREATS.....	397
SERIOUS GAMES AND GAMIFICATION AS INNOVATIVE TECHNOLOGIES IN DEFENSE SYSTEMS	408
SYSTEM FRAMEWORK FOR SECURE SPACE–AIR–GROUND TACTICAL COMMUNICATIONS IN MODERN MILITARY OPERATIONS.....	424

THE IMPACT OF HUMAN RESOURCE POLICY ON CYBERSECURITY IN MILITARY ORGANISATIONS, WITH SPECIAL EMPHASIS ON THE ARMY	442
THE ROLE OF MILITARY DIPLOMACY AND NATO IN COUNTERING HYBRID THREATS	452
HYBRID WARFARE AND THE RESHAPING OF GLOBAL SECURITY: STRATEGIC LESSONS FROM THE RUSSIA–UKRAINE CONFLICT	462
CITIZENS’ PERCEPTION AND POTENTIAL CYBERSECURITY RISKS ASSOCIATED WITH THE “SAFE CITY” SYSTEM IN SKOPJE	470
HYBRID THREATS AND CIVIL-MILITARY COOPERATION IN THE REPUBLIC OF NORTH MACEDONIA – A STRATEGIC REVIEW	480
FORENSIC ANALYSIS OF ADVANCED PERSISTENT THREAT ATTACKS	496
THE MODERN CONCEPT OF SECURITY THROUGH THE LENS OF LEGAL REGULATION	511
THE USE OF MILITARY FORCE IN THE CONTEXT OF CONFLICT RESOLUTION	523
RESTRICTIONS OF HUMAN RIGHTS GUARANTEED BY THE EUROPEAN CONVENTION ON HUMAN RIGHTS DURING HYBRID THREATS	532