Conference Agenda

THURSDAY, March 19, 2026

13.30 hrs – 15.00 hrs	Workshop - ***Academic Article-Writing Techniques*** – MDPI Open Access Publishing Romania - F.E.-3.4
15.00 hrs – 22.00 hrs	Arrival of delegations/ "Henri Coanda" Air Force Academy
19.00 hrs– 20.00 hrs	Dinner *(*Students' Dining Facility*)*

FRIDAY, March 20, 2026

07.30 hrs – 08.30 hrs	Breakfast *(*Students' Dining Facility*)*					
08.30 hrs – 09.00 hrs	Welcoming and registration *(Academy Auditorium)*					
09.00 hrs – 09.45 hrs	**Official Opening of the International Conference "Communicating across Cultures" AFASTUD'26** *(Academy Auditorium)*					
09.45 hrs – 10.00 hrs	**Photo Session** *(In front of Bdg A1)*					
10.00 hrs – 13.00 hrs	**Panels (I)**	**Weapons & Defense Technology** ***E - 10***	**Engineering** ***E – 46***	**Humanities & Social Sciences** ***E – 31***	**Military Sciences** ***F.E – 2.11***	**Military History** ***F.E – 3.11***
13.00 hrs – 14.00 hrs	Lunch (Students' Dining Facility*)*					
14.00 hrs – 16.00 hrs	**Panels (II)**	**Weapons & Defense Technology** ***E - 10***	**Engineering** ***E – 46***	**Humanities & Social Sciences** ***E – 31***	**Military Sciences** ***F.E – 2.11***	**Military History** ***F.E – 3.11***
16.30 hrs – 17.00 hrs	**Closing of the International Conference "Communicating across Cultures" AFASTUD'26/ "Henri Coanda" Air Force Academy's** *(Academy Auditorium***)**					
19.00 hrs – 23.00 hrs	Students' Official Dinner *(*Students' Dining Facility*)*					

SATURDAY, May 21, 2026

08.00 hrs – 09.00 hrs	Breakfast *(*Students' Dining Facility*)*
09.00 hrs – 15.00 hrs	Departure of delegations

Scientific Committee

Conference Coordinator:
Col Prof Adrian **LESENCIUC**, PhD,
"Henri Coandă" Air Force Academy, Brasov, Romania
Assoc Prof Florian **BICHIR**, PhD
"Carol I" National Defense University, Bucharest, Romania
Assoc Prof Dorel **BUȘE**, PhD
"Carol I" National Defense University, Bucharest, Romania
Col. Assoc. Prof Eng. Dilyan **DIMITROV**, PhD
"Vasil Levski" National Military University, Veliko Târnovo, Bulgaria
Col Assoc Prof Eng Laurian **GHERMAN**, PhD
"Henri Coandă" Air Force Academy, Brașov, Romania
Assist Prof Agata **JAGIELLO-TONDERA**, PhD
Military University of Technology, Warsaw, Poland
Assoc. Prof Ioanna **LEKEA,** PhD
Hellenic Air Force Academy, Athens, Greece
Prof Ion **GIURCĂ**, PhD
Hyperion University, Bucharest, Romania
Assist Prof Sofia **MENEZES**, PhD
Potuguese Military Academy, Lisbon, Portugal
Assoc Prof Daniela **MOLDOVEANU**, PhD
"Ferdinand I" Military Technical Academy, Bucharest, Romania
LTC Assist Prof Ferenc **PETRUSKA**, PhD
University of Public Service, Budapest, Hungary
Col. Assoc Prof Cosmina-Oana **ROMAN**, PhD
"Henri Coandă" Air Force Academy, Brașov, Romania
LTC Prof Tom **SIMOENS**, PhD
Belgian Royal Military Academy, Bruxelles, Belgium
Col Assoc Prof Daniel **ŞTEFĂNESCU**, PhD
"Henri Coandă" Air Force Academy, Brașov, Romania

Chairmen

LTC Lect Cristian **DRAGOMIR**, PhD
"Henri Coandă" Air Force Academy, Braşov, Romania
Capt Lect Cosmina **NECULCEA**, PhD
"Henri Coandă" Air Force Academy, Braşov, Romania
Cpt TA George **AIONESEI**
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Lect Kinga **KOLUMBÁN**, PhD
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LTC Assist. Prof. Eng. Cornel **ARAMĂ**, PhD
"Henri Coandă" Air Force Academy, Braşov, Romania
LTC Alin-Mihai **MECLEA**, PhD
"Henri Coandă" Air Force Academy, Braşov, Romania
LTC Cristian **ENE**
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Assist Prof Eng Sebastian **POP**, PhD
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Cpt Instr Bogdan **ANDRIEȘ**
"Henri Coandă" Air Force Academy, Braşov, Romania
Cpt Instr Alexandru **TUDOR**
"Henri Coandă" Air Force Academy, Braşov, Romania
Brig Gen (AF) (r.) Lect Jănel **TĂNASE**, Phd
"Henri Coandă" Air Force Academy, Braşov, Romania
LTC (Av) Lect Mihai **DEAȘ**, PhD
"Henri Coandă" Air Force Academy, Braşov, Romania
Cpt (Av) Instr Simona **TĂTULESCU**
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2nd Lt Miruna **MOCANU**
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Lt Laura **MĂLIȚĂ**
"Henri Coandă" Air Force Academy, Braşov, Romania

Organizing Committee

Col Dănuț **BĂLOS**
Inf Adina **DOBRIȚOIU**
Inf Adrian **ROTARU**
WO Valentin **ILIE**
WO Vlad **ŞTEFAN**
WO Denes **ZSABO**
WO Ionică-Eugen **PUȘCARIU-NENCIU**
Student Maria **MILCU**
Student Antonia **BELGIU**
Student Andreea **TOMESCU**
Student Vlad **RUGINĂ**
Student Isabela **BABOI**
Student Ștefan **GRECU**
Student Alexandra **VLAD**
Student Stefan **LUPU**
Student Iulia **MUNTEANU**
Student Alina **VĂCĂRIUC**
Student Denisa **BUDAŞU**
Student Alberto-Damian **ADOCHIȚEI**

Conference Panels

1. Military Sciences

Conference ROOM F.E 2.11

Moderators:

LTC Lect Cristian **DRAGOMIR**, PhD
"Henri Coandă" Air Force Academy, Brasov, Romania

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Student Maria **MILCU**
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Student Antonia **BELGIU**
"Henri Coandă" Air Force Academy, Brasov, Romania

Human Trafficking - The Daily Reality of Modern Slavery Worldwide

Ion BĂRBUȚ
"Alexandru Ioan Cuza" Police Academy, Bucharest, Romania

Organized crime and human trafficking are two interconnected and serious phenomena in the contemporary world. These are considered particularly serious crimes, with a major impact on society and the individuals involved. Organized crime can be defined as a structured group that acts deliberately for the purpose of committing serious crimes, such as drug trafficking, smuggling, corruption, money laundering and other illegal activities. Organized crime groups are often characterized by strict hierarchies, strong relations with the underworld, corruption and violence. Trafficking in human beings is a form of organized crime that consists of recruitment, transportation, transfer, housing or receiving persons by force, fraud or other means of coercion for the purpose of exploitation. Exploitation can take place in various forms, such as forced labor, sexual exploitation or modern slavery. These two phenomena are closely linked, because trafficking in human beings can be an important activity of organized crime groups. Combating these phenomena is a priority for the international community, coordinated efforts are needed between different governmental and non-governmental organizations.

Artificial Intelligence in Contemporary Warfare – Aspects of Morality and Leadership

Daria Maria BOCOCI
"Alexandru Ioan Cuza" Police Academy, Bucharest, Romania

Throughout history, humanity has experienced numerous conflicts that have profoundly shaped the evolution of international relations and legal norms. Particularly during the last two centuries, the global order has been significantly influenced by the two World Wars, as well as by a multitude of civil wars, insurgencies, acts of terrorism, and persistent geopolitical instability. Consequently, a distinct body of norms commonly referred to as the "law of war" has emerged, emphasizing ethical considerations and the protection of fundamental human rights, most notably the right to life.
In the contemporary geopolitical landscape of 2024, the international community continues to confront a climate marked by conflict, uncertainty, and security threats. The military aggression initiated by Russia against Ukraine in February 2022, alongside the escalation of hostilities in the Middle East beginning in October 2023, has intensified global tensions and prompted major powers to engage in a renewed arms competition reminiscent of the dynamics of the Cold War. Unlike previous historical periods, however, this competition is characterized not only by advancements in conventional and nuclear military capabilities but also by the rapid integration of artificial intelligence (AI) into military systems and strategic planning.
In this context, the prospect of artificial intelligence evolving from a mere technological instrument into a strategic actor capable of influencing or even directing military operations is no longer purely speculative. This research article seeks to examine the ethical implications of allowing AI systems to assess war-related scenarios, to participate in or assume leadership roles in military decision-making, and potentially to exercise command functions traditionally reserved for human military leaders.

Blitzkrieg War and the Illusion of Quick Victory

Daniel-Răzvan BURCIOIU, Ștefan VÂLCEA
"Carol I" National Defense University, Bucharest, Romania

This paper examines the origins, evolution, and operational characteristics of the Blitzkrieg concept and analyzes the structural limitations that ultimately exposed its strategic weaknesses. Blitzkrieg, often translated as "lightning war", became widely associated with Germany's early successes in the Second World War. However, the concept itself represents not merely a tactical innovation but the result of a broader transformation in military thought that occurred during the interwar period. German military theorists and planners, influenced by the experiences of the First World War, sought to avoid another prolonged conflict characterized by static trench warfare and attrition. As a result, they developed operational concepts that emphasized mobility, ***concentration*** *of force, and the* ***quick*** *exploitation of breakthroughs.*
The Blitzkrieg approach relied on the close coordination of multiple branches of the armed forces, particularly armored units, mechanized infantry, artillery, and air support. Central to this concept was the concentration of highly mobile armored formations at critical points along the enemy's defensive line, allowing German forces to penetrate

*weak sectors and disrupt the **operational** coherence of opposing armies. Once a breakthrough was achieved, mechanized units would quickly advance into the enemy's rear areas, targeting command structures, communication networks, and logistical infrastructure. At the same time, the Luftwaffe provided close air support and **strategic** bombing intended to weaken enemy resistance and amplify the psychological impact of the offensive.*

Decisional Resilience of the Military Leader

Nicolae-Alexandru CAUNEI
"Henri Coandă" Air Force Academy, Brașov, Romania

We are going through a difficult period from a political-economic-military point of view. Major events from wars to revolutions and from long periods of prosperity to economic crises tend to repeat obsessively at a certain interval of years. This period cannot be overcome if the systems that are at the helm of a country do not have leaders with an extraordinary capacity for decision-making resilience and general culture at their command. The quality of decisions adopted in crisis situations is influenced by the concept of resilience, professional experience, level of training and quality leadership. The focus of this article will be on the national defense system, namely on the decision-making resilience of the military leader. Given the conflict in the neighboring country, the National Army comes to the attention of the civilian population and it is sadly noted a long period of profound ignorance of those who managed this system logistically and of those who are responsible for the level of training of the military against modern physical and hybrid threats. Currently, Romania has several dozen projects underway to equip it with modern weapons, but spring is not done with a flower. In order to have an army prepared primarily to face the enemy, especially from a psychological point of view, we need leaders who can demonstrate decision-making coherence, responsibility, firmness and decision-making capacity under physical and mental stress.

The Dual Role of Cyberspace in Modern Societies

Andreea CONSTANTINIU
"Henri Coandă" Air Force Academy, Brașov, Romania

The rapid advancement of information technology and the expansion of global computer networks, beginning in the second half of the twentieth century, created the need for effective digital protection mechanisms. With the emergence of ARPANET and later the modern Internet, data exchange became increasingly fast and complex, yet more vulnerable. During 1970s and 1980s, the first incidents of unauthorized access highlighted the necessity of defensive measures against cyber intrusions. As public institutions, corporations, and critical infrastructures integrated advanced information systems, the risk associated with the online environment grew substantially. The digitalization of the economy and the rise of electronic commerce transformed data protection into a global strategic priority. Within this framework, policies, technologies, and procedures were developed to prevent cyber-attacks and mitigate their impact.
Today, this field involves the use of encryption, authentication mechanisms, and continuous network monitoring to identify vulnerabilities. It also encompasses risk management strategies and incident response plans designed to ensure operational

continuity. In a profoundly digitalized society, safeguarding virtual space has become an essential component of economic stability and the reinforcement of trust in the online environment.

OSINT/Open Source Intelligence

Mihai DAN
"Henri Coandă" Air Force Academy, Brașov, Romania

One of the most fundamental responsibilities of the modern state is to guarantee the comprehensive security of its territory and its citizenry, a duty that encompasses the preservation of national sovereignty, political independence, and the sustained quality of life for its people. Today's intelligence, which is part of the structures of security organs, belongs to the elite part of the special forces performing strategic goals. Therefore, acquiring the information by OSINT is important not only for the institution itself but also for citizens. OSINT represents one of the instruments through which internal and external security is supported. Open-source information contributes to economic, political, military, and other dimensions of national security. Books, academic and professional periodicals, statistical yearbooks, social media platforms, and daily newspapers constitute some of the basic and verifiable sources of open information. In the context of globalization, OSINT assumes particular significance, as the information obtained enables states to anticipate threats and undertake preventive or defensive measures.

The Evolution of Logistical Support in the Context of the War in Ukraine

Robert Alexandru FIRINCĂ, Rareș-Mihai IORDACHE
"Carol I" National Defense University, Bucharest, Romania

The war in Ukraine illustrates the modern paradigms of military logistics in high-intensity conflicts, highlighting the need to adapt quickly to challenges such as geopolitical blockades, precision strikes and logistical difficulties. The paper analyses the modernization of the Ukrainian Armed Forces' logistics system through the integration of NATO practices, technological innovations (drones, autonomous vehicles, micro-hubs) and solutions for road flexibility and critical infrastructure protection. Bureaucratic vulnerabilities, exposure to air threats and digital deficiencies are identified, proposing resilience measures based on domestic production, digitization and civil-military cooperation. The conclusions highlight the role of logistics as a decisive factor in operational sustainability.

Global Security Challenges in the 21st Century

Bogdan GRIGORE[*], Florentina ILIN[**]
[*]"Mircea cel Bătrân" Naval Academy, Constanța, Romania
[**]"Nicolae Balcescu" Land Forces Academy, Sibiu, Romania

The security environment of the 21st century is marked by complexity, interdependence, and the rapid transformation of risks at global and regional levels. Traditional military threats now coexist with non-traditional challenges such as cyber warfare, hybrid conflicts, terrorism, climate change, and energy insecurity. Globalization and

technological progress have intensified interconnectedness, while geopolitical rivalries have reshaped strategic competition. This paper analyzes the principal global security challenges of the contemporary era and evaluates their implications for international stability and maritime security. The research is based on qualitative analysis of academic literature, strategic documents, and recent security assessments. The findings indicate that modern threats are multidimensional and increasingly interconnected, requiring adaptive strategies, strengthened international cooperation, and resilient defense mechanisms. The study emphasizes the critical role of collective security frameworks and maritime domain awareness in preserving global order and protecting strategic infrastructure.

Considerations on Action Procedures against Military Dogs

Mihaela-Gabriela MÎNJINĂ, Dumitru Eduard MIHALACHE
"Nicolae Balcescu" Land Forces Academy, Sibiu, Romania

The article discusses the use of dogs in military conflicts and protective measures against them. It examines individual and collective defensive methods of evading tracking dogs, techniques of escaping from their range and procedures for neutralizing canine teams. Emphasis is placed on the adaptation of strategies according to terrain conditions, scent and specific stimuli influencing dog behavior. The study aims to provide solutions applicable to military operational personnel (scouts, paratroopers, FOS operators, pilots) who may face such threats, when for different reasons, they are in the enemy's battle field and apply SERE (Survive, Eluding, Resisting, Evading) type of action procedures.

Winning Trust, Gathering Truth: Human Intelligence in the Afghanistan War

Dragos-Andrei NUELEANU
"Henri Coandă" Air Force Academy, Brașov, Romania

This paper analyzes Human Intelligence (HUMINT) within the historical and geopolitical context of the Afghanistan War (2001–2021). It begins by examining the origins of the conflict following the September 11 attacks, the subsequent international intervention, and the long-standing internal instability shaped by decades of prior conflict. The study explores how regional rivalries, cross-border dynamics, tribal structures, and shifting alliances influenced both the trajectory of the war and the methods of intelligence collection. In a complex environment marked by insurgency, counterinsurgency, and competing political narratives, locally gathered information became essential for understanding social networks, security threats, and power structures. The paper also evaluates how information was disseminated during the conflict, including military communication strategies, media coverage, and insurgent propaganda efforts. By situating HUMINT within the broader political, cultural, and strategic framework of the war, this study highlights the extent to which intelligence activities were shaped by the evolving context of the conflict. The analysis demonstrates that while technological capabilities expanded significantly, human-based intelligence remained deeply dependent on the social and geopolitical realities of Afghanistan.

Security of Travel Documents in the Schengen Area: The Contribution of Passports Authorities to Countering Hybrid Threats Case Study on the Detection of Falsified Documents at Romanian's External Border-Interinstitutional Cooperation Mechanisms in the Schengen Context

Iuliana-Georgiana-Daniela SÎRBU
"Alexandru Ioan Cuza" Police Academy, Bucharest, Romania

This paper explores the role of travel document security within the Schengen framework, emphasizing its strategic importance in the context of evolving hybrid threats. The study examines the legal, institutional, and technological foundations that underpin the issuance and verification of passports, highlighting their contribution to the protection of the European Union's external borders. Particular attention is given to the interaction between national authorities and European agencies in ensuring document integrity and preventing fraudulent activities.
The research analyzes the multidimensional nature of hybrid threats, which combine criminal, cyber, informational, and migratory components to exploit administrative and technical vulnerabilities. In this environment, passport authorities are positioned as key actors in strengthening institutional resilience and safeguarding border security. The paper assesses procedural standards, biometric technologies, and integrated information systems designed to detect forged or fraudulently obtained documents.
A case study focused on Operation "Identitas" illustrates how coordinated operational measures, intelligence exchange, and the deployment of advanced verification tools contribute to identifying falsified travel documents and dismantling criminal networks. The findings underline the added value of interinstitutional cooperation, both at national and European levels, in countering cross-border risks.
The study concludes that maintaining a high level of travel document security requires continuous modernization, adaptive legal frameworks, and sustained professional training. An integrated approach that merges prevention, detection, and rapid response mechanisms is essential for reinforcing both national security and the collective security architecture of the Schengen Area.

The Metamorphosis of Warfare Through Operational Innovation and Digitalization

Casian-Dan TIHOVAN
"Alexandru Ioan Cuza" Police Academy, Bucharest, Romania

This paper's goal is to examine how artificial intelligence tailored to developing technologies, disinformation, and OSINT resources—each of which has a distinct function—integrates the operational space of modern wars into the digital system.
A pertinent example of the significant changes in contemporary warfare is the Nagorno-Karabakh conflict. In this type of combat, cognitive factors both enhance and frequently mask the physical aspects of the struggle. The study examines the use of AI in drone automation, target selection, reconnaissance, and tactical decision modeling against the backdrop of a hybrid conflict in which the visible and invisible fronts coexist.
The report also emphasizes the sophisticated use of narrative manipulation and disinformation efforts in both traditional and digital media with the goal of influencing

public opinion and warping perceptions of truth. In this situation, OSINT has been used as an active instrument of psychological coercion and propaganda in addition to monitoring and analysis.

Through an analysis of this event, the study makes the case that contemporary warfare has changed from being a strictly physical combat to a multifaceted struggle with a digitalized battlefield.

As a result, the Nagorno-Karabakh conflict provides an interesting case study for comprehending the new military paradigm, which emphasizes the importance of narrative control, information supremacy, and reconciliation in attaining strategic superiority.

Transformation of the Operational Paradigm in the Public Order and Safety System through the Integration of Artificial Intelligence. Case Study on Optimizing the Decision-Making and Intervention Mechanisms of the Romanian Gendarmerie in the Management of High-Risk Events

Ștefania-Cătălina TUDOR

"Alexandru Ioan Cuza" Police Academy, Bucharest, Romania

The transformation of the operational paradigm in the public order and safety system through the integration of artificial intelligence represents the central focus of this research, using the Romanian Gendarmerie as a case study. The analysis starts from the premise that contemporary dynamics, marked by rapid digital mobilization, spontaneous mass gatherings, and increasing social polarization, exceed the capacity of traditional, predominantly reactive models to ensure effective and proportionate interventions.

The study proposes a conceptual framework for integrating artificial intelligence into strategic, tactical, and operational decision-making processes. It highlights the role of predictive analytics, real-time monitoring, and intelligent decision-support systems in enhancing situational awareness and operational responsiveness. A case study concerning the management of a high-risk sporting event illustrates, through comparative analysis, the advantages of an AI-assisted operational model, particularly in reducing response time and improving the anticipation of potentially tense situations. The findings demonstrate that behavioral analysis algorithms and dynamic risk scoring mechanisms significantly optimize the allocation of human and material resources, increase intervention efficiency, and reinforce the preventive character of operational actions. Consequently, interventions shift from a purely reactive approach to an anticipatory model, reducing the probability of major incidents and limiting the need for extensive use of force.At the same time, maintaining human oversight over critical decisions remains essential, as legal and moral responsibility ultimately lies with human authorities. Balancing technological efficiency with the principles of the rule of law is fundamental to sustaining public trust and ensuring the legitimacy of public order interventions.

2. HUMANITIES & SOCIAL SCIENCES

Conference ROOM E31

Moderators:

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On Patterns of Military Idioms: A Tentative Analysis

Ana-Maria ALBULESCU
"Henri Coandă" Air Force Academy, Brașov, Romania

Military idioms are everywhere in English, even in conversations that have nothing to do with war or the Armed Forces. We bite the bullet when we face a difficult decision, find ourselves on the front line of a crisis, or call the shots in a team meeting. Most of the time, we use these expressions without giving any thought to their military origins. What makes these idioms especially intriguing is how easily they move beyond their original domain. Language associated with combat, hierarchy, and survival is routinely used to talk about office politics, social conflict, or personal challenges. This process invites a closer look at how meaning is preserved, reshaped, or expanded as idioms travel from literal to metaphorical contexts. The present paper studies English military idioms from (a) a semantic and (b) cognitive perspective, focusing on their metaphorical motivation and their capacity for contextual adaptation. By looking at how these expressions function in present-day usage, the study reveals that military idioms are not static relics of specialized language, but flexible and culturally grounded tools of everyday communication.

Flight Biopolitics: The Human Body as Interface

Ioana ANDREIANA
Institute of Military Medicine, Bucharest

This paper addresses the status of the pilot from a socio-medical perspective, while also exploring the psychological nuances that have evolved alongside history. The most

complex component of the flight system is the human body, which is analyzed through the lens of biopolitics. This concept, developed by Michel Foucault, focuses on the life of the subjects and how their biological existence is influenced by the military institution as a form of governmentality that establishes control over the knowledge-power-subjectivity complex.

We argue that flight medicine does not merely function as a clinical practice, but as a sophisticated tool for social engineering and risk management. The analysis focuses on three main dimensions: first, the "body-as-interface" perspective, where medical selection standards construct a social elite by transforming biological traits into technical requirements; second, the organizational sociology of the physician-pilot relationship, highlighting the power dynamics and the social barriers to medical transparency; and finally, the anthropological shift from the "heroic age" of aviation to the contemporary culture of safety.

By recontextualizing physiological limits as social constructs, this study demonstrates how the pilot's body serves as the ultimate interface between state power, advanced technology, and human fragility. Ultimately, the research highlights that in modern aviation, managing the biological resilience of the pilot is as much a social necessity as it is a medical one.

Leadership beyond Words: The Communicative Power of Body Language

Mihnea ANGHEL

"Nicolae Bălcescu" Land Forces Academy, Sibiu, Romania

Communication represents the foundation of human interaction, shaping relationships, influencing perceptions, and guiding collective action. While verbal expression has traditionally been considered the primary vehicle of communication, nonverbal elements, particularly body language, play an equally significant, and often decisive, role in how messages are interpreted.In professional, educational, and organizational environments, leaders are not evaluated solely by the content of their words, but also by how those words are delivered. Gestures, posture, facial expressions, eye contact, and tone of voice can reinforce, contradict, or even replace verbal communication. Consequently, the ability to understand and intentionally use body language becomes an essential competence for modern leaders. This paper examines the theoretical foundations of nonverbal communication and analyzes its practical implications in leadership contexts. It discusses how body language contributes to credibility, trust-building, emotional intelligence, persuasion, and conflict management. Furthermore, it addresses cultural considerations and the potential risks of misinterpretation in diverse environments. The motivation behind this study arises from the increasing complexity of contemporary communication, where leaders must navigate multicultural teams, hybrid work settings, and high-stakes interactions. In such contexts, awareness of body language is not merely advantageous but indispensable. Ultimately, this paper seeks to emphasize that successful leadership is not only about what is said, but also about what is silently communicated.

Secondary Victimization in Domestic Violence Cases and the Psychological Effects

David-Marian-Valentin BARZU
"Alexandru Ioan Cuza" Police Academy, Bucharest, Romania

Romania is waging a difficult war against domestic violence. This is a war fought primarily by state authorities, alongside victims, against aggressors. Despite attempts to do good, officials providing assistance can fall into the trap of secondary victimisation against the victims of this violence. This represents a significant part of the protection process for the individuals involved; therefore, this study aims to establish awareness of its effects and the situations in which it occurs, so they may be avoided and countered. Secondary victimisation is more prevalent in Romania than it should be for a European country. Such behaviours will be analysed in this study.

Weaponized History: The Use of Historical Revisionism in Russian Wartime Propaganda

Marian-Ionuț BOTEZATU, Ștefan MANOLEA, Aurel-Cristian CREȚU
"Henri Coandă" Air Force Academy, Brașov, Romania

Historical narratives have evolved into a potent instrument within the framework of modern information warfare. The Russian Federation has systematically utilized historical revisionism, particularly regarding the Soviet Union's legacy and the Second World War, to advance its strategic political and military goals. By fundamentally rewriting the past, the Kremlin administration seeks to justify external aggression, diminish the standing of its opponents, and maintain domestic stability. This article demonstrates the ways in which Russia manipulates key historical events, such as the Great Patriotic War and the Molotov-Ribbentrop Pact, to provide a basis for its actions in Ukraine and other regions formerly under Soviet influence. It further analyzes state-controlled mechanisms, including the education system and media platforms, in relation to specific legislative measures. Finally, the article evaluates the security implications of this weaponized history both at home and abroad, observing how historical accuracy is compromised in a state saturated with authoritarian propaganda.

The Social Status of Women in the Middle East: The Concept of Microhistory through Contemporary Literature

Andrada-Maria BUMBU, Isabela-Andreea BABOI
"Henri Coandă" Air Force Academy, Brașov, Romania

This paper examines the complex interplay of political, economic, and religious forces that shape gender dynamics and women's lived experiences in the Middle East, emphasizing how interpretations of Sharia, patriarchal social structures, and regional conflict contribute to persistent inequalities. Drawing on literary analyses of Zülfü Livaneli's "Disquiet" and Khaled Hosseini's "A Thousand Splendid Suns", the study explores how fiction can function as microhistory, illuminating the human consequences of war, displacement, and gender-based oppression through intimate, character-driven narratives. Both novels center marginalized women whose stories reveal the impact of

extremist violence, forced marriage, and restrictive social norms, while also highlighting resilience, solidarity, and agency. By situating these literary testimonies within broader discussions of tradition, legal frameworks, education, and activism, the paper argues that women's status in the Middle East cannot be understood through a single narrative but must be viewed as a mosaic shaped by diverse cultural, political, and historical contexts. Ultimately, the analysis underscores the importance of recognizing women not only as victims of structural violence but also as active participants in social transformation across the region.

Resilience of Military Families Facing Deployment Psychological Impact

Alexandru BUTURUGĂ-DELCEA, Sorin URSU
"Carol I" National Defense University, Bucharest, Romania

The paper investigates how families adjust and continue to function under extended stress and looks at the psychological effects of military deployments. It explains typical reactions before, during, and after a mission, paying attention to changes in family roles, communication patterns, and emotional climate. It draws on research on deployment-related suffering in spouses and children. The study uses family resilience models to highlight important protective processes, including access to social and institutional support, open emotional communication, rituals that maintain connection at a distance, and cohesive family narratives about the mission. Family-centered resilience programs are given special attention, and FOCUS is given as an example of structured training that improves cohesiveness, problem-solving abilities, and coping skills in military homes. The paper makes the case that assisting military families is not only a question of well-being but also a strategic element of contemporary defense policy by connecting these resilience mechanisms to the preparedness and retention of service personnel.

When Drones Cross the Line: Romania's Airspace Sovereignty

Laurențiu-Andrei BUZGURILĂ
"Alexandru Ioan Cuza" Police Academy, Bucharest, Romania

This paper examines Russian drone-related incidents that affected Romania in the context of systematic attacks on Ukrainian Danube port infrastructure and the "spillover" risks for a neighbour state. Using official information from the Romanian Ministry of National Defence (MApN) and reliable media reporting, this study illustrates: unauthorized entries into Romanian airspace, the fall of debris on Romanian territory and crashes with impact. After that, it talks about the legal implications under international law, focusing on airspace sovereignty under the Chicago Convention and about the principle of the territorial integrity in Article 2(4) of the UN Charter. At last, the paper evaluates the legislative response through Law no. 73/2025, which broadened the legal framework to cover unmanned aircraft systems and introduced a clearer, step-by-step set of measures for managing unauthorized use of the airspace. The analysis shows a change from isolated incidents to a persistent border security problem.

Remembering What Never Happened: The Psychology of Collective Misremembering

Elena-Isabela CHELARU
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The Mandela Effect refers to a phenomenon in which large groups of people share the same inaccurate memory of an event, fact, or cultural detail. This paper examines the Mandela Effect from a cognitive and social perspective, focusing on the psychological mechanisms that may explain the emergence of collective false memories. The study explores the relationship between the Mandela Effect, false memory formation, and memory reconsolidation processes. Drawing on cognitive psychology research, particularly studies on false memories and reconstructive memory, the paper argues that the Mandela Effect is not evidence of alternative realities but rather a result of normal cognitive processes combined with social and cultural influences.
The theoretical framework integrates research on memory reconstruction and misinformation effects, highlighting how repeated exposure to incorrect information can reshape individual recollections. Additionally, the paper analyzes two well-known case studies frequently cited in discussions of the Mandela Effect, illustrating how shared misremembering develops and spreads within communities and digital environments. By examining both psychological and social factors, this research aims to clarify why collective false memories occur and why the Mandela Effect has gained significant attention in contemporary online culture. The findings contribute to broader discussions on memory reliability, digital misinformation, and collective belief formation.

Perceived Stress and Cognitive Performance In Military Academic Contexts

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Stress represents a central construct in both educational and military psychology, particularly within structured environments defined by discipline, hierarchy, and high performance standards. Military academic institutions combine intellectual demands with physical training, leadership development, and constant evaluation, creating a distinctive psychological context in which stress becomes both an adaptive mechanism and a potential risk factor. The present paper provides a theoretical analysis of the relationship between perceived stress and performance in military academic environments, based exclusively on established psychological theories and peer-reviewed empirical research. The discussion integrates Hans Selye's General Adaptation Syndrome (Selye, 1956), the transactional model of stress proposed by Lazarus and Folkman (Lazarus & Folkman, 1984), neuroscientific findings on stress-related cognitive effects (Lupien et al., 2009), and research from military psychology concerning performance under pressure (Morgan et al., 2000). Contributions from Romanian psychology regarding personality structure and adaptive functioning in demanding environments are also considered (Zlate, 2004; Aniței, 2010). The literature consistently indicates that moderate levels of stress may enhance alertness and engagement, in accordance with the Yerkes–Dodson law (Yerkes & Dodson, 1908), whereas excessive or chronic stress impairs executive functioning, working

memory, and decision-making accuracy. At the same time, resilience emerges as a protective psychological factor associated with adaptive functioning in demanding environments (Connor & Davidson, 2003). The findings underline the importance of balanced stress exposure and structured resilience development programs within military academies in order to sustain academic excellence and operational readiness.

From Fields to Cities – Life in the Eighteenth-Century Britain

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Life in the eighteenth century, particularly in Britain, differed greatly from modern experience, as opportunities, social mobility, and living conditions were strongly shaped by place of residence and social status. This paper explores everyday life in both town and countryside, focusing on daily conditions and social changes, rural life and agriculture, and urban growth and city atmosphere. In the countryside, agriculture dominated economic activity and determined the rhythm of daily life. Peasants lived in close connection with the land, following traditions shaped by religion and culture, while fulfilling obligations to landowners. Although rural communities were often stable and closely knit, life was physically demanding and marked by limited resources and few opportunities for advancement. In contrast, towns offered greater economic diversity and social interaction. Urban centers expanded rapidly during the eighteenth century, bringing in new professions and social groups such as merchants, craftsmen, and intellectuals, including writers and philosophers. This growth encouraged cultural exchange and innovation, but it also created serious challenges. Overcrowding, poor sanitation, and the frequent spread of disease affected urban populations, while sharp inequalities separated the wealthy elite from the working classes. Overall, the eighteenth century in Britain was a period of transition, during which traditional ways of life were increasingly influenced by early industrialization, political change, and evolving economic structures.

The Decision-Making Process of Military Pilots and the Influence of Psychological Factors in Critical Flight Situations

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This paper explores the decision-making process of military pilots in critical flight situations, emphasizing the role of psychological factors such as stress, attention, perception, fatigue, and experience. Operating in high-risk environments characterized by uncertainty and time pressure, military pilots must rely on both technical competence and cognitive adaptability. The study highlights how perception and attention influence situational awareness, while stress and cognitive overload may lead to errors such as tunnel vision. It also examines the benefits and limitations of experience-based decision-making, including potential cognitive biases. Furthermore, the paper underlines the importance of psychological resilience and modern training methods, such as simulation and crew resource management. Ultimately, the research demonstrates that effective decision-making in military aviation depends on a complex interaction between technical skills and psychological stability.

The Impact of Artificial Intelligence on Cross-Cultural Communication in Coalition Military Operations

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When nations combine efforts in conflict zones, clear dialogue between troops who speak different languages grows essential. Should messages get lost - whether during planning or amid combat - the results might include mistakes, wasted time, or even injuries among allies. Instead of relying only on human interpreters, some teams now test artificial intelligence that translates speech instantly while also recognizing cultural cues. These systems draw from advances in natural language processing, adapting spoken or written words into another tongue almost immediately. Research shows such tools help smooth interactions when soldiers from separate countries must act together quickly. One way they do so is by adjusting phrases that could sound harsh or confusing if translated word-for-word. With machine learning models trained on military jargon and regional dialects, accuracy improves under stress conditions. Experiments involving simulated missions suggest response times shorten when misunderstandings drop. Though machines cannot replace trust built through shared experience, their presence supports clearer coordination at key moments. What once depended solely on gestures or bilingual personnel now shifts toward digital assistants working inside helmets or radios. Early deployments reveal fewer breakdowns in command flow where language barriers used to slow decisions. While challenges remain - including handling slang or rapidly changing situations - progress points to meaningful gains in joint readiness. Behind each improvement lies a mix of linguistics, computing power, and field feedback shaping smarter tools over time. A different angle examines how today's artificial intelligence struggles with niche battlefield dialects, shaky signal conditions, or hostile electronic settings. Though machines lack a person's deep cultural sense, they still fill critical gaps during joint international efforts - shifting the way cooperating militaries connect and carry out tasks in modern warfare.

The Long-Term Effects of the Chernobyl Nuclear Disaster: A Multidimensional Analysis on the Exposed Populations

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This scientific article analyzes the multidimensional consequences of the nuclear accident that occurred on April 26, 1986, at reactor unit no. 4 of the Chernobyl Nuclear Power Plant. Beyond the immediate human toll and the massive demographic reconfiguration—marked by the initial evacuation of approximately 115,000 people and the subsequent relocation of over 220,000 citizens—this study examines the persistence of the Exclusion Zone as a space of socio-geographic segregation. The objectives of the article include investigating information management mechanisms, evaluating the psycho-moral impact, analyzing the phenomenon of discrimination, and exploring subjective historiographical perspectives. The research emphasizes that the Chernobyl disaster represented not only a technological catastrophe but also a sociological turning point,

generating a crisis of institutional trust and a reconfiguration of social pathologies within the post-Soviet space, the echoes of which persist in contemporary collective memory.

Decoding Intent: Human Rights and Mens Rea in Neuro-Controlled Drone Operations

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The twenty-first century is the future previous generations envisioned, but in a different form. If the image of flying cars was representative of the future, current technologies suggest that twenty-first century has chosen the direction of merging mind and machine. What past generations called artificial telepathy exists today in the form of Brain-Computer Interfaces (BCI), although current technology surpasses the imagination of those eras. However, implementation challenges are not slow to emerge. Applied to drone control, this technology raises fundamental legal dilemmas. The legal terms actus reus (the voluntary physical act) and mens rea (the clear and conscious intent) will be overtaken by a legislative gap left unaddressed by current penal regulation. Both act and intent, potentially triggered by a stress reflex, an intrusive thought, or the absence of any deliberate decision, will be impossible to prove. The paper comparatively analyzes two distinct normative frameworks: the Rules of Engagement (ROE) and the doctrine of collateral damage in military operations, alongside the principle of proportionality and the human rights standards applicable to law enforcement activity, a comparison that supports the incompatibility between neuro-control technology and the existing normative framework. In conclusion, the current criminal justice system does not regulate liability in such operations. The recognition of neuro-rights is necessary, referencing Chile, which constitutionally protected mental integrity in 2021, in order to firmly establish the limits of individual criminal liability before this technology is implemented in public space.

Between Soldier and Woman: Feminity and Identity in Military Professions

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For centuries, femininity was constructed as fragile, domestic, and morally confined to the private sphere, while authority, strength, and warfare were defined as masculine domains. This paper examines how that traditional model was built, challenged, and ultimately transformed.
By tracing the historical association of women with motherhood, moral guidance, and emotional care, the study reveals how these traits were used to justify exclusion from education, politics, and military authority. The gradual expansion of women's rights exposed the social nature of these limitations and initiated a redefinition of gender roles. In contemporary military environments, femininity has not disappeared under the pressure of hierarchy and discipline. Instead, it has adapted. Traits once restricted to domestic life, relational awareness, ethical responsibility, cohesion-building, now function as strategic assets. The paper further argues that differences between male and female leadership styles reflect variation in expression rather than inequality in competence.

Mechanisms of Obedience: From Social Psychology to Historical Reality

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Obedience is a central phenomenon in social psychology, reflecting the ways individuals respond to authority and conform to societal norms. Classical experiments and modern analyses reveal that obedience is not only the result of explicit commands but can also emerge from implicit social pressures and institutional contexts. Integrating historical reality into the study of obedience highlights how cultural narratives, political structures, and collective memory shape both individual and group behavior across time. This perspective emphasizes that mechanisms of obedience are dynamic, influenced by changing social values and situational factors. By bridging social psychology and historical analysis, researchers can better understand how obedience contributes to the maintenance or transformation of social order, particularly in intercultural contexts. The study of obedience thus benefits from a contextualized approach that considers the interplay of authority, community, and communication, offering deeper insights into the processes that govern human behavior and societal development.

Education Under Fire: Ideological Conflict and Social Resilience in "I Am Malala"— A Military Humanities Approach

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This paper examines "I am Malala" as more than a personal memoir, arguing that it represents a valuable case study for military humanites and security studies. By analyzing the Taliban' s control of Swat Vally, the systematic destruction of girls' schools, and the targeted attack against Malala Yousafzai, the study highlights how education becomes a battlefield in asymmetric and ideological conflict. The narrative reveals hos extremist grups use fear, propaganda, and gender-based restriction to reshape social structures and undermine long-term stability. Through close reference to key events description in the book, this paper demonstrates that education functions not only as a human right but as a strategic security asset. The analysis further explores the role of resilience, civil society, and international respond in countering extremism. Ultimately, the paper argues that sustainable security requires integrating military awareness with cultural understanding and educational protection policies.

Identity and Ethics in the Age of Algorithmic Surveillance

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Identity and ethics represent fundamental pillars of human dignity in the digital age, promoting individual autonomy, moral responsibility, and social trust. Identity in the algorithmic era involves the complex interaction between the authentic self and data-driven profiles. Ethics ensures that technological progress remains subordinate to human values, thereby contributing to the prevention of algorithmic discrimination and manipulation. This paper analyzes the critical role of identity and ethics in the context of massive data processing as key drivers of a democratic digital society. It highlights the

obstacles faced by individuals and regulatory authorities in protecting these values, including corporate resistance and the loss of the private sphere. Additionally, the work explores how the implementation of robust ethical frameworks, the adoption of specific tools, and the strengthening of algorithmic transparency can significantly improve individual protection. By integrating these principles, societies can cultivate digital trust, consolidate individual freedom, and drive sustainable, human-centric technological development.

Situational Power

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The existence of situational power and its influence is something that every person should understand, especially those in leadership positions. This concept has been studied many times, and the results of these studies highlight the importance of group identity and the key factors that shape situational power.
The main points of this paper are the differences between situational power and situational wealth, in order to clearly distinguish between the two concepts; the changes in the way people act when they are placed in different situations or treated differently by others; and how situational power can be used for the benefit of the group by increasing work efficiency without leading to abuse.
This position of situational power has been shown to affect a person's thoughts and influence both their professional and private life.

Military Punishments: Then vs Now - A Comparative Study

Ana MAMAISCHI
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Discipline has consistently served as a foundation of military effectiveness, although the methods of enforcement have changed significantly over time. In ancient, medieval, and early modern armies, punishment was frequently brutal, collective, and physically coercive, intended to instill fear and maintain cohesion at the expense of individual rights. Practices such as decimation, flogging, mutilation, and public humiliation treated soldiers' bodies as instruments of authority rather than as autonomous individuals. In contrast, contemporary military justice, as demonstrated by the Romanian legal framework, operates within constitutional and statutory constraints that prioritize human dignity, individual responsibility, and proportionality. Modern disciplinary measures reject collective punishment and physical coercion, emphasizing lawful procedures, corrective sanctions, and respect for human rights. This evolution reflects broader societal shifts toward the rule of law, the intrinsic value of human life, and the ethical foundations of authority.

The True Purpose of Detention – The Reintegration of Inmates into Society

Oana MĂRGINEAN
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At first glance, the purpose of detention imposed on inmates appears to be their removal from society. However, that same society which rejected them is often unaware that the vast majority of inmates will eventually return among them, sooner or later.What I consider to be truly important and what also represents the real purpose of detention is the manner in which they return to society and the correction of the antisocial behavior they previously displayed. This behavioral change is a long and demanding process in which inmates face various difficulties. Nevertheless, it is a transformative journey that turns former offenders into individuals with healthy social values.This process includes various programs and activities carried out within penitentiaries, with the support of prison staff. Through these initiatives, inmates can develop existing skills, acquire new ones (such as vocational qualifications), continue their education (from primary school to university level), and receive psychosocial assistance (including psychological counseling).Therefore, the process inmates undergo during their period of detention should genuinely prepare them for reintegration into society and provide us, as citizens, with the assurance that they no longer pose a real threat to the community.

The Use of UAV Aircraft within the Framework of Technical Surveillance Measures Provided for by Article 138 of the Criminal Procedure Code

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The article examines the use of drones (UAVs) by criminal investigation bodies and specialized police structures as a technical means of implementing the technical surveillance measure as regulated by the Criminal Procedure Code (Articles 138–142 CPC). It analyzes the conditions for ordering and executing the measure, with particular emphasis on the specific features of video surveillance and localization/tracking by technical means when unmanned aerial platforms are employed. The paper assigns a central role to the issue of the admissibility of evidence obtained in this manner, in light of Article 102 CPC, as well as to the relationship between this intrusive measure and the right to private life guaranteed by Article 8 of the European Convention on Human Rights and Articles 26–27 of the Constitution. Special attention is devoted to the filming of courtyards and private properties by means of drones, where the risk of exceeding the limits of the warrant and of disproportionate interference is particularly high.

Artistic expression in Communist Romania: Subtle resistance in the work of Ion Grigorescu

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Postwar Romania was shaped by a series of international decisions that redrew its borders and placed the country within the Soviet sphere of influence. The aegis of

communism, with its imperatives and constraints, had a profound impact on the way art and culture developed in Romania during that period. The regime's official ideology, socialist realism was imposed as the golden standard of artistic creation, a concept that defines art as being merely used to idealize the regime, the working class, the Soviet Union and as a form of Propaganda.

Socialist Realism in the communist East was seen as the opposite of abstraction, which was associated with the capitalist West: a contrast between a style imposed by and for the state and the idea of artistic freedom. Although this view was mostly true, the history of that period is better understood by looking at the exceptions. Despite political pressure and persuasive censorship, some artists found ingenious ways to express their true messages and emotions, subtly. Through symbolism, allegory, or even abstractionism, these artists managed to preserve a spark of the human spirit and creativity, even in the darkest of times.

An Introspection Into Human Trafficking and Commercial Sex

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This paper analyses the phenomenon of human trafficking, from defining their core concepts and focusing on the actors to the contexts and mechanisms that shape this phenomenon. The study explores who is involved in this system, where and when exploitation is involved, and the structural and individual factors that explain why trafficking takes place. The focus of our research is placed on the experience of victims and the methods used by the aggressors, including coercive techniques, psychological manipulation and control strategies such as "Loverboy". Analyzing this matter, we paid attention to the Romanian context, describing where exploitation is concentrated and how recruitment patterns typically appear. We aimed to investigate cross-border trafficking routes, particularly the pathways leading from Eastern Europe to the Western part. The study outlines how victims are transported, the networks involved, the living conditions they face abroad and the economic dimension, covering the maintenance costs of the victims and the potential profits and risks for traffickers. The study concludes with an evaluation of current methods of combating it, culminating in an applied case study in which we propose solutions that target legislative changes and shifts in societal perception.

Peer Support Strategies for Preventing Mental Health Disorders Among Military Flying Personnel - A Systematic Review

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Mental health is essential for safe aircraft control, decision-making, and mission success in military aviation. Military air force personnel operate in environments characterised by combat exposure, fatigue, traumatic events, and prolonged deployments. These stressors are associated with depression, post-traumatic stress disorder, substance use disorder, suicidal ideation, and health-care avoidance driven by stigma and fear of license loss. Objective: The aim of this review is to identify peer support strategies relevant to military aviation for the prevention of mental health disorders. Materials and methods: A

structured literature search was conducted in PubMed, Google Scholar, aviation medicine journals, regulatory documents, and practice guidelines published between 2016 and 2025 and twenty principal articles addressing military aviation, mental disorders, peer support, resilience, and just culture were selected. Results: Available data show a high incidence of mental disorders among combat-exposed air force personnel, with suicide rates and lifetime suicidal thoughts. Under-reporting and reluctance to seek care limit true prevalence estimates, yet programs such as Wingman-Connect and Airman's Edge have reduced suicidal ideation, depression symptoms, and occupational problems through network-based, unit-level interventions. Conclusions: Mental disorders and avoidance of care have direct safety implications in military aviation. Structured peer support integrated within a just culture framework, appears promising for early identification, prevention, and operational readiness. However, the limited military-specific data underlines the need for controlled trials and evaluation of program effectiveness as well as the underdevelopment of this field in our country.

Winston Churchill – The Leader that Everyone Wanted

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This paper examines the leadership of Winston Churchill during the Second World War and his lasting influence on both Britain and the international system. Widely recognized for his decisive leadership and powerful oratory, Churchill played a central role in guiding Britain through one of the most challenging periods in its history. The paper first analyzes Churchill as a political and strategic leader, focusing on his decision-making, military strategy, and ability to maintain stability during wartime. The second part explores Churchill's role as an orator, highlighting how his speeches, such as "We shall fight on the beaches", strengthened public morale and inspired national unity in moments of crisis. His use of language and rhetoric is examined as a key tool in shaping public opinion and sustaining resistance against adversity. Finally, the paper considers Churchill as a visionary of the post-war world, analyzing his ideas on international cooperation and security, including his influence on the emerging post-war international order. Overall, this paper aims to demonstrate how Churchill's leadership, communication skills, and long-term vision contributed significantly to Britain's wartime resilience and to global political developments after 1945.

Social Media's Role in Rallying Societies Toward Armed Struggle

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This article examines the mechanisms through which social media platforms function as catalysts for mass mobilization toward armed conflict. Drawing on contemporary case studies — including the Arab Spring, the Russia-Ukraine war, the Israel-Hamas conflict, and ISIS recruitment campaigns — the paper analyzes how algorithmic amplification, emotionally charged narratives, echo chambers, and coordinated information operations collectively transform digital grievances into real-world violence. The study integrates theoretical frameworks from social identity theory, radicalization pathway models, and cognitive mobilization theory to explain the psychological mechanisms underlying online-

to-offline escalation. Furthermore, the paper examines the role of state and non-state actors in weaponizing social media for strategic mobilization purposes and discusses the ethical, legal, and regulatory implications of these dynamics. The findings suggest that social media does not independently cause armed mobilization but functions as a powerful force multiplier that accelerates, amplifies, and coordinates pre-existing grievances — fundamentally reshaping how societies are recruited toward armed struggle in the digital age.

Juvenile Criminal Liability in Romanian Law

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The criminal liability of minors represents a particularly important subject within criminal law, as it reflects the balance between society's need to sanction antisocial behavior and the state's obligation to protect and educate individuals in the process of development. Romanian criminal legislation regulates the criminal liability of minors through special provisions that take into account the psychological and social particularities of persons under the age of 18. The Penal Code establishes a differentiated legal regime depending on the minor's age and the presence of discernment, emphasizing primarily the application of educational measures rather than punitive sanctions. This approach reflects modern principles of criminal policy, focused on crime prevention, the rehabilitation of minors, and their social reintegration. The aim of this paper is to analyze the legal framework regarding the criminal liability of minors in Romanian legislation, the conditions under which minors can be held criminally liable, and the types of educational measures applied by the courts. The study also highlights the importance of protecting minors' rights and the necessity for criminal procedures involving them to pursue primarily educational and corrective objectives.

Dynamics of Short-Form Video Content Consumption: A Comparative Analysis of the Psychosocial Impact on Minors and Young Adults

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We all feel the pull of the endless scroll. Over the last few years, platforms like TikTok, Instagram Reels, and YouTube Shorts have fundamentally rewired how we consume media, trading sustained narratives for 15-second hits of dopamine. But this isn't just a matter of tracking "screen time". It is a structural shift in human attention and social interaction. This paper synthesizes recent empirical data to explore the psychological and social fallout of short-form video consumption, specifically comparing its impact on two distinct groups: minors (12–17) and young adults (18–25).
The findings reveal a stark contrast in how this digital acceleration harms different age brackets. For teenagers, who are still actively forming their identities, the algorithmic feed acts as a relentless, hyper-curated "front stage". It weaponizes peer pressure, directly driving up rates of body dysmorphia and social anxiety. Young adults face a different kind of crisis. Crushed by the mounting expectations of early adulthood, they often use short-form content as a psychological escape hatch. The result? Shattered attention spans, chronic procrastination, and a deep, paralyzing sense of status anxiety

when comparing their real lives to the viral successes of others. Ultimately, by viewing these behavioral trends through the sociological theories of Hartmut Rosa and Erving Goffman, this research argues that we aren't just losing our focus. We are surrendering our agency to a digital environment explicitly designed to keep us distracted

Tactical Valence of Lucid Dreaming in Flight Personnel Training

Ecaterina ȚURCANU
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The study explores the correlation between neural pathway activation during REM sleep and subsequent wake-state motor performance. Three primary directions are examined: mental rehearsal of Emergency Procedures (EPs), desensitization to kinematic stress factors, and the stimulation of creative tactical problem-solving within contested airspaces. The implementation of these techniques can lead to enhanced muscle memory and reduced reaction times in critical scenarios. Furthermore, utilizing lucid dreaming as a form of Neuro-Cognitive Simulation (NCS) contributes to mitigating symptoms associated with combat-related stress and bolstering the psychological resilience of pilots during long-duration missions. Ultimately, the paper asserts that these NCSs function as a critical "biological simulator", bridging the gap between psychological resilience and operational excellence to ensure a decisive advantage in the multidomain battlespace.

Rhythms of Achievement: The Impact of Classical Music on Mental Agility, Cognitive Control and Emotional Balance in Military Education

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Music is an indispensable element of our lives, manifesting in diverse forms, whether we are aware of it or not. The foundation of any musical work is rhythm, and this rhythm is not only present in musical compositions, but also in processes that define us, the most significant being the rhythm set by the beating of our hearts, clear evidence of how human beings live, in essence, through music. Over time, numerous studies have demonstrated that music, especially classical music, has major advantages for cognitive processes. It is scientifically proven that when we listen to or perform classical compositions, highly valuable concentration skills are activated within our cognitive mechanisms, skills that can be developed through consistent practice.
This paper aims to highlight the benefits of music in learning processes, as well as the need to raise awareness of this aspect among military students and beyond. To this end, a pilot experiment was conducted, measuring physiological parameters in two groups of students: the first set of measurements involved students who, during the experiment, listened to a fragment of a classical music composition, while the second set of measurements was performed on students listening to another type of music. The results obtained further confirmed the utility of quality music in supporting emotional balance and mental agility.

From Civilian to Combat: Nutrition and Training of Women in the Military

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The transition from civilian life to military service represents a demanding physical and cultural transformation. Many young recruits enter military institutions shaped by sedentary lifestyles, making adaptation to structured training both challenging and essential.
By analyzing energy requirements, macronutrient balance, and hormonal regulation, the study highlights how proper nutritional strategies enhance operational readiness and reduce preventable health risks. Particular attention is given to female personnel, whose physiological characteristics and social expectations intersect within a traditionally male-structured environment. The shift from aesthetic ideals to functional strength illustrates how military training reshapes not only the body, but also perceptions of capability.

December 7, 1941: The Attack on Pearl Harbor and the Birth of the "American Century"

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The attack on Pearl Harbor, or Operation Hawaii as the Japanese called it, not only triggered America's entry into World War II, but also gave rise to a new American era, something many historians refer to as the "American Century". The long-standing tensions between these two powerful states ended in a planned attack with significant losses for the US. However, in terms of this country becoming a world power, it went from a country that did not want to get involved in World War II, choosing instead to remain neutral and focus on domestic issues, to a nation that entered the war with an impressive military, economic, and social mobilization, so that the US was no longer seen as just a regional power, but a world leader. In addition to mobilization, the US demonstrated unity against the Japanese, national solidarity, and devotion to its own homeland. Moreover, it became a supporting power and a guarantor of security for both Europe and Asia. Ultimately, this paper aims to analyze the impact that Pearl Harbor had on the military, economic, and political development of the US , turning it into the global power it is today.

Constructing Legitimacy: A Discourse Analysis of the March 17, 2017 Mosul Airstrike

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This paper examines the March 17, 2017 airstrike that took place in the Al Jadidah district of Mosul, which resulted in the deaths of more than one hundred civilians and two ISIS snipers. It analyzes the official U.S. Central Command press release "CJTF-OIR Completes Airstrike Investigation" from both a linguistic and a factual perspective. The study explores how technical terminology and legal language shape the representation of

civilian harm and military responsibility in the report. Drawing on Reyes' (2011) framework of legitimization strategies, the analysis also highlights the role of the voice of expertise and altruism in presenting the operation as justified and proportionate. By comparing the language used in the press release with the documented sequence of events, the paper demonstrates how the military frames the airstrike as legitimate while redistributing responsibility for the tragic outcome. The findings show that language is used not only as a reporting tool but also as a mechanism of institutional positioning and moral framing.

3. Engineering

Conference ROOM E46

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A general overview of Bio-Inspired Morphing Architectures for Next-Generation Aircraft

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This paper explores the technological frontier of continuous morphing wings, a transformative approach intended to redefine the efficiency, adaptability, and maneuverability of next-generation aircraft. By surpassing the geometric and aerodynamic limitations imposed by traditional discrete control surfaces—such as flaps, slats, and ailerons—morphing wing technologies replicate the seamless, real-time shape modulation observed in avian flight, enabling continuous optimization of lift, drag, and stability across all phases of operation (Adaptive Compliant Wing, 2014; Ajaj, Friswell & Saavedra Flores, 2021; Barbarino et al., 2011). The study reviews the historical trajectory of the field, from early conceptual developments to contemporary experimental demonstrators, with emphasis on the integration of compliant mechanisms and smart, multifunctional materials. Particular attention is directed toward bio-inspired architectures such as the tendon-driven Fish Bone Active Camber (FishBAC) mechanism (Woods & Friswell, 2014), reconfigurable honeycomb-core structures capable of controlled topological adjustments (Ivchenko, Sharonov, Ziatdinov, 2019), and actuator-driven morphing trailing edges employing novel electromechanical or ultrasonic systems (Wu et al., 2015). By examining the interaction between flexible structural elements, active materials, and aerodynamic loading, the paper highlights design strategies that

ensure both high morphing capability and sufficient load-bearing capacity while preserving smooth, gapless aerodynamic surfaces essential for performance gains and noise reduction (Thill et al., 2010; Santer & Pellegrino, 2012; Dayyani, Shaw & Friswell, 2014).Ultimately, the analysis outlines a forward-looking path in which future aircraft are conceived not as rigid mechanical assemblies, but as adaptive technological organisms capable of continuous geometric reconfiguration for maximal aerodynamic efficiency.

Reverse Engineering and Propulsion Integration for High-Aspect-Ratio UAV Platforms

Andrei Cristian BANU
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Unmanned Aerial Vehicles (UAVs) derived from high-performance competition gliders offer exceptional aerodynamic efficiency for surveillance and reconnaissance missions. This paper presents a methodology for the digital reconstruction and electrification of the NAN F3J Xplorer 2 platform, a 3.8m wingspan glider originally designed for thermal duration flight. The study details a non-destructive reverse engineering process utilizing photogrammetric tools to extract geometric parameters in the absence of original CAD data (Computer-Aided Design data). Subsequently, the acquired data is processed in XFLR5 to generate a high-fidelity digital replica. A critical component of the research focuses on the conversion from a towed glider (F3J) to an electric-powered UAV (F5J), analyzing the impact of propulsion system integration on the static margin. The results demonstrate the feasibility of modifying the fuselage to accommodate a brushless propulsion system while maintaining the optimal Center of Gravity (CoG) through precise component placement.

Geometric Measurement, 3D Modeling and Aerodynamic Analysis of the RR Lentus Motor Glider

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The development and validation of radio-controlled (RC) aircraft often necessitate transitioning from empirical testing to precise theoretical analysis. This paper presents a comprehensive reverse engineering methodology to digitize and evaluate the aerodynamic and propulsive performance of the RR Lentus motor glider. Due to the unavailability of manufacturer CAD (Computer-Aided Design) files, the aircraft's geometry was initially acquired using photogrammetry via PhotoMeasure, enabling the extraction of dimensions. The propulsion system's propeller was digitally reconstructed using QBlade. Subsequently, operational simulation conditions were established by calculating the Reynolds number range using the Airfoil Tools calculator. The core aerodynamic evaluation was conducted within the XFLR5 environment, encompassing both 2D airfoil analysis and full 3D aircraft simulation to assess pressure distribution, lift-to-drag ratios, and inherent longitudinal stability. Furthermore, the aircraft's power system was validated using the eCalc propulsion calculator to estimate thrust, climb rate, and electrical efficiency. The results confirm an efficient aerodynamic design suited for thermal soaring, accompanied by a stable flight behavior and an optimal thrust-to-weight

ratio. Ultimately, this study demonstrates a robust, cost-effective digital approach for predicting RC model flight behavior.

Assessment of Industrial Risk Areas Using Aloha Simulation at the Seveso Chemark Rom Site

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Assessing the risks of sites that fall under the influence of Law 59/2016 is a major challenge for modern industrial engineering. The main objective of this paper is to mathematically model and determine the risk areas generated by a possible release of hazardous chemicals at CHEMARK ROM in Codlea, Brasov County. The research uses computer-assisted simulation with the help of Aloha software. This estimates toxic dispersion and thermal radiation based on the physical and chemical parameters of the substances involved and the weather conditions at the time of the accident. The analysis uses real data from the safety report and public information that the economic operator has made available to citizens and aims to investigate a scenario in which the substance Quickphos-Up reacts with water inside the warehouse. The results obtained provide a visual and technical basis for understanding the vulnerability of the area. Finally, the study demonstrates that numerical simulation transforms theoretical data into practical solutions for protecting the population.

Emission, Reception and Jamming of Electromagnetic Signals

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This paper analyzes the evolution of electromagnetic signal emission, reception, and jamming, emphasizing their essential role in modern communication systems. The foundations were established through the discoveries of Hans Christian Ørsted and Michael Faraday, who demonstrated the relationship between electricity and magnetism. These ideas were unified by James Clerk Maxwell in his work "A Dynamical Theory of the Electromagnetic Field", where he formulated the electromagnetic field theory and predicted the existence of electromagnetic waves. The experimental confirmation provided by Heinrich Hertz validated Maxwell's theory and opened the path toward practical wireless communication.
The development of early radio systems by Guglielmo Marconi transformed scientific theory into applicable technology, enabling long-distance transmission of information. Over time, transmitters and receivers evolved from simple spark-based devices to complex digital systems using semiconductor components and digital signal processing. The paper also examines signal jamming and its role in electronic warfare, highlighting the importance of controlling the electromagnetic spectrum. Today, wireless networks, satellite communications, and mobile technologies depend entirely on the efficient emission and reception of electromagnetic waves.

Signal-to-Noise Ratio Applied in the Numerical Processing of Radiolocation and Electronic Warfare Signals

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The signal-to-noise ratio is a fundamental quantity in the field of signal processing, quantifying how strong a useful signal is compared to the level of background noise present. In mathematical terms, SNR is defined as the ratio of the useful signal strength to the noise strength at a point in the system. Radiolocation (detection and localization of targets by radio waves) and electronic warfare (the set of jamming, interception and electromagnetic protection actions) are areas in which SNR plays an important role. In radiolocation, the SNR directly determines P_s P_z the maximum detection distance of *a radar and* the accuracy of the measurements *made (such as distance or angle from the target). In electronic warfare, knowledge of the signal-to-noise ratio underlies* ***jamming*** *(which aims to lower the SNR of enemy signals to the point where they can no longer be detected) and* ***electronic countermeasures*** *(aimed at maintaining or improving the SNR of one's own signals to avoid interference).*

Mitigating USV Navigational Drift: Trajectory Simulation and Route Analysis via OpenDrift

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Uncrewed Surface Vehicles (USVs) require robust integration of metocean data to mitigate navigational drift during hydrographic and surveying missions. This paper evaluates the OpenDrift simulation framework as the primary computational tool for predicting USV spatial displacement under complex environmental forcing. By ingesting high-resolution surface current and wind vector fields, OpenDrift enables the precise modeling of hydrodynamic and aerodynamic leeway effects acting upon the vessel's hull. We analyze route deviation and kinematic predictability by comparing theoretical courses against simulated drift trajectories driven by real-world environmental datasets. The results demonstrate that OpenDrift's modular architecture effectively quantifies cumulative environmental drift, providing the critical spatial parameters necessary for adaptive route planning. Consequently, this study validates the framework's utility in advanced mission preparation, offering practical insights for developing resilient, weather-aware control systems tailored to modern marine engineering and autonomous naval equipment requirements.

SKY RAPTOR 231/A

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The course "Design and Operation of UAS" aims to provide fundamental knowledge regarding the design, construction, and operation of unmanned aircraft systems. Within this discipline, students study the structural elements of a UAV, aerodynamic configuration, propulsion systems, and command and control systems, with emphasis on

correlating theoretical aspects with practical applications. By completing this course, students acquire essential knowledge regarding the functioning of an unmanned aircraft and understand how constructive choices influence UAV performance, stability, and safety.

Aerodynamic Analysis of CUBIC 3.4 by VP Models Model

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The CUBIC 3.4 by VP Models is a UAV/thermal sailplane designed for high-performance flight, with a fixed-wing configuration optimized for thermals and precise control in various flight conditions. According to EASA and national AACR regulations, it belongs to the Open category, requiring operator registration (weight >250 g) and is suitable for operation in the A3 scenario, outside populated areas.
This project presents a software analysis of the aerodynamic parameters of the Cubic 3.4, evaluating its sensitivity to center of gravity, camber (aileron sub-trims), and control surface deflections, as well as estimating its performance in typical scenarios: thermal use and approach/landing.

Aerodynamic Analysis of Aeroic Alpenbrise 4 Meter Scale Model

Georgiana Flavia LOBODĂ
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Alpenbrise 4 Meter by Aeroic drone falls into the high performance motor glider class, with an operational weight of 4.05 kg to 4.9 kg. This is a fixed wing RC model aircraft made of advanced composite materials, optimized for sailing and thermal flight, with a high aspect ratio of 22.
This work presents a software analysis of aerodynamic parameters and for the Alpenbrise model using online and offline tools. The analysis aims to optimize the weight and mass configuration and evaluate energy performance across various flight scenarios, aligned with technical airworthiness requirements and current regulations for RC model airplane class in civil airspace.

Digital Solutions Utilized for Simulating the Operation of the Training Ship "Mircea" Propulsion System

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This paper presents the three-dimensional modeling process of the shafting and the analysis of propeller typologies for a bark-type vessel. The primary objective consists of transforming technical drawings into a virtual replica for simulating the propulsion mechanism within the Autodesk Fusion 360 environment. The study examines fixed pitch propeller (FPP) and controllable pitch propeller (CPP) models, determining their efficiency relative to the operational parameters of the Training Ship "Mircea". The working methodology includes the analysis of technical documentation and the geometric construction of the system components: the shaft, the journal bearings, and the propeller.

The project result is an animated digital assembly that reproduces the rotational motion and the interdependence of the shaft line elements under operational regimes. The simulation allows for the visualization of power flow and mechanical interactions within the hub—which, for controllable pitch models, exhibits a hub diameter ratio between 0.24 and 0.32—and the rest of the assembly. The project constitutes technical support for the study of naval architecture and the understanding of propulsion systems specific to training ships.

Integrated UGV–UAV System With Resilient Multi-Layer Communication Architecture

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Military operations in urban environments are affected by intentional jamming, attenuation in massive structures, and GPS signal degradation, which reduces the effectiveness of classic tactical networks based exclusively on radio communications. The paper proposes an integrated UGV–UAV system, called Shadow Cognitive Resilient Network (SCRN), which introduces a communications architecture based on multi-domain physical redundancy. The system uses independent propagation domains (adaptive RF, magnetic proximity propagation, HF channel, and infrared optical communication), exponentially reducing the total probability of failure.
A probabilistic resilience model and a controlled degradation mechanism are presented, whereby performance gradually declines without complete loss of connectivity. The integration of the UAV allows for electromagnetic environment monitoring and adaptive switching between layers, increasing system reliability in contested environments.

Autonomous UAV Technologies for Monitoring and Technical Support

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Autonomous unmanned aerial vehicles (UAVs) have evolved from remote sensing platforms into integrated engineering systems capable of supporting monitoring, inspection and technical assistance missions in complex environments. Their operational value comes from the combination of lightweight airframes, embedded computing, navigation sensors, computer vision, wireless communications and mission-planning software. In engineering practice, autonomous UAVs reduce human exposure to hazardous areas, improve data acquisition speed and enable repeatable inspections of large or hard-to-reach assets such as bridges, power lines, industrial facilities and disaster-affected zones. At the same time, their wider deployment requires robust approaches to airspace integration, communication reliability, cyber resilience, trustworthy artificial intelligence and risk-based mission planning. This paper analyses the engineering foundations of autonomous UAV systems used for monitoring and technical support. It reviews the main hardware and software subsystems, explains the role of onboard sensing and AI-enabled perception, and discusses representative use cases in infrastructure inspection, emergency support and asset management. The paper also evaluates current technical limitations related to navigation in GPS-denied spaces, battery endurance, regulation, data quality and system security. The conclusion is that

autonomous UAVs are becoming a high-impact engineering tool, but their safe and scalable use depends on multidisciplinary design, certification-oriented development and the integration of autonomy with dependable human oversight.

Holographic Subsurface Mapping Array

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Our project explores the vision of the Mobile Mapping System, an advanced machine designed to evaluate land and determine its suitability for construction through rapid, non-invasive scanning. By combining subsurface sensing, environmental analysis, and predictive modeling, MMS is conceived as a unified platform capable of interpreting terrain structure, stability, and underlying conditions that influence buildability. The system aims to translate complex geological and geotechnical factors into an accessible, site-specific assessment, enabling faster and more informed decisions during early planning stages.
By advancing this vision, the project seeks to define the principles, capabilities, and potential applications of a new class of land-analysis technology. Such a system could streamline feasibility evaluation, reduce uncertainty in site selection, and support more sustainable and resilient development practices. MMS thus frames terrain assessment as an intelligent, continuous sensing process, opening pathways toward more responsive and knowledge-driven construction planning.

Concrete Applications of the Lagrange Multiplier Method

Costin-Radu STEFAN
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The paper presents a general analysis of the Lagrange multiplier method and its importance in solving constrained optimization problems. The study explains the theoretical foundations of the method and highlights its role in mathematical analysis and applied sciences. The main idea of the method is that, in a constrained optimization problem, the gradient of the objective function becomes proportional to the gradient of the constraint function. This relationship allows the transformation of a constrained optimization problem into a system of equations that can be solved using differential calculus methods. The paper also highlights the geometric interpretation of the method, showing that the optimal solution occurs at the point where the level curves of the objective function are tangent to the constraint curve. In addition to the theoretical explanations, the study also includes practical perspectives, as well as examples illustrating how the method can be applied in various fields, such as geometry, economics, physics, engineering, and computer science. Several case studies are presented that highlight the relevance of the method in real situations. These examples include decision-making processes under limited resources, strategic positioning problems, and everyday life situations where people try to achieve the best results under certain constraints. The analysis shows that the Lagrange multiplier method is not only a theoretical tool of mathematics, but also a practical method for understanding optimization processes in various real-world contexts.

Design and Development of the Kalisto 0.6 UAV: The Importance of Student-Built Drone Prototypes in Academic Education

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This paper presents a comprehensive overview of the design and developmentof the KALISTO 0.6 unmanned aerial vehicle (UAV), a student-developed drone prototype conceived and realized within an academic environment. The project was carried out as part of an applied engineering initiative aimed at familiarizing students with the complete lifecycle of a UAV system, from initial concept definition and aerodynamic analysis to physical construction and experimental validation.
Beyond its technical objectives, the study emphasizes the educational significance of designing and building original UAV prototypes within military universities. By engaging students directly in the engineering process, the project facilitates the effective integration of theoretical knowledge with hands-on practical skills, fostering critical thinking, technical responsibility, and interdisciplinary collaboration.

Study of Reconstruction (Anti-Imaging) Filters in Digital-to-Analog Conversion

Mircea-Florian VILCAN
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The interfacing of numerical computing systems with the physical analog world represents a fundamental challenge in modern electronic engineering. This paper focuses on the theoretical analysis of the signal reconstruction stage in Digital-to-Analog Conversion (DAC). Specifically, it investigates the phenomenon of spectral imaging—the unwanted replication of the useful spectrum at multiples of the sampling frequency—caused by the Zero-Order Hold (ZOH) circuit. Through mathematical modeling, this study evaluates the theoretical spectral rejection performance and phase linearity of three higher-order analog filter topologies: Butterworth, Chebyshev, and Elliptic. The mathematical analysis demonstrates that while the Elliptic filter offers superior spectral efficiency , the Butterworth filter remains the optimal choice for time-domain waveform fidelity. The theoretical framework highlights that active analog filtering is fundamentally necessary to prevent intermodulation, preserve energy efficiency, and ensure electromagnetic compatibility in downstream analog stages.

4. Weapons & Defense Technology

Conference ROOM E10

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Visual Simulation of Active Radar Guiance Interfence Using Chaff Dispensing Systems

Matei BOGHICI
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This paper presents a comprehensive visual and technical study conducted in the Blender 3D environment to simulate the high stakes interaction between a fighter jet and an incoming active radar guided missile. The primary focus is to illustrate the complex operational mechanics of chaff dispensing as a critical passive countermeasure in modern electronic warfare. By high fidelity recreating the emissionn of aluminum coated glass fibers and the subsequent phenomena of radar cross section confusion, the simulation provides a clearer, more intuitive understanding of how chaff effectively disrupts the tracking logic of active seekers to prevent terminal impact. Furthermore, the study explores the importance of tactical geometry and timing, demonstrating that the efficacy of the decoy is significantly enhanced by the aircraft's evasive maneuvers. This research serves as a pedagogical bridge, translating abstract electromagnetic interference

principles into a tangible visual framework suitable for aviation safety training and tactical analysis.

V-M.O.X. GUIDED BOMB

Brian-Adrian ANDREA, Ștefan BOTEZAN, Ingrid-Maria BUNESCU, Ștefan Andrei DULEA
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The Visual-Marking Ordnance eXplosive (V-M.O.X.) Guided Bomb represents a low-cost precision munition designed for deployment from unmanned aerial systems. Unlike conventional precision weapons that rely on satellite navigation or laser designation, the V-M.O.X. platform uses onboard computer vision for autonomous target acquisition and trajectory correction. The munition integrates a Raspberry Pi 4 as the processing unit and an ESP-32 camera module positioned in the nose section for real-time visual data acquisition. Captured frames are processed using OpenCV algorithms capable of recognizing predefined targets such as vehicles, infantry formations or fortified positions. Once the target is detected, the algorithm determines the deviation vector between the target coordinates and the central trajectory axis of the munition. A set of four servo-actuated aerodynamic fins mounted on the tail section perform course correction during free fall. This system enables the munition to compensate for environmental disturbances such as wind drift and release inaccuracies. The architecture focuses on minimal resource consumption and maximum operational efficiency, allowing the munition to be produced using commercially available components at a significantly reduced cost compared to traditional guided weapons. Such a platform is particularly relevant in modern wars of attrition where cost-effective and scalable precision strike capabilities are essential.

The Evolution of Contemporary Aerial Threats and Their Impact on Air Defense Systems

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This paper analyzes the fundamental shift in the paradigm of aerial warfare during the first quarter of the 21st century, marked by a transition from reliance on costly manned platforms to a decentralized and asymmetric combat environment. The study examines how the proliferation of unmanned aerial systems (UAS), precision-guided cruise missiles, and emerging hypersonic platforms has generated a structural inversion of the military-technical balance between offense and defense. While air superiority was historically determined by the qualitative dominance of advanced multirole aircraft, the current context is dominated by the use of low-cost expendable mass, capable of saturating even the most sophisticated integrated air defense systems (IADS).
The analysis details the taxonomy of modern threats, ranging from small tactical drones utilized at the infantry level to high-altitude strategic systems and loitering munitions. A central aspect of the research is the disproportionate economic impact of new technologies: the ability of a $20,000 drone, such as the Shahed-136, to jeopardize naval assets or strategic energy infrastructures valued at billions of dollars. The technical mechanisms of cruise missiles are also investigated, with an emphasis on the Kalibr

family, which utilizes low-altitude flight profiles and TERCOM-type guidance systems to elude radar detection.
The research highlights the need for a profound modernization of anti-aircraft units, both through updating detection and interception equipment (SHORAD) and by adapting training doctrines to manage small, numerous targets with increased autonomy. The findings indicate that the future of air defense depends on the integration of machine learning algorithms (Deep Reinforcement Learning) to optimize resource allocation in the face of swarm attacks. The paper underscores that adapting to this saturated environment requires solutions that transcend the economic limitations of traditional interceptors, proposing a layered and sustainable approach to airspace protection.

ADATS (Air-Defence Anti-Tank System) – Capabilities, Development and it's Position in Modern Anti-Air Defence Systems

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The Air Defense Anti-Tank System (ADATS) is a mobile missile system designed to defend military forces from both air and ground threats. Developed in the late Cold War by Oerlikon Contraves in cooperation with Martin Marietta, the system was created to provide short-range air defense while also being capable of destroying armored vehicles. ADATS combines advanced detection technologies such as radar, infrared sensors, and laser guidance to track and engage targets with high accuracy.
The system carries eight high-speed missiles capable of reaching speeds above Mach 3 and striking targets up to about 10 kilometers away. Its dual-purpose warhead allows it to destroy aircraft, helicopters, drones, and heavily armored tanks. ADATS was primarily used by the Canadian Armed Forces, mounted on an armored vehicle platform to provide mobility and battlefield protection.
Although technologically advanced, the system was produced in limited numbers due to high costs and changing military requirements. Nevertheless, ADATS demonstrated an important step in the development of modern integrated air defense systems capable of engaging multiple types of threats from a single platform.

Optimizing Detections and Target Tracking Algorithms Using Pulse Doppler Radar Architectures: A Numerical Simulation Approach

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In the highly contested landscape of modern electronic warfare, the ability of an aerial platform or ground-based air defense system to autonomously detect, track, and maintain continuous coverage of highly maneuverable targets is a critical operational requirement. Traditional non-coherent radar architectures are becoming increasingly obsolete when confronted with advanced stealth technologies, massive environmental clutter, and frequency-agile countermeasures. This paper presents a theoretical investigation into the architecture, signal processing algorithms, and target tracking capabilities of Pulse Doppler (PD) radar systems. Operating primarily in the X-band, PD radars exploit the phase coherence of electromagnetic echoes to perform high-precision spectral analysis, allowing for the reliable discrimination of moving targets against a

background dominated by stationary noise. To validate the theoretical models, a software simulation was developed from scratch in the GNU Octave environment. This simulation encompasses the entire signal processing chain: from the initial radio-frequency emission and antenna scanning kinematics to dynamic Signal-to-Noise Ratio (SNR) calculations, Doppler filtering, Constant False Alarm Rate (CFAR) detection, and automated target tracking protocols. By subjecting a simulated target to extreme kinematic profiles—including high radial velocities and sudden 3G evasive maneuvers—the study rigorously evaluates the radar's capacity to resolve range and velocity ambiguities inherent in high Pulse Repetition Frequency (PRF) modes. Furthermore, the integration of an M-out-of-N detection logic and sequential state estimation filters is analyzed, confirming that software-defined cognitive processing can successfully mitigate hardware limitations and maintain situational awareness in dynamic combat scenarios.

Technical Evolution and Operational Relevance of the Mim-104 Patriot System

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The rapid evolution of aerial and ballistic threats has reshaped the requirements of modern air and missile defense systems. The MIM-104 Patriot system has undergone continuous modernization to address these emerging challenges and to ensure the protection of critical infrastructure and strategic assets. Originally designed for aircraft interception, the system progressively expanded its capabilities toward terminal-phase ballistic missile defense.
Patriot's architecture integrates a multifunction phased-array radar (AN/MPQ-65), an automated engagement control station, and modular launchers within a unified command and fire control framework. The transition from PAC-2 interceptors, equipped with proximity-fused warheads, to PAC-3 and PAC-3 MSE variants introduced the hit-to-kill principle, significantly enhancing interception precision and effectiveness against high-speed ballistic targets.
Operational performance is determined not only by interceptor characteristics but also by radar discrimination capabilities, resistance to electronic countermeasures, and network integration within broader air and missile defense structures. Despite its technological complexity and logistical demands, the system maintains high operational reliability and interoperability.
This paper examines the technical evolution of the Patriot system and evaluates its role within contemporary integrated air and missile defense environments.

AHEAD Ammunitions –Technological Innovation and Intercultural Dimensions in Modern Defense

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This paper analyzes the concept, technological architecture, and strategic relevance of AHEAD ammunitions (Advanced Hit Efficiency And Destruction) within the contemporary security environment. The study examines their operational principles, programmable airburst capability, and their role in asymmetric and hybrid conflicts. In addition, the

paper explores how technological innovation in defense industries reflects broader processes of intercultural communication, multinational cooperation, and strategic alignment within NATO and allied frameworks. By evaluating operational case studies and doctrinal implications, the research highlights the importance of precision, adaptability, and controlled lethality in urban and complex operational theaters. The findings demonstrate that AHEAD systems represent not only a technological advancement but also a paradigm shift in how military organizations communicate operational intent, manage risk, and integrate emerging technologies across cultural and institutional boundaries.

ARROW-3 and SKY NEX – Modern Solutions for the Air Defence of Romania

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This paper analyses two modern air defence systems, ARROW-3 and Skynex, from a strategic and operational perspective. ARROW-3 represents an advanced exo-atmospheric anti-ballistic missile defence capability, while Skynex is a short-range air defence artillery system optimized for countering drones and low-altitude threats. The study compares their technological features, advantages, and limitations, and evaluates their relevance for the Romanian Ministry of National Defence. Considering the evolving security environment in the Black Sea region, the integration of multi-layered air defence systems is essential for ensuring national resilience and strategic deterrence. The research also considers operational lessons identified in recent conflicts, where both ballistic missile threats and large-scale drone attacks have reshaped air defence doctrines. Special attention is given to cost-efficiency, interoperability within NATO frameworks, and long-term sustainability of defence investments. The comparative perspective highlights the complementary nature of strategic and tactical air defence systems in building a resilient national security architecture.

Weapons and Communications Systems: Strategic Integration and Technological Advancements

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This paper examines the strategic integration of weapons and communications systems as a defining feature of contemporary military operations. Modern combat environments require synchronized, network-based capabilities that combine kinetic force with real-time information exchange. The study analyzes the evolution of integrated systems, emphasizing interoperability, command and control enhancement, cybersecurity, scalability, and adaptability. It highlights key technological advancements, including smart munitions, electronic warfare systems, satellite communications, artificial intelligence, machine learning applications, and secure communication architectures. A mixed-method approach, incorporating technical analysis and relevant case studies, demonstrates the shift toward network-centric warfare and multi-domain operations. The findings reveal that operational superiority increasingly depends on secure data sharing, rapid decision-making cycles, and resilient digital infrastructures. Although

integration presents challenges such as interoperability constraints, cybersecurity vulnerabilities, training requirements, and financial limitations, the long-term strategic benefits outweigh these obstacles. The research underscores the necessity of sustained investment in secure, scalable, and interoperable defense systems capable of adapting to emerging threats and technological change.

Directed Energy Laser Weapons: Performance, Limitations and Defense Integration

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This paper is about high-energy laser weapons and how important they are becoming in modern air defense systems. Currently, there is a significant increase in the number of unmanned aerial vehicles, which is creating serious challenges. Conventional missile defense systems are becoming less effective because they cost significantly more than the targets they are designed to intercept. This imbalance has led to the search for alternative defense solutions that are more cost-effective. The research examines the fundamental operating principles of high-energy laser systems, explaining how concentrated electromagnetic energy can be used to disable or destroy airborne targets. It describes the core architecture of a military laser platform, highlighting the interaction between power generation, beam control, targeting mechanisms, and thermal management systems. Furthermore, the paper transitions from theoretical foundations to practical applications, offering a comparative perspective on current laser defense programs and their operational capabilities. There are limitations on the use of lasers as an air defense weapon; those limitations are the weather affecting laser performance, and lasers require large amounts of energy. This report describes both the benefits and drawbacks of using laser weapons and their uses within air defense networks. Improvements in the response time to threats and overall operational effectiveness will enable laser air defense systems to evolve into systems that can respond more quickly as air threats continue to change. Additionally, these types of weapons can provide a level of protection against possible attacks on air defense systems, making those systems more reliable and resilient over time.

Analysis of the Use of Air Power in Combating Hybrid Threads

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In recent years, the European Union and NATO have been facing a serious threat related to the development of hybrid threats and advances in military technology. Due to its key role in ensuring the security of transport routes supplying Ukraine, it has become a testing ground for hybrid actions. Russia uses its operatives to test our responses, from small commercial drones flying near military installations, attacks on critical infrastructure, to military drones crossing the borders. Aviation, as the most mobile force, can make a significant contribution to deterrence and countermeasures.

Radar Systems: The Core Pillar of Modern Air Surveillance

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This paper presents a fundamental analysis of modern radar systems and their role in air defence. The study covers the physical principles of radio wave reflection, the basic of a radar station, and the practical application of these technologies. It explores a radar station, detailing the functional synergy between the transmitter, antenna, and receiver units. Furthermore, the research transitions from theoretical concepts to the practical application of these technologies within the Romanian Air Force's operational environment. An important part of the paper is dedicated to the evolution of radiolocation, moving from traditional mechanical scanning to modern phased-array systems, while also addressing the current challenges posed by Unmanned Aerial Vehicles (UAVs) and stealth technology. By analyzing how radar systems detect, track, and identify airborne targets, the study highlights the strategic importance of maintaining an integrated surveillance network. In the end, the paper shows why radiolocation remains the primary technological pillar for ensuring national freedom and providing the necessary early warning capabilities in an increasingly complex and high-speed aerial battlefield.

The FIM-92 STINGER MANPADS System: Evolution, Functioning and Integration into Romania's Defense Architecture

Ioan PERSIC, Adrian-Dumitru TUDOR
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The emergence of Man-Portable Air-Defense Systems (MANPADS) has redefined air power vulnerability in the face of infantry. Among these, the American FIM-92 STINGER system has established itself as a benchmark for the Very Short-Range Air Defense (VSHORAD) category for over four decades. As a fire-and-forget weapon, the system eliminates the need for manual target tracking after launch, significantly increasing the operator's survivability. This paper analyzes the technological evolution and physical operating principles of the system, its continuous adaptation to asymmetric modern threats such as Unmanned Aerial Systems (UAS), and the strategic manner in which this platform and equivalent capabilities are integrated into the defense architecture of the Romanian Armed Forces.

Weapons & Defense Technology Cyber Warfare

Eduard Calin PUIU
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In the 21st century, weapons and defense technology have become key elements of national security. Rapid technological changes, regional instability, and hybrid threats have forced countries to rethink how they organize and use their armed forces. For Romania, defense modernization became especially important after joining NATO in 2004. This process required updating military structures, modernizing equipment, and aligning with NATO standards. The focus was on improving readiness, increasing deterrence, and making sure the armed forces could operate smoothly with allies.

Investments in new systems, like air defense, multirole aircraft, armored vehicles, and modern communications, became top priorities. Romania's location on NATO's eastern flank and its role in the Black Sea region make it necessary to constantly adapt to new threats. This paper looks at how Romania's defense industry and military technology have evolved since the end of the Cold War, highlighting modernization programs, key weapons systems, industrial development, and the country's contribution to regional security within NATO.

The CHIRON System – Development, Capabilities and its Position in Modern MANPADS Evolution

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This paper provides a comprehensive analysis of the CHIRON (KP-SAM), a South Korean man-portable air-defense system (MANPADS), examining its development history, technical architecture, and strategic impact on modern short-range air defense (SHORAD). As aerial threats transition toward high-agility platforms and unmanned aerial systems (UAS), the CHIRON represents a critical evolution in surface-to-air technology.
The study details the system's integration of dual-band (IR/UV) seeker technology, which provides superior resistance to infrared countermeasures compared to legacy single-band systems. Furthermore, the paper evaluates the CHIRON's operational flexibility ranging from infantry-portable configurations to vehicle-mounted integration , and its role in the global shift toward indigenous defense manufacturing. By comparing CHIRON against historical predecessors and contemporary peers, this research demonstrates that the system's combination of high-explosive fragmentation lethality, Mach 2+ velocity, and advanced electronic counter-countermeasures (ECCM) establishes it as a benchmark for 21st-century portable air defense. The findings conclude that the CHIRON is not merely a regional asset but a globally competitive platform that addresses the complexities of contested modern airspace.

Romania's Integrated Air and Missile Defense: Surface-to-Air Missiles, Anti-Aircraft Artillery, and NATO Interoperability

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Romania's security environment on NATO's Black Sea flank has sharpened the operational value of integrated air and missile defense (IAMD). Repeated airspace violations and the dissemination of low-cost unmanned aerial systems (UAS), cruise missiles, and ballistic threats require a layered mix of sensors, command-and-control (C2), surface-to-air missiles (SAMs), and anti-aircraft artillery (AAA) that can react quickly and fight through electronic attack. This paper analyzes Romania's evolving ground-based air defense as a weapons-and-defense-technology problem: how national assets (long-range fire units, medium-range systems, short-range guns and MANPADS) can be integrated with NATO's air-defense architecture to produce reliable track quality, disciplined engagement timelines, and sustainable logistics. The discussion highlights key technical bottlenecks sensor coverage gaps at low altitude, network latency, interoperability constraints, ammunition stockpiles, and training throughput and proposes modernization

priorities focused on short-range counter-UAS, multi-sensor fusion, and resilient communications for contested environments.

Missile Technology in Modern Air Forces – A Decisive Factor in Air Superiority

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This paper examines the fundamental shift in aerial warfare from traditional, close-range dogfights to modern beyond-visual-range (BVR) engagements. Driven by rapid advancements in detection systems and guided weaponry, contemporary air superiority now relies heavily on information dominance and technological integration rather than isolated aircraft maneuverability. The text traces the operational evolution of air-to-air missiles, highlighting the transition toward autonomous, "fire-and-forget" capabilities that maximize both lethality and pilot survivability. It further explores how integrating these advanced munitions with stealth platforms and networked sensor arrays creates a decisive tactical advantage.
In air-to-ground operations, the strategic use of precision-guided stand-off weapons is emphasized as a vital method for neutralizing heavily defended targets with minimal risk to aircrews. Furthermore, the analysis addresses the disruptive impact of hypersonic missiles, noting that their extreme velocities and unpredictable trajectories fundamentally challenge current air defense architectures. Finally, the text forecasts the future of aerial combat, projecting a transition toward artificial intelligence (AI) and networked warfare, where smart, adaptive missiles will dynamically coordinate in real-time to overcome complex operational environments.

Evolution and Operational use of Radar Systems in the Ukraine War

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The full-scale invasion of Ukraine by Russia in February 2022 has inadvertently created the most comprehensive and high-intensity testing ground for modern military technology since the Second World War. Among the myriad of systems being tested and stressed, radar technology stands out as the critical sensor upon which modern combined arms warfare depends. This study provides an in-depth analysis of the technological evolution and operational deployment of radar systems throughout the Ukraine war, examining both Russian and Ukrainian capabilities. Sophisticated jamming techniques, including those employing Digital Radio Frequency Memory (DRFM) to create false targets, are constantly countered by advanced signal processing and frequency agility in modern systems like the TRML-4D [1]. Simultaneously, the omnipresent threat of anti-radiation missiles (ARMs) forces radar operators into a high-stakes game of emission control and rapid mobility.
Furthermore, the conflict has starkly illustrated the vulnerability of even the most advanced radar systems. Ukraine's systematic campaign to degrade Russia's integrated air defense network has resulted in the destruction of numerous high-value assets, including the rare P-18-2 "Prima" anti-stealth radar, the 55Zh6U "Nebo-U" long-range radar valued at $100 million [3], and the naval-derived "Zaslon" system capable of tracking 200 targets simultaneously . The Ukraine war validates that the future of radar

development must prioritize resilience against electronic attack, seamless integration into networked sensor grids, the application of artificial intelligence for data fusion and threat prioritization, and the exploration of stealthy, multi-static architectures to maintain battlefield dominance in an increasingly contested and transparent electromagnetic environment.

The Impact of Air Transport on Hybrid Threats

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In recent years, the European Union and NATO have been facing a serious threat related to the development of hybrid threats and advances in military technology. Air transport is one of the key factors affected by the hybrid threats because of its multipurpose use and its involvement in many areas.

5. MILITARY HISTORY

Conference ROOM F.E 3.11

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Operation Challenges, the Psychology and Combat Survival in Romanian Fighter Aviation, Before, During and After World War II

Denis-Lucian BĂDESCU
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The History of ROMANIAN AVIATION certainly represents not only a working tool for specialists and teachers in aviation education, but also a valuable form (a means of patriotic education, especially for the younger generation eager to know and carry forward the rich traditions of Romanian aviation. This article follows the stages of development (1935-1959) of Romanian aviation before the Second World War, its evolution during the war (1941-1945), and immediately after, the psychology of the fighter pilot, respectively the establishment of fighter fleets for the training of flight and technical personnel, and the training of pilots on the new aircraft in the endowment.

The Evolution of MEDEVAC Missions

Ana Maria BALTĂ
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This paper analyzes the evolution of medical evacuation missions (MEDEVAC), highlighting their transition from logistical solutions of opportunity to a vital component of modern military strategy. The study investigates critical technological and doctrinal leaps, starting with the first vertical rescue experiments of World War II, continuing with the systematization of evacuation in the Korean War, and culminating with the revolution of the „Dustoff" concept in Vietnam. The paper emphasizes how the shift from simple transport to providing in-flight medical care validated the "Golden Hour" principle, drastically reducing mortality. Finally, the analysis connects historical lessons with current NATO interoperability standards, concluding that the integration of dedicated aerial platforms has transformed time from a deadly enemy into a strategic ally.

The Evolution of the Intendancy in Romania Between 1878 and 1916: Organization, Role and Institutional Impact

Codrin-Mihai CRĂCIUNESCU, Andrei BĂRBULEA
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This study analyzes the evolution of the Romanian Army's intendancy between 1878 and 1916, focusing on its organization, institutional development, and strategic role within the military system. Following the War of Independence, the Romanian state initiated a process of military consolidation in which the intendancy—responsible for supply, administration, and financial management—became an essential component of the army's operational capacity and its broader system of military logistics. Drawing on legislative changes, organizational reforms, and institutional developments, the paper examines how the intendancy gradually transformed from a centralized administrative structure into a more decentralized and integrated apparatus of military administration capable of responding to the practical needs of the troops.

George Valentin Bibescu - The Visionary who Brought Romania into the Era of Aviation

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*George Valentin Bibescu (1880–1941) stands as a foundational figure in both Romanian and international aeronautics, bridging the gap between aristocratic tradition and modern technological progress. Born into a prestigious family as the grandson of Wallachia's former ruler, Bibescu first demonstrated his passion for innovation through motoring. He founded the **Automobile Club of Romania** in 1904 and gained international acclaim for a 5,000 km automobile expedition from Galați to Isfahan.*
*His transition to aviation was marked by rigorous training at the **Blériot Flight School** in France. By obtaining International Pilot's License no. 20, he became one of the first 25 officially certified aviators in the world. Upon returning home, Bibescu established Romania's first flight school at **Cotroceni** and founded the **National Aeronautical League***

in 1912, which was instrumental in integrating aviation into the nation's defense doctrine.
*Bibescu's leadership reached a global scale during his decade-long presidency of the **Fédération Aéronautique Internationale (FAI)** starting in 1930, where he standardized pilot certifications and regulated international aerial records. Locally, his foresight led to the transformation of the Băneasa estate into a modern airfield, now known as **Băneasa Airport**. Beyond technical pursuits, he served as President of the Romanian Olympic Committee and, alongside his wife, the writer **Marthe Bibesco**, maintained Mogoșoaia Palace as a premier European cultural hub. Ultimately, Bibescu is remembered as a "founding father" of Romanian aviation whose legacy of leadership and modernity continues to inspire new generations of aeronautical professionals.*

Modernization of the Romanian Military Aeronautics in the Interwar Period

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This paper analyzes the modernization and consolidation of the Romanian Royal Aeronautics between 1920 and 1939, highlighting the transition from a secondary support arm, influenced by French military doctrine, to an independent and complex military branch. Romania recognized the indispensable nature of aviation, after the experience gains in World War I, initiating a series of administrative and strategic reforms that culminated in the establishment of the Ministry of Air and Marine in 1936.
Current research presents efforts to break away from dependence on imports and stimulate the national defense industry. Among the main areas of focus are the activities of I.A.R. Brasov, as well as the transition from wooden and canvas aircraft to modern, safer aircraft built from metal. The acquisition of certain foreign construction licenses to the detriment of Romanian-made prototypes is also investigated. At the same time, the evolution of Air Artillery is studied, which benefited from continuous development through the acquisition and implementation of innovative Romanian systems in the interwar period.
Industrial developments led to the maintenance of Romanian military aviation performance at the beginning of World War II.

Operational Capabilities of the Romanian IAR80 fighter Aircraft in the Stalingrad Air Campaign

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The present paper aims to highlight the role and importance of the IAR 80 fighter aircraft in Romania's participation in the Battle of Stalingrad, in 1942–1943, in the context of the operations carried out on the Eastern Front of World War II. By analyzing the strategic context, the technical evolution of the aircraft and its use in total war conditions, the contribution of the Royal Romanian Aeronautics to supporting the Romanian ground troops deployed on the flanks of the German 6th Army is outlined.In the summer and autumn of 1942, with the advance of the Axis forces towards the Volga and the Caucasus, Romanian aviation units were deployed to support the offensive on the city of Stalingrad.

The groups equipped with the IAR-80 and its improved version, the IAR-81, carried out missions of escorting bombers, intercepting Soviet aviation and, in some situations, ground attack. At this stage, the missions aimed mainly at protecting the Romanian position on the Don and maintaining a minimum of air superiority in the assigned sectors. The launch of the Soviet counteroffensive on November 19, 1942 (Operation "Uranus") radically changed the strategic situation. The Romanian aviation was faced with an intensification of Soviet air activity, severe weather conditions and major logistical difficulties. In these circumstances, the IAR-80, designed in the late 1930s, began to show its technical limits in relation to the new types of Soviet aircraft, better armed and more efficient at high altitudes. However, the Romanian pilots continued to carry out missions to protect the retreating troops and to cover air and ground convoys. In the winter clashes of 1942–1943, the Romanian fighter aviation recorded confirmed aerial victories, but also significant losses in aerial combat and under anti-aircraft fire, reflecting the intensity and desperate nature of the operations around Stalingrad. Overall, the analysis demonstrates that the IAR-80 represented an important element of the Romanian fighter aviation also during the Stalingrad campaign, contributing to the fulfillment of defensive and air support missions in an unfavorable strategic context. At the same time, the experience of this campaign highlighted both the professionalism of the Romanian pilots and the technological limits of the national aeronautical industry in the face of the demands of a war of attrition on the Eastern Front.

Aurel Vlaicu

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Aurel Vlaicu (1882–1913) was a pioneering Romanian engineer whose childhood fascination with flight led him to study in Munich and eventually build his first glider in 1909. Despite modest means and tempting offers from German manufacturers, Vlaicu insisted on bringing his inventions to Romania, where he developed the "A. Vlaicu No. I". On June 17, 1910, he made history by piloting his original aircraft, making Romania the third country in the world to fly a locally designed and built machine. His technical brilliance was internationally recognized at the 1912 Aspern Contest, where his improved "A. Vlaicu No. II" won five prizes against a field of global competitors. A hero of both civil and military aviation, Vlaicu died in September 1913 during a tragic attempt to fly over the Carpathian Mountains, a mission intended to symbolically unite the Romanian people.

Captain Egon Nasta, Commander of Squadron N. 11

Alexandru CALINIUC
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Determined and tenacious by nature, Egon Nasta was drawn to the azure skies and the perils of flight. A graduate of the Flight School, he distinguished himself as an iconic figure in Romanian military aviation during World War I, demonstrating exceptional skills as a fighter pilot and remarkable courage in the face of the enemy. Serving in Squadron N. 11, he logged over 250 flight hours and participated in more than 30 aerial battles, achieving 3 confirmed victories against enemy aircraft.

"A pilot at war needs something more. I would call it <<nerves of steel and a strong heart>>". Even under these conditions, Second lieutenant Egon Nasta never missed a mission, as flying represented a way of life for him.

The Historical Development of Military Drones and Their Role in Modern Warfare

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The rapid growth of unmanned aerial vehicles (UAVs), known as military drones, has changed modern military operations and strategic thinking. Originally designed as experimental remote-controlled aircraft in the early twentieth century, drones have evolved into advanced systems that can carry out complex military missions. Today, unmanned aerial systems are widely used for surveillance, reconnaissance, intelligence gathering, target acquisition, and precision strike operations. They have become essential tools in modern warfare.
This paper looks at the historical development of military drones and highlights the technological and strategic changes that have influenced their current roles in military operations. The study starts with the early experimental days of unmanned aviation during the First World War, when engineers first tried to create planes that could operate without a pilot. It then explores the technological improvements made during the Second World War and the Cold War, when unmanned aerial systems were used more systematically for reconnaissance and intelligence tasks.
The research continues with the rise of modern combat drones at the end of the twentieth century, especially the introduction of advanced UAV platforms that can send real-time surveillance data and carry precision-guided weapons. A special focus is on the heavy use of drones in current conflicts, particularly during the Russian invasion of Ukraine, where unmanned systems have become vital for reconnaissance, artillery targeting, and direct combat.
Additionally, the paper looks at the growing significance of counter-drone technologies and the future development of unmanned aerial systems. This includes the integration of artificial intelligence, self-navigating systems, and drone swarm capabilities. These advancements are likely to further affect military strategies and change the battlefield dynamics of future conflicts.
By examining both the historical development and current uses of UAV technology, this paper emphasizes the increasing strategic importance of military drones and their role in shaping the future of warfare.

Beyond the Horizon: The Rise of Romanian Women in Aviation

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This article is meant to underline the situation of women in Romania between the mid 19th century and the 20th century, their struggle for education and then their right to fly. This long journey was defined by a series of small but very important successes that allowed Romanian women to challenge old traditions and gain their rights to study, fly, and take part in politics. A central part of this change was the improvement of the

country's rules and social standards, which created the necessary foundation for progress. Furthermore, the study emphasizes the role of a group of women who played a significant role in advancing professional opportunities and who wanted Romania to have the same rights as other modern countries. Their hard work not only opened new career paths in aviation but also changed the way men and the entire society viewed the abilities and the role of women in the modern world.

From Spears to Firearms

Elena-Isabela CHELARU
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The military history of Africa encompasses the development of armies, strategies, and conflicts that have shaped the continent's political, social, and economic structures. From precolonial kingdoms to contemporary states, military organization has played a central role in state formation, territorial expansion, and regional security. This paper examines African military history across three major periods: precolonial, colonial, and contemporary. In the precolonial era, empires such as Mali, Songhai, and Ethiopia developed sophisticated military structures, combining mobility, terrain knowledge, and disciplined regiments to maintain control and defend against invasions. The Zulu kingdom, under Shaka Zulu, exemplifies innovation in military tactics and organization. Shaka's regimental system, combined with strategies like the "horns of the buffalo" formation, enabled rapid territorial expansion and consolidation of power in southern Africa. Colonial encounters introduced firearms and new logistics, prompting adaptation and resistance, while contemporary African militaries face diverse challenges including civil conflicts, regional interventions, and international peacekeeping. By analyzing these periods, the paper highlights the continuity and transformation of African military systems, demonstrating their central role in shaping societies, leadership, and regional stability.

Air Flotilla General Dan Stoian Master of Aerial Bombardment in the Second World War

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This paper analyzes the prodigious career of General Dan Stoian, a war veteran and a prominent figure of the elite generation of Romanian aviation. A graduate of the Aviation Officers' School in May 1941, he served as a second lieutenant and subsequently as a lieutenant pilot within the 5th Bombardment Group (1st Bombardment Flotilla Brașov). Specialized in the German-made Junkers Ju-88 twin-engine aircraft, Stoian flew 147 missions involving heavy bombardment (both 70-degree dive-bombing and horizontal bombing) and long-range reconnaissance. Military analysis reveals remarkable efficacy; he dropped over 280 tons of bombs on enemy targets across the Eastern and Western fronts, operating from Ukraine and Bessarabia to Czechoslovakia. The project pays particular attention to the year 1944, highlighting the strategic dilemmas of the Romanian Air Corps in the face of the Soviet offensive and the period of "forced inactivity" between May and August, interpreted as a tacit preparation for the events of August 23.The study details the immense risks of these missions, from vulnerability to anti-

aircraft artillery during the aiming process via the "STUVI" bombsight, to the vital protection provided by fighter escorts. The recognition of his bravery is attested by an impressive record of decorations, including the "Aeronautical Virtue" with Swords, the "Iron Cross" (1st and 2nd Class), and the "Star of Romania". Finally, the research documents the brutal transition from the status of a career officer to postwar political exclusion when, after only 9 years and 9 months of service, he was "released" (discharged) from the army. Forced to rebuild his life as an agronomist, he remained a symbol of military honor untouched by the vicissitudes of history.

Smaranda Brăescu (1897–1948): High-Altitude Parachuting, Aeronautical Innovation, and the Scientific Foundations of Early Aviation Safety

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Smaranda Brăescu was a Romanian aviation pioneer whose achievements in high-altitude parachuting and piloting contributed significantly to the scientific and operational development of early twentieth-century aeronautics. This paper analyzes her career from a technical and scientific perspective, focusing on high-altitude physiology, parachute engineering, aerodynamics, and aviation safety systems. Particular attention is given to her 1932 world-record parachute jump from 7,233 meters in Sacramento, California, an event that provided practical validation of high-altitude descent mechanisms and human survivability in low-pressure atmospheric conditions. Beyond her parachuting achievements, Brăescu's role as a licensed pilot and her service in aerial medical evacuation operations during World War II demonstrate her broader contribution to applied aeronautical science. Her legacy illustrates the intersection of experimental risk, engineering innovation, and the advancement of women in STEM fields.

Romania's Participation in the Second World War (1941 – 1945)

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This paper analyzes Romania's participation in the Second World War between 1941 and 1945, focusing on the political, military, and territorial transformations that shaped the country's evolution. The study examines the complex circumstances that led Romania to enter the war, highlighting the impact of the territorial losses of 1940, which generated a profound national crisis and influenced the country's strategic decisions.
Under the leadership of Ion Antonescu, Romania aligned itself with Nazi Germany, aiming to recover Bessarabia and Northern Bukovina. Romanian forces participated in Operation Barbarossa and subsequent campaigns on the Eastern Front, initially achieving their objectives. However, continued involvement beyond national borders led to heavy losses, especially during the Battle of Stalingrad, which marked a turning point in the war and weakened Romania's military capacity.
The paper also addresses the internal and external consequences of Romania's alliance with Germany, including economic strain, political repression, and involvement in actions against civilian populations. A key moment analyzed is the political and military shift of 23 August 1944, when King Michael I of Romania decided to join the Allied powers. This

decision significantly contributed to the defeat of German forces in Southeastern Europe and allowed Romania to participate in the liberation of its territory and in operations in Central Europe.
The paper highlights the complexity of Romania's wartime decisions and their long-term consequences, including the country's transition into the Soviet sphere of influence after 1945.

The Decisive Role of Maneuver in Armed Conflicts: The Mongol Empire as a Historical Case Study

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This paper examines the decisive role of maneuver in medieval armed conflicts through the case study of the Mongol Empire in the 13th century. Rather than attributing Mongol expansion solely to brutality or numerical strength, the study argues that their military superiority derived from a coherent operational system centered on mobility, structural flexibility, deception, and coordinated concentration of force.
By analyzing key engagements such as Kalka, Mohi, and Ayn Jalut, the paper highlights how maneuver functioned as a structural principle linking strategy and tactics. The Mongol example demonstrates that in medieval warfare, operational success depended largely on the ability to control space, tempo, and enemy cohesion.
The research confirms that maneuver, when integrated into a disciplined and adaptable military structure, represented the decisive determinant of Mongol battlefield and campaign effectiveness.

Romanescu Mihail, Knowna as "Leul"

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A prominent figure of the Romanian wings, General Mihail Romanescu, affectionately nicknamed "The Lion" by his peers and subordinates, represents a powerful symbol of the evolution of military aviation in the 20th century. His life and career encapsulate the transition from interwar biplanes to the command of large, modern fighter units during the tumultuous years of World War II. His exemplary career, which surprisingly started in the infantry branch, was truly consecrated in aviation through rigorous training stages, including a prestigious exchange program with the Royal Air Force in Great Britain. This experience allowed him to bring modern Western aerial combat tactics to Romania. His military trajectory culminated with the elite leadership of the 1st Fighter Flotilla during the Eastern Front campaigns, where he proved to be a masterful tactician and an inspiring leader. However, his destiny was tragically broken by the installation of the communist regime in Romania. Like many other elite officers of the Royal Army, he was purged, subjected to show trials, and eventually executed in 1952 at the Jilava Penitentiary. This paper aims to analyze his professional evolution, his operational successes during the Second World War, and his tragic transformation from a decorated frontline hero into a victim of brutal political repression, highlighting his enduring legacy within the Romanian Air Force.

Henri Coandă

Theodora-Raluca DIACONESCU
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This paper analyzes the impact and scientific achievements of the Romanian engineer and inventor Henri Coandă, a pioneer of modern aviation. The study focuses on his most significant discovery, the "Coandă effect", and its fundamental role in developing aerodynamic technologies for aircraft, helicopters, and industrial applications. Furthermore, the paper examines Coandă's visionary projects, such as the world's first jet aircraft (Coandă-1910), the Lenticular Aerodyne, and his innovative high-speed tube transport system, which anticipated modern concepts like the Hyperloop. By exploring his diverse contributions—from solar-powered desalination to modular architecture—this work highlights Coandă's enduring legacy as a symbol of innovation and perseverance in the history of global science and technology.

The Importance of Logistics in World War II

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The scientific papers "The Importance of Supply in World War II" highlights the fundamental role of logistics in the conduct and outcome of the 1939–1945 conflict. In a war of global scale, which involved the mobilization of unprecedented human and material resources, supply became a vital element of military strategy. Food, fuel, ammunition, equipment, and means of transport had to be managed efficiently to support operations across multiple fronts.
The industrial superiority of the United Nations provided a decisive advantage, reflected in the constant production and distribution capacity of resources to the Allies. Through the Lend-Lease program, the United States significantly supported the Allied war effort, providing essential equipment and materials that sustained their operational capacity. Concurrently, the efficient organization of military transport, exemplified by the Red Ball Express system, allowed for the maintenance of a continuous flow of provisions to the troops on the European fronts.
In contrast, the logistical difficulties encountered by Germany severely affected the conduct of operations, demonstrating that military success depends not only on strategy and combat power but also on the capacity for material support. Thus, supply proved to be a determining strategic factor in the outcome of the war.

The Lieutenant Commander Dan Valentin Vizanty, A Symbol of Bravery and Professionalism in the Romanian Fighter Aviation

Lorena Mădălina DUMITRU
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A prominent figure of Romanian aeronautics, defined by exceptional courage and masterful technical skill, Lieutenant Commander Dan Valentin Vizanty established himself as a charismatic leader and an elite tactician amidst the turmoil of World War II. As a fighter aviation ace with 43 air victories and commander of the legendary 6th Fighter

Group, Vizanty coordinated the heroic defense of the national airspace against the massive Allied raids of 1944. This paper explores his professional trajectory, the technical challenges of commanding a Romanian-equipped unit against superior technological forces, and his enduring legacy. Despite later enduring persecutions by the communist regime, his figure remains a symbol of military dignity and a cornerstone for the history of Romanian wings.

Grigore Bastan

Cosmin-Mihai ENE
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This paper examines the legacy of Major General Grigore Baștan, the pioneer of modern Romanian military parachuting, and its enduring impact on multinational military cooperation. It analyzes his biographical journey, technical innovations, notably the BG-7M parachute system, and his historic 10,000-meter stratospheric jump in 1970. Aligning with the AFASTUD 2026 theme, "Communicating across Cultures", the research contextualizes Baștan's legacy through the modern operations of the "Major General Grigore Baștan" Training Center. By hosting joint training for NATO forces, this institution acts as a vital conduit for intercultural communication. The study concludes that shared tactical doctrines and standardized airborne procedures create a transnational military culture, overcoming linguistic barriers to ensure allied interoperability.

The Winged Knight, General Andrei Popovici

Nicola Ioan ENEA
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"We know what we are, but know not what we may be". This Shakespearean quote captures the life of one of Romania's greatest aeronautics visionaries, Andrei Popovici. The date of 14 August 1883 marks his birth and the beginning of a journey defined by brilliance and "fearful symmetry", a voyage which unexpectedly started in a railroad station. From the very start, his future appeared uncertain. Despite this, he never lost hope, eventually becoming one of the key figures in the development of national civil and military aviation. Although the dawn of his military career was marked by the School of Infantry and Cavalry, his sheer devotion to something greater led him to become one of the first breveted pilots of Romania. He occupied many positions over the course of his activity, including commander of the most important aeronautical group during the air campaign to save Romania in the fiery summer of 1917, founder of the Regal Aeroclub and director of the first national air transport company, "L.A.R.E.S.". Even after his resignation from active service, Popovici remained deeply connected to aviation, giving interviews to the press of the time, writing articles in specialized magazines and revealing the shortcomings and the true state of the aeronautical industry during periods of economic crisis. Some may boast about such a great number of achievements, but one fact about General Popovici that remains undeniable is his humility, a quality found only in true winged knights.

Analysis of the Aeronautical Legacy of Lieutenant Commander Constantin Perju: from Interwar Diplomatic Raids to Civil Aviation Precision

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This research paper provides a comprehensive examination of the career and contributions of Constantin Perju, a seminal figure in the history of Romanian aviation. Spanning the critical decades of the 1930s and 1940s, Perju's professional life encapsulates the transition of the Romanian Royal Air Force (ARR) from an era of romantic heroism and international competitions to a period of rigorous professionalization and strategic logistics. The study details his participation in high-profile events such as the 1931 Bucharest-Rome Cup and the 1935 Bucharest-Tel Aviv raid, which served as both technical benchmarks and diplomatic instruments. Furthermore, the report analyzes his successful integration into civil aviation via LARES, highlighting his 1940 emergency landing at Arad as a masterpiece of flight safety. Finally, the analysis evaluates his wartime service, specifically his role in the high-stakes repatriation missions of 1944, where his technical judgment prioritized human life over mission completion. By synthesizing records from the Higher School of War and contemporary aeronautical journals, this report positions Perju as a primary architect of the Romanian pilot archetype: a synthesis of military discipline and technical expertise.

Lieutenant Ionel Ionescu: Operational Profile of a Romanian War Pilot

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Shaped by the operational demands of the First World War, Lieutenant Ionel Ionescu emerged as a significant figure in the consolidation of Romanian military aviation between 1916 and 1918.Trained as a pilot at the Băneasa Flight School, he became an instructor on Maurice Farman and Farman 40 aircraft, later taking part in the battles on the Moldavian front, where he carried out numerous missions under extreme conditions. In Bessarabia, he conducted intense aerial activity against Bolshevik forces, flying at very low altitudes, obtaining aerial imagery, bombing military targets, and providing crucial tactical information to Romanian troops. His operational record, reflected in documented missions, flight hours, and exposure to combat conditions, resulted in successive promotions and decorations, positioning him among the relevant operational figures of Romanian military aviation during the period leading to the Great Union.

A Jet of Our Own: The Legacy and Strategic Evolution of the IAR 99 in the Romanian Air Force

Bianca-Daniela ILIEȘ
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This paper explores the historical and operational trajectory of the IAR 99, the first jet aircraft entirely designed and manufactured in Romania. From its conceptual birth in the 1980s at INCREST to its current transformation into the IAR 99 SM (Standard

Modernized), the aircraft remains the backbone of the Romanian Air Force's pilot training program. The study examines the human element behind its development, its performance in training missions and its critical role in bridging the gap between legacy platforms and 5th-generation fighters like the F-16 and F-35. By analyzing technical upgrades and the strategic necessity of an indigenous trainer, the paper highlights how the "Șoim"(Hawk) continues to define the identity of Romanian military aviation.

Air Power and Strategic Aviation in the Normandy Landings as Decisive Factors in Operation Overlord

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This paper aims to highlight the strategic effectiveness of Allied air power employed during the Normandy landings as a decisive factor in the success of Operation Overlord. By examining how air superiority and strategic bombing worked as force multipliers in the absence of alternative means to neutralize German defensive capabilities, a more comprehensive understanding of the Allied victory can be established. Furthermore, this paper will research into the systematic application of air power in the pre-invasion phase, analyzing how the Transportation Plan isolated the battlefield and how fighter cover protected the amphibious assault. Given the vast and often simplified narratives surrounding D-Day, which frequently emphasize ground operations at the expense of aerial contributions, this study seeks to restore balance by demonstrating that without the dominance achieved by the Allied air forces, the landings would have faced impossible chances. Through this analysis, the paper aims to clarify the extent to which strategic aviation shaped the outcome of the Normandy campaign and redefined the role of air power in modern amphibious warfare.

From Gliders to Powered Flight: The Wright Brothers' Contribution to the Development of Aeronautical Engineering

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This paper highlights the contribution of the Wright brothers to the development of aeronautical engineering. The Wright brothers, Wilbur and Orville, were two American inventors and aviation pioneers who designed, built and flew the first powered, heavier-than-air aircraft capable of repeated controlled flight. Their research in aeronautics spanned the years 1900 through 1905, and is well documented in the vast body of historical literature.

The Origins of a Ghost: How B-2 Spirit Shaped the Modern Aeronautical Warfare

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The B-2 Spirit represents one of the most significant technological leaps in the history of military aviation. Conceived in the late Cold War era to penetrate the increasingly sophisticated air defense networks of the Soviet Union, the B-2 merged the aerodynamic

efficiency of the flying wing design with revolutionary low-observable technologies that rendered it virtually invisible to enemy radar. This article traces the B-2's development from the Advanced Technology Bomber program through its shrouded "black" project existence, examines the engineering principles that define its stealth capabilities, and analyzes its operational history from combat debut in Kosovo to recent strategic strikes. More than three decades after its first flight, the B-2 fundamentally reshaped modern warfare by proving that stealth bombers could execute global, precision strike missions from the continental United States without reliance on forward bases. Its success forced rival nations to re-evaluate air defense doctrines and established a new paradigm of strategic air power that now finds its culmination in the B-21 Raider. The B-2 stands as both a testament to Cold War engineering ambition and the enduring foundation of twenty-first-century strategic deterrence.

Colonel Mariana Drăgescu

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A graduate of the "Mircea Cantacuzino" Flight School, Mariana Drăgescu was a pivotal figure of the "White Squadron", a unique Romanian sanitary unit active during World War II. Her role necessitated a multidisciplinary expertise, as she functioned simultaneously as a pilot, navigator, nurse, and aircraft mechanic. Following the events of August 23, 1944, Drăgescu continued her service within the 108th Air Transport Squadron of the First Romanian Air Corps. Throughout the liberation campaigns in Transylvania, Hungary, and Czechoslovakia, she completed over 25 high-stakes missions, facilitating the medical evacuation of the wounded and the secure transport of strategic military personnel and documentation.

Cholet Panait

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This research outlines the remarkable career of the Romanian aviator Panait Cholet, one of the key figures in the early development of national military aviation. Born on October 28, 1886, in Păcurari, Iași, Cholet began his military career in the Cavalry, where he quickly stood out for his energy and strong sense of discipline. From the very beginning, he showed a solid work ethic, and according to his superiors, he turned "the execution of orders… into a religion".
His passion for flying led him to obtain his Pilot License in 1914. His career reached a defining moment on September 3, 1916, when, as a Captain Aviator and commander of the Mircea Vodă Squadron in Dobrogea, he achieved—together with Sergeant gunner Gruia—the first aerial victory in the history of Romanian military aviation, forcing an enemy aircraft to land near Silistra.
Cholet continued to carry out high-risk reconnaissance and bombing missions and was awarded important military decorations throughout his career. Although he was later required to transfer from aviation for administrative reasons, he continued an honorable career in the Cavalry, advancing to the rank of Colonel and holding key command and administrative positions at a high level.

Although he remains one of the less studied figures of the early aviation period, Panait Cholet stands out as a symbol of tactical courage, exceptional physical endurance, and total dedication, being one of the pioneers who laid the foundations of Romania's early aerial combat tradition.

The Impact of the Dacian Falx on the Evolution of Roman Equipment

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The Dacian Wars (101-106 AD) represent a pivotal moment in ancient military history, characterized by a unique technological arms race between the Roman Empire and the Dacian Kingdom. This paper explores the 'disruptive' impact of the Dacian falx – a specialized two-handed curved sword – on the standard Roman military doctrine and equipment. By analizing biomechanical principles and archaeological evidence from sites such as Tropaeum Traiani, this study examines how the lethal efficiency of the falx forced the Roman army to implement unprecedented 'R&D' measures in the midst of conflict. These adaptations, including the reinforcement of helmets with iron cross-bars and the reintroduction of the manica arm guard, signify one of the earliest documented cases of large-scale military equipment evolution under the combat pressure. The paper concludes thtat the Roman response to the falx offers timeless lessons for modern defense strategies, emphasizing that tactical success depends not only on industrial superiority but on the rapid capacity to adapt to asymmetric technological threats.

Ion Macri

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Major General Ion Macri, a central figure in the organization of Romanian military aviation, was appointed Director of the Military Piloting School at Cotroceni in 1912. Although he was part of the first group of officers selected for aviation in 1911, his primary contribution was as the architect of the aeronautical education system and as an administrator of technical resources.
A graduate of the Military Engineering branch, Macri facilitated the modernization of the army through specialization missions in France and demonstrated remarkable leadership during the First World War, being decorated with the Order of the Star of Romania for his exceptional qualities as a commander.

The Jet Revolution in Military Aviation

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This paper aims to study the jet revolution in military aeronautics as an evolution of technology, rather than as a series of aircraft types. It begins by highlighting the roots of reactive propulsion at the beginning of the Second World War, having in the foreground the events associated with Ciurcu and Boisson, but also the Coandă case of 1910. At the same time, he also studies how the interwar thinking on the reactive engine also functioned in its use in planetary flight, not only for military aviation, paying attention to personalities such as Tiolkovski and Oberth. The study critically approaches questions

such as "Who was first?", distinguishing the facts that can be proven from the stories that have appeared. The structure pursues three general directions: the evolution of the reactive engine as a high-performance innovation, the change of aerodynamics to facilitate the evolution to supersonic and the change in the way of sustaining air operations as the doctrine adapted interception and dependence on radars and missiles in gaining air superiority. The paper highlights through three case studies presented as stages of evolution: the use of the Me 262 and Meteor in 1944-1945, the confrontation of the MiG-15 and F-86 in the Korean War and the period 1954-1960 in which interception and deterrence become increasingly important.

The Invisible Artery of War: Strategic Air Logistics and Operational Sustainment in the Afghanistan War

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This paper aims to highlight the role of aviation logistics in sustaining coalition forces throughout the two decades of conflict in Afghanistan War, from the launch of Operation Enduring Freedom in October 2001 to the final withdrawal in August 2021. At the same time, it shows that military operations are fundamentally dependent on logistics, and nowhere was this dependency more evident than in the Afghanistan conflict. By firstly emphasizing on the historical and geographical context that led to the intervention of The United States and the hardships that they had to go through as they approached a landlocked country with no railways, no navigable rivers, and roads constantly threatened by IED attacks, it proves that developing a complex and scaled aviation-centric supply system was more than necessary.
At the core of this system was a three-tier framework operated primarily by the Air Mobility Command: strategic airlift connecting the United States and allied nations to major distribution hubs, intratheater airlift redistributing resources across regional nodes such as Bagram and Kandahar, and tactical last-mile delivery to over 150 forward operating bases across the country. Each tier relied on a distinct set of platforms and capabilities, including the C-17, C-5, C-130, CH-47, and UH-60, supported by aerial refueling and a highly effective aeromedical evacuation system.
In the end, it concludes by examining Operation Allies Refuge, the largest non-combat evacuation in American history, and Romania's contribution to the large-scale coalition effort. Despite the strategic failure of the overall mission, the aviation logistics system demonstrated remarkable effectiveness, proving that air mobility is not merely a support function, but the foundation upon which modern military campaigns are built.

The Israeli-Palestinian Conflict

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This paper analyzes the multidimensional evolution of the Israeli-Palestinian conflict, exploring its historical, cultural, and religious roots. The study begins by examining the rise of the Zionist movement in the 19th century and the impact of settlement on local demographics, factors that precipitated the major wars of 1948 and 1967. Particular attention is paid to the role of religion, contrasting the Biblical perspective of the "Holy

Land" with the Islamic view of the land as "Waqf", thereby transforming a territorial dispute into an existential one. Furthermore, the paper evaluates the strategies of the main military actors: the ethical and operational doctrine of the Israel Defense Forces (IDF) in opposition to the asymmetric tactics of Hamas and Hezbollah organizations. The conclusion highlights the difficulty of achieving peace amidst radicalized identity narratives and suggests the necessity of interfaith dialogue as a complementary solution to political diplomacy.

The Firebombing of Tokyo (1945) and the Transformation of Air Strategy

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The firebombing of Tokyo on the night of 9–10 March 1945 marked a decisive transformation in American air strategy during the final phase of the Second World War. After months of limited effectiveness from high-altitude precision bombing, U.S. planners shifted toward low-altitude incendiary attacks designed to exploit Japan's densely built urban environment. The raid devastated large sections of eastern Tokyo and resulted in catastrophic civilian losses, becoming one of the deadliest conventional air attacks in history.
This paper analyzes the strategic reasoning behind this operational shift and situates the event within the broader evolution of twentieth-century air power doctrine. The decision to prioritize area bombing reflected both technological realities—such as weather conditions, aircraft performance, and targeting limitations—and a growing acceptance of total war principles. Japanese industrial production, widely dispersed within residential neighborhoods and small workshops, was considered inseparable from the urban civilian fabric, blurring the line between military and non-military targets.
By examining contemporary military assessments and postwar evaluations, the study argues that the Tokyo firebombing represented more than a tactical adaptation; it signaled a doctrinal redefinition of strategic bombing. Its consequences extended beyond immediate military objectives, influencing postwar debates on air power effectiveness, civilian vulnerability, and the ethical boundaries of modern warfare.

The History of Law Enforcement Aviation from Surveillance to Complex Missions

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The pivotal moment in the emergence of police aviation at the global level was marked by the establishment of the first police aviation unit by the New York Police Department (NYPD) in 1919 (formally institutionalized in 1929), in response to the growing need to regulate air traffic and to combat illicit activities. This study examines the historical development of aviation within policing, as well as the technological evolution that has shaped its modern trajectory. Early advancements included rudimentary AM radio communication systems, followed by the integration of technologies such as Spectrolab Nightsun searchlights, thermal imaging sensors, Global Positioning System (GPS) capabilities, and night vision goggles (NVG). Contemporary platforms incorporate real

time mapping systems such as Aero Computers that overlay digital cartography onto live camera feeds, as well as data downlink technologies utilizing microwave and LTE networks to transmit high-definition video directly to dispatch centers and ground patrol units.The use of aviation in policing encompasses a wide range of operational domains that function in close interdependence, without which law enforcement agencies would face significant operational vulnerabilities. These domains include border surveillance, traffic monitoring, counterterrorism operations, identification and monitoring of mountainous routes used by fleeing suspects, and responses to emergency situations such as large-scale wildfires and other natural disasters.Overall, police aviation has evolved into a strategic pillar of modern public safety, providing a unique operational advantage unmatched by other resources: real time aerial perspective combined with rapid mobility and centralized coordination. In pursuit operations, helicopters enable continuous monitoring of suspects without compelling ground units to engage in high-risk, high-speed chases. For example, units such as those of the Los Angeles Police Department employ the "observe and coordinate" tactic, whereby ground patrols disengage while the aircraft maintains surveillance from a safe altitude, thereby minimizing risks to both civilians and officers. This approach has fundamentally transformed the philosophy and operational conduct of urban police pursuits.

A2/AD Expansion in the Black Sea: Implications for NATO's Enhanced Air Policing Planning and Execution

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This paper analyzes the impact of the expansion of Russian Anti-Access/Area Denial (A2/AD) capabilities on the planning and execution of NATO Enhanced Air Policing missions in the Black Sea region. In a security context marked by the illegal annexation of Crimea and the invasion of Ukraine, the Black Sea has gradually evolved from a space of cooperation into a regional security complex defined by conflict. These air interdiction bubbles and hybrid attacks on GPS jamming systems force a rethinking of NATO doctrine, moving from assurance to deterrence by denial.

The Dowding System: Shifting the Paradigm of Air Warfare from Numerical Strength to Information Flow

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The Battle of Britain in 1940 represents a fundamental shift in the history of aerial warfare, marking the transition from a paradigm of numerical superiority to one of information flow management. This paper explores the "Dowding System", the world's first Integrated Air Defense System (IADS), and its role in redefining the concept of air superiority. By analyzing the technological synergy between Chain Home radar networks, the Royal Observer Corps, and the Filter Room at Bentley Priory, the research demonstrates how the Royal Air Force (RAF) nullified the Luftwaffe's numerical advantage through informational efficiency. The study examines the invalidation of interwar doctrines, specifically Giulio Douhet's axiom that "the bomber will always get

through", and provides a comparative analysis of German intelligence failures and fragmented command structures. A detailed case study of "Black Thursday" (August 15, 1940) illustrates the system's resilience and its ability to optimize resource allocation under extreme stress. Ultimately, the paper argues that the Dowding System served as a precursor to modern Network-Centric Warfare (NCW), Airborne Warning and Control System (AWACS) and the OODA (Observe, Orient, Decide, Act) cycle. By prioritizing the control of the electromagnetic spectrum and decision loops over raw mass, the Dowding System established information management as a defining strategic discipline for contemporary security.

53rd Fighter Squadron in 1941

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This paper provides a high-level analytical overview of the 53rd Fighter Squadron's performance during the pivotal year of 1941. Positioned as the elite interceptor unit of the Royal Romanian Air Force (ARR), the squadron played a decisive role in the re-acquisition of national territories. The study investigates the technical superiority afforded by the Messerschmitt Bf 109E platform, the strategic deployment within the 7th Fighter Group, and the tactical innovations introduced by seasoned pilots. By examining the synergy between German aeronautical engineering and Romanian combat doctrine, this research highlights the squadron's contribution to neutralizing Soviet aerial resistance and establishing air parity, and subsequently superiority, over the Eastern Front.

The White Squadron: The Role of Women in Romanian Medical Aviation During World War II

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This paper analyzes the situation of women in Romania between the mid-19th century and the 20th century, highlighting their struggle for education and for the right to fly. Overcoming the constraints of a conservative society, the pioneers of Romanian aviation opened the path toward a profession that had previously been reserved exclusively for men. This effort culminated during the Second World War with the establishment of the "White Squadron", a military medical squadron composed entirely of women. The article explores the context in which this unit was formed at the initiative of Marina Știrbei and details the heroic missions of evacuating wounded soldiers from the front. Aviators such as Nadia Russo, Mariana Drăgescu, and Smaranda Brăescu demonstrated extraordinary courage, taking part in wartime missions and saving lives under extreme conditions. Finally, the paper addresses the tragic fate of these heroines after 1945. The political shift and the new communist regime led to their marginalization and persecution by the security. Their sacrifice remains undeniable proof of female resilience and a major innovation in the history of aviation.

Control of the Skies and Strategic Outcomes in Modern Warfare

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The development of air power in the 20th century fundamentally changed the structure of armed conflict. Whereas before World War II aviation was considered an auxiliary element of land and naval forces, the experience of the global conflict of 1939–1945 demonstrated that air superiority is an essential condition for strategic success. This paper analyzes, from a historical perspective, how control of airspace decisively influenced the outcome of major campaigns, such as the Battle of Britain and the Six Day War of 1967, as well as how these lessons were integrated into subsequent conflicts, particularly the Gulf War (1991). The central argument is that the loss of air superiority leads to progressive operational degradation and, ultimately, strategic vulnerability. Thus, in modern military history, control of the skies becomes a structural factor of military power, and the inability to maintain it limits the capacity for force projection and reduces freedom of action.

Operation Desert Storm: Gulf War Air Campaign

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OPERATION DESERT STORM: GULF WAR AIR CAMPAIGN analyzes the decisive role of aerospace power during the First Gulf War (1990–1991). The conflict was precipitated by Iraq's invasion of Kuwait in August 1990 under the direction of Saddam Hussein, prompting a multinational response led by the United States under United Nations authorization. The initial phase, Operation Desert Shield, centered on deterring further Iraqi aggression and defending Saudi Arabia. Central to this effort was an unprecedented strategic airlift operation that transported coalition troops, armored units, and logistical materiel into the Persian Gulf theater with remarkable speed and scale, demonstrating the mobility and reach of modern air forces.

The transition to Operation Desert Storm in January 1991 marked the commencement of an intensive air campaign designed to systematically dismantle Iraq's military capacity prior to ground engagement. Coalition aircraft targeted command, control, communications, and intelligence nodes, crippling Iraqi leadership's ability to coordinate defensive operations. Precision-guided munitions, stealth platforms, and electronic warfare assets disrupted radar systems, neutralized air defenses, and severed operational linkages between headquarters and frontline units.

Achieving and maintaining air superiority was foundational to coalition success. By suppressing the Iraqi Air Force and degrading its integrated air defense network, coalition forces operated with near impunity, enabling sustained interdiction, strategic bombardment, and close air support. The campaign illustrated the transformative potential of aerospace power in modern warfare, redefining operational doctrine and underscoring air dominance as a prerequisite for rapid, decisive military victory.

The Future of Military History

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Military history is the history of wars, and of armed forces in peace as well as in war. Its separation from history more broadly defined arises from its didactic purpose. Its origins therefore lie with the development of professional armies. The growth of history as a university subject from the late nineteenth century did mean that academics as well as soldiers studied the history of war, but its institutional foundations were shallow. Moreover, soldiers rather than academics wrote the official histories of World War I. The situation only changed with the adoption of broader definitions for the official histories of World War II. The world wars themselves showed the absurdity of approaching the study of modern history without taking military history into account. Since the 1960s academic military history has thrived on the back of two influences. The first, 'the new military history,' is largely American in origin and stresses the subject as a component of 'total history.' The second, strategic studies, relates past to present.

The Evolution of Military Rockets

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Military rocket technology changed dramatically since the first rocket was invented, with the military rocket evolving from primitive, gunpowder-driven fire arrows to advanced precision-guided and hypersonic missile systems. Military rockets gained traction in the 13th century in Song Dynasty China, using gunpowder technology to create "fire arrows" aimed at Mongol forces. Back during World War II rocket science ushered in a new revolutionary era with the development of the German V-2 ballistic missile, the first large-scale liquid-propellant rocket able to operate for long distances with guided flight. The Cold War sped rocket development, positioning intercontinental ballistic missiles (ICBMs) like the R-7 and Atlas as major components of nuclear deterrence strategies. At present military missiles stress mobility, precision, and speed, as exemplified by HIMARS systems and other hypersonic missiles that are designed to exceed Mach 5. This project covers the history, technology, and strategic evolution of military rockets, including advances in engineering, propulsion technology, and their role in global military doctrine. They may be taken for granted as new technologies.

The Romanian Air Corps on the Eastern Front (1 January 1943 / 23 August 1944)

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This paper aims to analyze the evolution and activity of the Romanian Air Corps on the Eastern Front between 1 January 1943 and 23 August 1944, following the outcome of the Battle of Stalingrad. The political and military consequences resulting from the Axis defeat led to a shift from offensive operations to a defensive approach, emphasizing ground support, interception, and evacuation missions during the retreat, as well as an increasing dependence on German resources and coordination.

The reorganization of aviation units, their technical resources, training levels, and cooperation with the Luftwaffe are examined in relation to operational efficiency under deteriorating military conditions. Particular attention is given to the shift toward national airspace defense against Soviet advances and American strategic bombing, especially in the oil region of Ploiești.
The analysis also addresses the role of Romanian aviation in the battles in Moldova, during the Iași-Chișinău offensive, and the impact of the collapse of the front on combat capability. Additionally, the study evaluates the political and military consequences of 23 August 1944 for Romanian aviation, highlighting the doctrinal transformation, logistical limitations, and the contribution of aeronautical personnel during a conflict fought from a position of strategic defense.

Radu Beller: His Life and Contribution to Romanian Aviation

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Radu Beller, a pioneer of Romanian aviation, stood out as one of the central figures in the development of military and civil aviation during the interwar period. Trained at the Cotroceni Flight School, Beller distinguished himself through technical talent, courage, and active involvement in the modernization of Romanian aviation. He participated in numerous reconnaissance missions, flight tests, and international air raids, contributing to the evaluation and improvement of the aircraft used by the Romanian Air Forces. Furthermore, he supported the promotion of civil aviation, collaborating with the Romanian Air Club and participating in events that stimulated the national aviation culture. His career was marked by the tragic accident of 1931, known as the "Bhabua Drama", which occurred during the raid to Saigon organized under the auspices of the International Aeronautical Federation. Radu Beller died as a result of the burns sustained, being subsequently commemorated as a hero of Romanian aviation. His technical, military, and cultural contributions consolidated the reputation of Romanian aviation in Europe and influenced its evolution.

Panait Cholet – A Reliable Aviator of Romanian Military Aeronautics During the First World War

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Panait Cholet, one of the notable Romanian aviators of the First World War, distinguished himself through courage, self-control, and a steadfast character, qualities that recommended him both in the military aviation of the neutrality period and on the fronts of Dobruja, Cadrilater, the Carpathians, and Moldova. Originally trained as a cavalry officer, he earned his military pilot license in 1914 and quickly became a trusted reconnaissance pilot both during the period of neutrality and throughout the major campaigns of 1916–1917. He accomplished difficult missions over the Danube Valley and the Carpathians, providing essential intelligence to Romanian command structures. His dedication and tactical clarity illustrate the rapid development of Romanian military aviation during the war. Panait Cholet remains an important representative of the early

generation of Romanian airmen and contributed significantly to the foundations of national aeronautical tradition.

From Neutrality to the First Sortie: The Doctrine and Tactical Baptism of the Romanian Combat Air Group (1939-1941)

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The entry of Romania into the Second World War required a complex preliminary phase of doctrinal adaptation and technological modernization. This paper analyses the evolution of the Romanian military aviation from the neutrality period (1939-1941) to its first major operational test: the 1941 campaign for the liberation of Bessarabia and the siege of Odessa. By examining the establishment of the Combat Air Group (Gruparea Aeriană de Luptă - GAL), the research highlights the contrast between peacetime procurement strategies and the harsh realities of front-line combat. The methodology relies on a critical review of Romanian military historiography, focusing on the tactical deployment of both indigenous aircraft (such as the IAR-80) and imported assets. The findings suggest that while the pre-war training and doctrine provided a solid foundation for achieving initial air superiority, the 1941 campaign also exposed logistical vulnerabilities that would later impact subsequent operations. Ultimately, the paper demonstrates that the tactical successes of GAL in 1941 were the direct result of the intensive preparations made during the neutrality years.

Grigore Zamfirescu - *The Visionary Engineer Who Laid the Foundations of Romania's Aeronautical Industry*

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Grigore Zamfirescu was one of the key Romanian aeronautical engineers of the interwar period, founder of the Technical Exploitation Society (SET) and a pioneer of aircraft manufacturing in Romania. Through his work in airplane design, industrial organization, and training of aeronautical personnel, he played a decisive role in establishing a domestic aviation industry capable of producing indigenous aircraft for training, reconnaissance, and military use. His technical legacy, groundbreaking for the 1920s-1930s, established him as a foundational figure in Romania's early aviation engineering.

The World's First Military Physician-Pilot: Victor Anastasiu, the Romanian Visionary Who Merged the Physics of the Cockpit With the Science of Life to Redefine the Human Limits of Flight

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The career of General Victor Anastasiu (1886–1972) began with a definitive display of academic supremacy, as he secured first place among one hundred elite candidates for only seven positions at the Military Medical Institute in Bucharest. This initial brilliance set the stage for a trajectory that would redefine the boundaries of military medicine. On March 3, 1916, Anastasiu achieved a historical milestone by becoming the world's first

licensed military physician-pilot, a feat that allowed him to bridge the gap between clinical physiology and the visceral realities of flight. Unlike his contemporaries, who observed aviation from the ground, Anastasiu utilized the cockpit as a laboratory, conducting high-altitude reconnaissance missions during World War I to analyze cardiovascular and respiratory shifts in real-time. His dual identity as a combat pilot and a scientist culminated in 1920 with the founding of the Aeronautical Medical Center, the precursor to the modern INMAS. By securing significant international funding to import advanced barochambers and laboratory instruments from France and Italy, he institutionalized the rigorous health standards that transformed aviation from a daredevil's pursuit into a regulated science. His work focused on the human factor in aviation, studying the effects of high-altitude flight and rapid acceleration on the human body long before these became standard fields of inquiry, ensuring that the mechanical evolution of the machine never outpaced the biological endurance of man and establishing a legacy that continues to define Romanian aerospace medicine.

The Evolution of Propaganda from World War 2 to the Russia-Ukraine War

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Propaganda remains one of the most effective tools to manipulate people's perception of reality during times of geopolitical crises. This paper seeks to explore the way persuasive methods have evolved in tandem with technological advancements, drawing parallels between the analog methods used during World War 2 and the contemporary digital or hybrid means of manipulation in the context of the Russia-Ukraine War. The research follows the evolution of propaganda, from state-centralized narratives to networked or computational propaganda spread through social media. By means of a comparative analysis, the results show that in an age of unprecedented information availability, new vulnerabilities have emerged.

The Operational Capabilities of the Romanian IAR-80 Fighter Aircraft in the Air Campaigns in Bessarabia and Odessa

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The present paper aims to highlight the role and importance of the IAR-80 fighter aircraft in the military campaigns carried out by Romania in Bessarabia and Odessa, in 1941, in the context of participation in operations on the Eastern Front. By analyzing the strategic context, the emergence and development of the aircraft, as well as its technical and operational characteristics, the essential contribution of the Royal Romanian Aeronautics to obtaining the air superiority necessary to support the ground troops is outlined. The study highlights the way in which the IAR-80 was used in interception, escort and close air support missions, both in the offensive phase of the liberation of Bessarabia and in the difficult conditions of the siege of Odessa (August 8 – October 16, 1941). In the summer and autumn campaigns of 1941, Romanian pilots achieved over 100 confirmed aerial victories with this type of aircraft, while also recording losses of several dozen aircraft in aerial combat and under anti-aircraft fire.

Overall, the analysis demonstrates that the IAR-80 represented a central element of Romanian fighter aviation in the first stage of the war, directly contributing to the achievement of Romania's military objectives, but also reflecting the technical limitations and human costs of the confrontations on the Eastern Front.

Heroes of the Air – The Dignity and Sacrifice of Romanian Airmen during the Western Campaign (1944–1945)

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This paper analyzes the role and sacrifice of Romanian aviators during the Western Campaign (1944–1945), highlighting the contribution of the Romanian Air Force to the liberation of national territory and to the Allied effort against Nazi Germany. The study emphasizes both the operational dimension of air missions and the symbolic and identity-related aspects of the sacrifice assumed by Romanian pilots in a complex geopolitical context. Representative figures such as Lieutenant Aviator Gheorghe Mociorniță and Lieutenant Aviator Mircea T. Bădulescu are examined, alongside the aircraft used in combat operations – JU-87D, MESSERSCHMITT BF 109 and IAR-80/81. By combining historical analysis with an examination of fundamental military values, the paper underlines the importance of collective memory and the continuity of Romanian aeronautical tradition.

IAR-80: From National Technological Apex to Operational Attrition on the Western Front

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This paper analyzes the historical and operational evolution of the IAR-80 aircraft, from the initial design stage and entry into production to its use during World War II on the Western Front. The study focuses on the processes of designing, testing and manufacturing the aircraft. It highlights how the operational requirements, the resource availability, and the experience gained influenced the development and adaptation of the aircraft, and in the final stage of the study, its activity on the Western Front is examined. The operational effectiveness of the aircraft and the limitations it faced during the military campaign are assessed. The conditions under which the aircraft initially had to operate and the strategic framework later provided by the Western Front are discussed, being marked by the technological superiority of the enemy. The paper highlights the ability of the IAR-80 aircraft to cope with enemy pressure through escort and ground attack missions, fulfilling its historical mission up to that point.

Sergeant Nicolae Tănase

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This article examines the operational activity of aviator Nicolae Tănase during World War I (1916-1918), highlighting his role in the consolidation of early Romanian military aviation. The research focuses on how tactical improvisation and individual initiative compensated for the acute lack of technical resources and the material inferiority of the

Romanian forces. By analyzing archival documents, the study highlights Tănase's missions on the Southern Front-including the unconventional "brick bombardment" at Turtucaia and the attacks on Austro-Hungarian monitors. The findings demonstrate that the adaptability and courage of the first generation of pilots were decisive factors in ensuring the efficiency of aerial reconnaissance and combat missions, contributing to the institutional development of the Romanian Air Corps.

Shadows on the Wings: Why Auschwitz Remained Unscathed and How Berlin Remembers

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This paper examines the convergence of World War II military logistics and contemporary architectural discourse on Holocaust memory. The starting point is the historical dilemma of the failed bombing of the Auschwitz-Birkenau complex, despite aerial reconnaissance missions by US aviation units in 1944. The study examines the "strategic detachment" of high-altitude flying, where the extermination camps appeared on pilots' maps as simple industrial geometric grids, thus facilitating a decision of inaction based on cold tactical priorities.

The second part of the paper establishes a symbolic and structural connection between this aerial perspective and the Berlin Holocaust Memorial (Memorial to the Murdered Jews of Europe). It is argued that the abstract design, consisting of 2,711 concrete stelae, mirrors the rigid and bureaucratic grid of the concentration camp system observed from above by the airmen.

While the aerial perspective of 1944 represented a form of moral distancing, the Berlin Memorial functions as a massive "terrestrial response", forcing the visitor into immersion and physical confrontation. The paper concludes that by transforming geometric order from a source of indifference (during the war) into an instrument of reflection (in the present), the memorial occupies the space left empty by bombs that were never dropped, converting historical absence into an unavoidable monumental presence.