

## FOREWORD

The pursuit of ever greater specialisation and interdisciplinarity in new bodies of research, along with the increasingly global connectivity of researchers and institutions, necessitates the birth of new avenues to report and explain their work and results. One such promising avenue that I have seen emerge is the *Journal of Aerospace & Security Studies* (JASS), now issuing this impressive third volume. Closely tied to the Centre for Aerospace & Security Studies (CASS), JASS speaks to the broader concept of 'security studies' with respect to areas such as emerging technologies, aviation, space technologies, warfare, economics and geopolitics, and where particular interest is accorded to the aerospace domain.

This third volume of JASS remains true to that interdisciplinary commitment to security studies, following closely in the footsteps of two previous volumes that also adhered to excellent research standards, by offering a range of interesting and novel contributions to areas of scientific and social concern within the broader security studies research domain. The reader of this issue will find in the pages of this volume a cutting-edge and salient collection that warrants close examination as the world passes through a time of transformation and turbulence, when technological advancements become sharper double-edged swords for those concerned with the preservation of the utmost public value: security.

Shaheer Ahmad's article provides a thorough overview of the perils portended by an emerging domain of warfare: neural warfare or 'neurowarfare,' a battle within the adversary's most inner mind. The risks posed by the mere existence of such a domain warrant the utmost policymaker concern, and Ahmad's paper provides the necessary distillation of trends and risks in that regard. Shaza Arif addresses the changes that quantum computing augurs in the field of aviation. With the formidable computing power that quantum computers shall muster, many dimensions of aviation can achieve far greater levels of optimisation, from flight trajectories to flight paths, to aircraft design, and still more. As such, her article sits very

well within a core interest of JASS in aerospace and emerging technologies.

Shah Muhammad's study examines the concept of 'technological sovereignty' through a geoeconomic lens with China as the case study. He concludes that the acrimony in US-China technological competition shall worsen but that a total and complete separation between both superpowers in the technological sphere is unlikely due to a degree of inextricable ties across technology domains. His article thus sits well in its multidisciplinary between geoeconomics, emerging technology, and foreign policy.

Mustafa Bilal explores Western 'securitisation' of Chinese telecommunication companies, therein comparing the developing and developed worlds attitudes towards the breakthroughs made by Chinese telecom giants. The divergent political and economic considerations of various countries points to increasing complexity in the global technology sphere. Zahra Niazi's paper focuses on the photovoltaic potential of Pakistan, where she deploys a SWOT analysis of the factors at play in advancing a larger renewables agenda in the country. Energy security and economy are two of the most important considerations for the security of any nation. Therefore, her study is valuable for those seeking a comprehensive, balanced approach to understanding the solar potential in Pakistan.

No scholar would advance their understanding of their field without a voracious reading habit. Reflecting this, JASS presents a rich book review section in its second portion, with important contemporary works by: Chad Anderson on the Space Economy, Sara Louise Miller on women's participation in air forces, Aaron Bateman on the history of space weaponisation, Andrew F. Krepinevich on disruptive military innovation, and Bohumil Doboš on the geopolitics of space colonisation. These reviews are extremely well situated to JASS' key subjects of aerospace and security and offer keen analyses of the books in question. Together, the book reviews as well as the scholarly articles evidence the thirst for scholarship imbibed by the contributors to the volume.

This volume, as with its two predecessors, would not be possible without the tireless efforts made by Sarah Siddiq Aneel who, in her capacity as editor of JASS, has ensured that the journal adheres to the highest international standards of scholarship. Through her commendable endeavour, a high-calibre of peer reviewed articles has been meticulously arranged, proofed, and presented in a manner that enriches the reader's understanding of important developments of our time and prognostications of a future time. I am privileged to support her in my humble capacity as Editor-in-Chief, to ensure that these standards persist in future volumes, which will allow JASS to bloom as an avenue of novel research that does justice to both the hard work of its contributors, as well as to CASS' reputation as a leading centre of national and international research.

**Dr Usman W. Chohan**

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