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Journal of Defence and Security Industries: Strategy and Technology (JDSI)

Journal of Defence and Security Industries: Strategy and Technology (JDSI) is an open-access, peer-reviewed academic journal dedicated to publishing scientific research in the fields of engineering, technology, management, and strategy as they relate to the defence and security sectors. Established by Defence Industries Academy Publications, JDSI aims to foster academic and industrial collaboration by providing a platform where scholars and professionals can exchange knowledge, insights, and innovative approaches to complex challenges in defence and security.

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Redefining Strategic Connectivity: A Holistic Vision for the Journal of Defence and Security Industries

Dear Readers,

In the evolving landscape of global security and technological competition, the defence industry has transcended its traditional boundaries. Once limited to system design, manufacturing, and procurement, it now stands as a strategic pillar shaping national economies, technological ecosystems, and geopolitical dynamics. In this transformative age, the Journal of Defence and Security Industries: Strategy and Technology (JDSI) has been envisioned not merely as a technical publication, but as a comprehensive, interdisciplinary, and future-oriented academic journal—an intellectual platform for synthesizing the best practices, strategic models, and global defence-industrial insights.

JDSI aims to serve as an anchor for scholarly discourse and strategic knowledge generation in the fields of defence and security. It is uniquely positioned to examine defence not only as an industry but as a multidimensional domain involving policy design, strategic foresight, economic resilience, and international cooperation. In this context, the journal covers a wide thematic range, including but not limited to defence technologies, AI and autonomy, cyber security, space and satellite systems, defence economics, innovation management, export strategies, offset mechanisms, consortium-led production models, and the geopolitical implications of defence alliances.

What distinguishes JDSI is its commitment to exploring the intersections of policy, technology, and human capital. The journal delves into defence industry models adopted by different nations, their historical trajectories, and comparative policy frameworks, offering a panoramic view of how states build and manage their defence-industrial capabilities. Through detailed case studies, peer-reviewed research, and strategic analysis, the journal provides visibility to collaborative production initiatives, financial ecosystem design, and institution-building efforts—including performance-based procurement, technology transfer strategies, and counter-embargo mechanisms.

A key focus area is the scale and complexity of modern production: from small-batch innovation to large-scale serial manufacturing. The journal examines scale economies, agile production paradigms, and platform-centric development models that shape today's defence value chains. It also aims to spotlight international offset practices and technology acquisition strategies that contribute to long-term sustainability and independence.

Equally important is JDSI's emphasis on education and workforce development. Recognizing that strategic competence is inseparable from talent development, the journal will feature collaborative models between defence industry actors and national education institutions—ranging from vocational schools and engineering faculties to advanced research centres. Best practices in technical and leadership training, integrated curricula, mentorship models, and

applied learning environments will be shared to contribute to a globally competitive and locally grounded human capital base.

As the scientific platform of the National Competence Initiative, JDSI seeks to instill a culture of critical inquiry, systemic thinking, and interdisciplinary innovation. Competence, in our vision, is not merely the mastery of tools and techniques, but a strategic synthesis of technological expertise, operational leadership, global awareness, and institutional capacity.

With an open-access policy, double-blind peer review, and a strong editorial advisory board, JDSI is committed to academic rigour and inclusivity. It will provide a platform for scholars, practitioners, engineers, and policymakers to converge, collaborate, and contribute to the global body of defence knowledge.

In conclusion, JDSI is not just another technical journal. It is a strategic vision. A curated space for knowledge that not only documents the present but shapes the future of defence and security. As we step into a century marked by complexity, interdependence, and resilience, JDSI stands as a beacon for those who seek to transform ideas into strategy, and strategy into impact.

We invite you to engage, contribute, and build with us.

Prof. Dr. Haluk Görgün
Chairman

Editorial

It is with great pleasure and much pride that I would like to invite our readers into the first issue of the Journal of Defence and Security Industries: Strategy and Technology (JDSI), which represents the very first step towards the formalization of the new scholarly infrastructure for defence and security studies. This first issue marks the dawn of our effort to establish an academically robust academic community focused on defence, security, strategy, and advanced technologies. Defence and security are increasingly being defined by rapid development of technical advances, emergent threat environments, and digitalization around the world, leading to complexity in strategic and technological decision-making as unprecedented as ever before. Against this background, JDSI aims to be a critical bridge between academia, defence industries, and policy-making communities.

JDSI aims to encourage research of high quality that links theorization with praxis to provide evidence-based decision-making and dialogue across disciplinary and institutional contexts. The first issue of JDSI contains eight articles that taken together convey the holistic nature and strategic view behind JDSI as a multidisciplinary venture. A particularly strong emphasis is put on data-driven governance and decision-support systems to meet the needs of today's pressing security environment. Also, the matter exemplifies the critical role of communication and navigation systems in defence and security applications that are necessary today, and are increasingly important strategic players. Also, despite the fact that one of the article's contributions introduces the CubeSat concept, another focuses on the creation and simulation of patch antennas for Global Navigation Satellite System (GNSS) applications. A further article highlights the criticality of secure communication through image encryption practices, which is an important method of securely detecting and protecting sensitive information in defence and security contexts. With a focus on artificial intelligence technologies for applications related to communication, navigation, and defence, the issue also discusses AI with a focus on AI-based target detection and identification systems.

Apart from the content above, advanced materials and manufacturing are presented as the enabling drivers of contemporary defence applications, in particular aerospace and space. Thus, in this first issue two articles address high-performance material manufacturing and state-of-the-art analysis methods.

With such contributions, JDSI seeks to contribute towards fostering informed conversations, encouraging cross-sector partnerships, and seeking evidence-based responses in defence and security. With this first issue, we mark the beginning of a new phase, one that aims to establish a sustained and continuously evolving academic platform, contributing to a broader, more relevant, and increasingly global scope in the years ahead.

Sincerely,

Prof. Dr. Hakan Karataş & Prof. Dr. İhsan Kaya
Editors-in-Chief