Editor's Note

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     Space & Defense Vol. 14, No. 1 represents the third issue since the move to a new cover and format celebrating our US Air Force Academy and University of Nebraska at Omaha partnership. This Spring 2023 issue represents a focused but diverse collection of deterrence thinking, including three research articles, the 2022 Deterrence and Assurance Academic Alliance keynote transcripts, two student contributions, and a book review.

This issue offers several divergent points in important conversations regarding technology and nuclear escalation caused by great power competition. The first peer-reviewed feature article is by Grant Van Robays, Major Tom Hammerle (US Army and Ph.D. Candidate), SrA Chloe Rynolds, Lieutenant Will Jackson (US Army) analyze what China can do with their nascent nuclear triad and how it impacts their international relations strategy by providing an overview of China's nuclear modernization efforts applied to a conceptual framework of nuclear weapons and nuclear deterrence. In this sense, the authors examine China's Weishe deterrence, ongoing conflicts and territorial disputes with other countries, and deterrence strategy options, as well as China's new nuclear options in the context of limited, extensive, and maximum deterrence strategies.

The second peer-reviewed feature, by William Cosgrove, takes on an assessment of the Air and Space Force's barrier to technology. Cosgrove explains that underperforming tech, high resource security controls, and cumbersome IT policy prevent the Space Force from achieving its goals. Cosgrove argues that IT policy should allow the personnel to process UUI on their personal devices on a regular basis or commercial environments to improve service capabilities' efficiency and effectiveness. In this regard, Cosgrove examines impediments to change in the military for technology and information security, why the Air and Space Forces need technological innovation, and include an approach to implement technology flexibility with low cost/risk.

The third and final peer-reviewed feature article takes on deterrence posture from the US perspective with the influence of emerging technologies. The article is written by Hugh Harsono and Nick Ondovcisk, and they analyze the reasons for China's rising capabilities and the US' declining power in artificial intelligence. In this regard, the authors discuss the concept of dual use technology, 'intelligentization', and AI integration into C4ISR systems in relation to China's advantage, yet the future prospects with 5G offer an option for the US to regain its competitive advantage. It's important to note that at the time of writing this article, ChatGPT was still unknown to the larger public.

Next, our issue publishes a special correspondence piece by Dr. Kori Schake, who was the keynote speaker for the 2022 U.S. Strategic Deterrence and Assurance Academic Alliance Conference and Workshop which took place in 2022. During this address she discusses the importance of understanding the nature of deterrence. Dr. Schake underlines that the Biden administration undercut deterrence of Russia by withdrawing the NATO mission in Ukraine, the American embassy from Kyiv, and the monitors in the OSCE mission in the Donbas region. She also highlights the changing deterrence dynamics between the US and Russia, and what Vladimir Putin and the Biden administration achieved in this respect.

We also present peer-reviewed student contributions, which were submitted from our relationship with the U.S. Strategic Command Academic Alliance. First, Ryan Bushman from Utah State University discusses how US nuclear policy decisions should take into account the strategic culture of adversarial nations. Bushman examines two specific threads of Russian and Chinese strategic culture and how a US response of modernizing US arsenal can confirm culturally encoded perceptions of these nations and reinforce paranoia. Second, Leila Yanni from Purdue University discusses deterrence strategies and communicate aspects of the threat by taking cyber attacks into consideration. In this context, Yanni examines the alternatives of explicit and written communication, signaling of capabilities, and global norms. Finally, Claire Benedix from the University of Nebraska at Omaha offers a perspective on the recently published book by Dr. Amy Zegart, *Spies, Lies, and Algorithms: The History and Future of American Intelligence* (Princeton University Press, 2022). Benedix presents Zegart's ideas on the threat of the emergence of digitization and the cyberspace to traditional warfare strategies and intelligence norms by empowering new adversaries and opportunities and creating new actors.

We are proud of publishing this issue, along with the increased focus on the subject of deterrence, not just in the publishing field, but also educational programs. Specifically, the University of Nebraska has created a deterrence laboratory, where students are encouraged to research and experiment on deterrence concepts with faculty members. I currently help lead this effort with my colleague Dr. Deanna House from the University of Nebraska at Omaha, and located in the College of Information Science and Technology. This lab is learning how to combine deterrence theory and concepts with quantitative analysis, cybersecurity, and computer science. We are looking forward to the innovative research this lab plans to produce, along with teaching future thinkers in deterrence.

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