APLN

China and AI-Military Integration: Perspectives, Opportunities, and Challenges

MAY 2026

JINGDONG YUAN

This paper was supported through a general core grant from the Nuclear Threat Initiative.

Please direct inquiries to: Asia-Pacific Leadership Network (APLN)
Secretariat 4th floor, 116, Pirundae-ro,
Jongno-gu, Seoul, ROK, 03035
Tel. +82-2-2135-2170
Fax. +82-70-4015-0708
Email. apln@apln.network

This publication can be downloaded at no cost at www.apln.network.

Cover Photo: Getty/China Unveils New Weapons In V-Day Parade.

CHINA AND AI-MILITARY INTEGRATION: PERSPECTIVES, OPPORTUNITIES, AND CHALLENGES

Jingdong Yuan

INTRODUCTION

At the 20th National Congress of the Communist Party of China in 2022, Chinese leader Xi Jinping called on the People's Liberation Army (PLA) to work toward the following goals: "Building a powerful strategic deterrence force system, increasing the proportion of new-domain and new-type combat forces, accelerating the development of unmanned intelligent combat forces, and coordinating the construction and application of network information systems."[1] As the Chinese military transitions from informatisation [信息化] to intelligentisation [智能化], i.e., from information-guided and network-centric warfare to AI and automation-driven modernization and the relevant doctrinal shift, artificial intelligence (AI) and its integration into the military system will be an essential and indispensable ingredient in the PLA's modernization programs, processes, and benchmarks.

In the US-China context, technology competition, including in AI military applications, is seen as the essential element that will determine the outcome of their rivalry. AI is already deeply integrated into military systems, playing an increasingly important role in military operations. This has been demonstrated in recent conflicts, including the US and Israeli military strikes against Iran and the decimation of its top leadership in the first hours of operations.[2] AI enables the rapid processing of large volumes of data, enhances situational awareness and threat detection, support decision-making functions, and is crucial in target selection and execution in fast-moving combat environments. Militaries with more advanced AI integration have clear advantages over those that are less equipped. This is increasingly the case in the nuclear domain, where nuclear-armed states are integrating AI into NC3.[3] Competition in innovation, and applications in critical domains will affect the commanding heights in this new round, or the "third

[1] Xi Jinping, "Full text of the report to the 20th National Congress of the Communist Party of China," 25 October 2022, https://www.mfa.gov.cn/eng/xw/zyjh/202405/t20240530_11341666.html.

[2] Katrina Manson, Project Maven: A Marine Colonel, His Team, and the Dawn of AI Warfare. New York: W. W. Norton & Company, 2026; Nilza Amara, "The Iran war highlights the creeping use of AI in warfare," London: Chatham House, 27 March 2026, https://www.chathamhouse.org/2026/03/iran-war-highlights-creeping-use-ai-warfare.

[3] Federation of American Scientists, Artificial Intelligence, and Nuclear Command, Control, and Communications: Current Status and Future Risks. June 2025. https://fas.org/wp-content/uploads/2025/07/June2025_AIxNC3_FAS.pdf.

nuclear age" of technological revolution of military affairs.[4]AI will have a transformative impact, as it provides both first-mover advantages and opportunities for "overtaking on a curve" [弯道超车], offering enormous benefits to those that lead in its development and applications.[5]

Chinese analysts are fully aware of, and closely watching, emerging and disruptive technologies are bound to change the balance of power, rewrite battlefield rules, and transform modern militaries, including their doctrine, training, and combat operations. AI is leading the way in data processing and analysis, intelligence and reconnaissance, battlefield cognition, and unmanned combat with autonomous weapons systems.[6] This technology stands out as a powerful agent of change, a major driving force in global military transformation, and a critical key to the PLA's pursuit of intelligentisation" (智能化).[7] Along these lines, the Generative artificial intelligence (GenAI) serves as a core technological support for proactively generating decision-support information, improving situational awareness in constantly changing and dynamic battlefield environments, and elevating overall operational effectiveness.[8]

This policy brief provides a preliminary assessment of Chinese perspectives on AI and its military applications, with a focus on the AI-nuclear nexus. It begins by presenting Chinese debates and discussions regarding various aspects of AI and its applications in the military domain, including the benefits and risks of AI's integration into the nuclear enterprise. This is followed by a brief review of Chinese interests and developments in the military applications of AI, from nuclear command, control and communication (NC3) to decision-making and autonomous nuclear weapons systems. The next segment explores some of the potential risks inherent in AI-nuclear integration and the challenges that the PLA faces in pursuing AI military integration. The paper concludes with a set of policy recommendations.

---

[4] Andrew Futter et al., The Global Third Nuclear Age: Clashing Visions for a New Era in International Politics (London and New York: Routledge, 2025).

[5] Rod Thornton and Marina Miron, "Towards the 'Third Revolution in Military Affairs': The Russian Military's Use of AI-Enabled Cyber Warfare," RUSI Journal, 165, no. 3 (April 2020), pp. 12-21; Kenneth Payne, "Artificial Intelligence: A Revolution in Strategic Affairs?" Survival, 60, issue 5 (2018), pp. 7-32.

[6] Cheng Baihua [程柏华], "The competition to seize the commanding heights in future warfare is accelerating in the militarization of artificial intelligence [抢占未来战争制高点 人工智能军事化竞争不断提速]," PLA Daily [解放军报], 1 September 2022, http://www.81.cn/yw_208727/10181959.html.

[7] Guo Cuiping and Liu Meijun [郭翠萍 刘美君], "Intelligent Game: Military Artificial Intelligence Reshapes the Offense-Defense Balance of Modern Warfare [智能化对弈：军用人工智能对现代战争攻防平衡的重塑]," Strategic Decision Research [战略决策研究], no.6 (2024), pp. 77-97; Li Chen [李晨], "Technological Innovation, Artificial Intelligence, and Major-Country Military Competition [技术创新、人工智能与大国军事竞争]," China Security Studies [国家安全研究], pp.46-64.

[8] Deng Xiaolin, Liu Mingkun and Su Junyuan [邓小林 刘明坤 苏军院], "How will generative artificial intelligence empower future warfare? [生成式人工智能如何赋能未来战争]" Military Digest [军事文摘], no. 1 (2026), pp. 16-21.

CHINESE PERSPECTIVES ON AI, MILITARY APPLICATIONS, AND THE AI-NUCLEAR NEXUS

The PLA has set 2035 as an important milestone for defence modernisation, with intelligentisation and integration of emerging technologies such as AI identified as key pillars of a world-class military. Indeed, one of the key benchmarks for achieving the 2027 centennial military building goal is to further accelerate the integrated development of informatisation and intelligentisation in parallel, rather than in sequence, to seize the opportunity presented by the growing trend in global military development—AI integration and automationt. As emphasised by a PRC Ministry of National Defence spokesperson, "building intelligent military systems has become a major trend in global military development [建设智能化军事体系已成为世界军事发展重大趋势]."[9] Chinese analysts argue that AI will accelerate the process of military transformation, causing fundamental changes to armed forces' planning, operational styles, equipment systems, and generation of combat models, ultimately leading to a profound military revolution. AI integration into military operations and strategy is essential to realising military intelligentisation (军事智能化), a top priority set by Xi Jinping and the Central Military Commission (CMC), and will allow the PLA to "overtake [other world-class militaries, the US in particular] on the curve" (弯道超车) in its competition with the United States.[10]

Chinese analysts highlight how AI can improve strategic decision-making capabilities. An intelligent command system can significantly enhance multiple functions, including deduction, analysis, and prediction based on more comprehensive battlefield information; simulation of the deployment and combat capabilities of opposing forces; and more accurate assessment of the battlefield situation. AI can also enhance the speed and quality of combat systems, enabling enhancement of the OODA loop (Observe, Orient, Decide, Act) through "intelligent sensing, intelligent judgment, intelligent decision-making, and intelligent action [智能感知、智能判断、智能决策、智能

[9] Xinhua, "The Ministry of National Defense explains how to understand ensuring the achievement of the centenary goal of the People's Liberation Army by 2027," 26 November 2020, http://www.xinhuanet.com/politics/2020-11/26/c_1126791220.htm; Rena Sasaki , "The Three Pillars Underpinning the 2027 Centennial Military Building Goal," Jamestown, 30 September 2025, https://jamestown.substack.com/p/the-three-pillars-underpinning-the

[10] [7] Austin Horng-En Wang, Emily Lathrop, Michael S. Chase, and William Marcellino, The People's Liberation Army's Perspectives on Artificial Intelligence Highlighting Integration as Key to "Intelligentization" Goals. Santa Monica, CA: RAND, March 2026, https://www.rand.org/content/dam/rand/pubs/perspectives/PEA4500/PEA4574-1/RAND_PEA4574-1.pdf; "How the U.S. and China Compare in the Race to Build AI Combat Drones," Wall Street Journal, 12 August 2024, https://www.wsj.com/video/series/us-vs-china/how-the-us-and-china-compare-in-the-race-to-build-ai-combat-drones/28D9277E-A87A-4865-8646-66D0A7D78FD7

行动],” thereby improving overall decision making and conferring advantages in time-sensitive combat situations.[11]

The PLA has been actively pursuing development and application of AI in its military systems to gain advantage in future intelligentised warfare. AI systems can benefit the Chinese military by: (i) increasing efficiency in data processing and ensuring its accuracy; (ii) providing better situational awareness (态势感知) and battlefield judgement; (iii) shortening decision-making time to enable faster responses; and (iv) supporting military rehearsal (军事推演), including war-game simulation.[12]

At the same time, Chinese analysts also highlight areas where AI integration into military systems could increase the risk of nuclear use, including the introduction of autonomous weapon systems and their enhanced ability to accurately search, track, locate, and target adversaries' nuclear weapon systems. This could weaken their second-strike capabilities, shorten decision-making timeframes, and invite attacks on command and control systems.[13] For instance, AI poses destabilising effects, particularly by compressing decision timeframes and generating inaccurate assessments due to data insufficiency and bias. The system is also vulnerable to cyber manipulation and attacks, which can potentially result in pre-emptive nuclear use with catastrophic consequences. Furthermore, due to the "black box" nature of AI systems, it is difficult for either side to accurately evaluate or predict the basis of the other's AI decisions and the actions it may take. In crisis situations, this can further exacerbate uncertainty and reduce crisis stability.[14]

Indeed, these same capabilities pose serious risks in nuclear escalation. Military AI integration can be of particular interest and concerns in three areas: AI in nuclear command, control and communication (NC3), AI-enhanced capabilities, such as

---

[11] 李腾达等 [Li Teng et al.], “Mechanism analysis of OODA loop empowered by artificial intelligence technology [人工智能技术赋能 OODA 环机理探析],” Command Control & Simulation [指挥控制与仿真], March 2026, pp. 27-34; 杨红齐等 [Yang Hongqi et al.], “Application of Artificial Intelligence in Military Decision Making [人工智能在军事决策中的应用],” Cybersecurity and Data Governance [网络安全与数据治理], September Supplement (2025), pp. 291-295.

[12]周国辉 刘文术 张鉴 [Zhou Guohui, Liu Wenshu and Zhang Qian], “Accelerating the integration of artificial intelligence into modern command and decision-making to improve the level of military command and decision-making [加快人工智能融入现代指挥决策，推动军事指挥决策水平提升],” PLA Daily [解放军报], 30 June 2022, http://www.81.cn/ll_208543/10167799.html.

[13] Luo Yi [罗曦], “Artificial intelligence technology may exacerbate the risk of nuclear war [人工智能技术可能加剧核战争风险],” World Affairs [世界知识], no. 16 (2019), pp. 68-69; Wu Xiaolong, Shi Zhaozu, and Xia Liangbing [武晓龙 石绍柱 夏良斌], “The impact of artificial intelligence technology on nuclear weapons [人工智能技术对核武器的影响],” Cruise Missiles [飞航导弹], no. 6 (2020), pp. 1-5.

[14] ZHANG Dongdong [张东冬], “The Militarization of Artificial Intelligence and Global Strategic Stability [人工智能军事化与全球战略稳定],” Global Review [国际展望], no. 5 (2022), pp. 142-161; Michael C. Horowitz, “Artificial Intelligence and the Future of Strategic Stability,” Texas National Security Review, Vol. 9, Issue 2 (2026), pp. 66-83.

autonomy, and AI-enabled systems integrated into non-nuclear applications, which in turn can be entangled with nuclear systems where the NC3 platforms are shared.[15]

In this regard, nuclear use may be influenced by three crucial factors: the degree of human control, whether AI systems become a single point of failure, and how AI applications effectively change the offence-defence balance. The integration of AI in NC3 systems could significantly impact strategic stability between major nuclear weapons states (in terms of arms race, first-strike, and crisis stability) while conventional-nuclear entanglement poses potential risks.[16]

Chinese analysts carefully monitor the developments in the AI-nuclear nexus in other major military powers, particularly how and in what circumstances nuclear weapons will be used. These include the use AI in early warning systems and reconnaissance to improve intelligence gathering and analysis, strengthen nuclear command and control systems, provide decision-making support develop missile launcher with a higher degree of autonomy, and enhance the autonomous strike capability of nuclear weapons. The PLA's analyses and observations on military AI applications and nuclear system integration in other major powers, including the United States and Russia, can be found in publicly available Chinese publications.[17]

From Beijing's perspective, US military AI development, including enhancements to command, control, communication, and intelligence (C3I) systems, enhancement in target acquisition, tracking, and guidance, improvements in missile and air defence capabilities, optimisation of nuclear delivery systems, and strengthened resilience against jamming and spoofing to sustain credible deterrence[18], will have important implications for US-China strategic stability. It would undermine crisis stability, and

---

[15] HAN Hongtao [韩洪涛], "An analysis of the potential application and influence of artificial intelligence in nuclear combat systems [人工智能在核作战体系中的潜在应用及影响浅析]," National Defence Technology [国防科技], 43, no. 4 (August 2022), pp. 77-81; "The impact and current status of artificial intelligence on nuclear weapons [人工智能对核武器的影响与现状]," Chinese Command and Control Society [中国指挥与控制学会], 3 May 2025, https://www.sohu.com/a/891586763_358040.

[16] Jacob Stokes, Colin H. Kahl, Andrea Kendall-Taylor and Nicholas Lokker, Averting AI Armageddon: U.S.-China-Russia Rivalry at the Nexus of Nuclear Weapons and Artificial Intelligence. Washington, DC: Center for a New American Security, February 2025, https://s3.us-east-1.amazonaws.com/files.cnas.org/documents/Averting-AI-Armageddon_TSP-IPS_2025_finalB_021325.pdf; Xu Lin, Lo Bingchi and Fan Huafeng [徐林 卢柄池 凡华锋], "Artificial Intelligence: A Key Variable for Global Strategic Stability [人工智能：全球战略稳定重要变量]," PLA Daily [解放军报], 20 July 2021, http://www.81.cn/2021zt/2021-07/20/content_10064177.htm

[17] YANG Nan [杨楠], "The US Artificial Intelligence Armament Posture and Its Assessment [美国人工智能军备态势及其战略影响]," Contemporary International Relations [现代国际关系], no. 8 (2025), pp. 123-142.

[18] Peter L. Hays, On the Precipice: Artificial Intelligence and the Climb to Modernize Nuclear Command, Control, and Communications. Washington, DC: Federation of American Scientists, 2026, https://fas.org/wp-content/uploads/2026/01/2026_on-the-precipice.pdf.

drive-up arms race in military AI, thereby increasing the risks of nuclear use.[19] With US AI-enabled surveillance and intelligence capabilities, the United States could detect Chinese land- and sea-based nuclear launch facilities, which would seriously threaten China's second-strike capabilities through precision long-range conventional and nuclear strikes. Additionally, AI can help enhance US missile defence systems with more accurate early warning through intelligence, surveillance, and reconnaissance (ISR). As a result, the delicate nuclear balance between the two countries will be upset.[20]

IN PURSUIT OF INTELLIGENTISATION: AI AND MILITARY INTEGRATION IN CHINA

China's efforts to leverage emerging and disruptive technologies to enhance its strategic capabilities are guided by the CCP's objective of strengthening military capabilities through science and technology (科技强军), with a view to transitioning from fighting informatisation (信息化) to intelligentisation (智能化) warfare.[21]

The PLA's advancement in military AI applications has received support from top leadership, dedicated resources for R&D, a whole-of-government approach, including military-civil fusion (MCF), and access to critical technologies and components from abroad despite export controls, particularly from the United States. China has yet to "overtake [the United States] on the curve" in military AI, but is rapidly narrowing the gap.[22] Military AI applications in China are informed by the belief that future warfare will be "intelligent, intangible, and silent," with a focus on autonomous vehicles, ISR, information and electronic warfare, predictive maintenance and logistics, simulation and training, command and control, and automated target recognition.[23]

---

[19] Chinese sources here.

[20] Ding Yi and Jiang Tianjiao [丁伊 江天骄], "The Impact of the U.S. AI Militarization on China-U.S. Strategic Stability [美国军备人工智能化对中美战略稳定的冲击]," Global Review [国际展望], 17, no. 2 (March/April 2025), pp. 88-109.

[21] Elsa B. Kania, "Designing Deterrence: The PLA's Outlook on Disruptive Technologies and Emerging Capabilities," in Roy D. Kamphausen, ed., Modernizing Deterrence How China Coerces, Compels, and Deters. Seattle and Washington, DC: National Bureau of Asian Research, 2023, pp. 121-140.

[22]Cole McFaul, Sam Bresnick, and Daniel Chou, Pulling Back the Curtain on China's Military-Civil Fusion: How the PLA Mobilizes Civilian AI for Strategic Advantage. Washington, DC: Center for Security and Emerging Technology, Georgetown University, September 2025, https://cset.georgetown.edu/wp-content/uploads/CSET-Pulling-Back-the-Curtain-on-Chinas-Military-Civil-Fusion.pdf; John Lee, "'Overtaking on the Curve'? Defense AI in China," in Heiko Borchert, Torben Schütz, and Joseph Verbovszky, eds., The Very Long Game: 25 Case Studies on the Global State of Defense AI. Springer Nature, pp. 465-486.

[23] Ryan Fedasiuk and Emily Weinstein, "AI in the Chinese military," in William C. Hannas and Huey-Meei Chang, eds., Chinese Power and Artificial Intelligence: Perspectives and Challenges. London: Routledge, 2022, pp. 175-188; Ryan Fedasiuk, Jennifer Melot, and Ben Murphy, Harnessed Lightning: How the Chinese Military is Adopting Artificial Intelligence. Center for Security and Emerging Technology,

The PLA is accelerating more extensive integration of AI across its intelligence operations, including data collection and analysis to support strategic decision-making;[24] autonomous systems such as military vehicles, capable of conducting combat-support operations, robot dogs powered by China's DeepSeek, and uncrewed ground, underwater, and aerial vehicles;[25] cognitive and information warfare.[26]According to one recent study, "Beijing has already deployed advanced sensors in the oceans and in space to map and monitor undersea activity, with the goal of eventually tracking US submarines around the globe."[27]

Chinese interests in military applications of AI cover a wide spectrum of areas, including early warning, command and control, decision-making, autonomous weapons systems, and logistic, for both conventional and nuclear domains. These interests are reflected in the PLA's recognition of AI's strategic implications in the coming decades, as China transitions from an informationised to an intelligentised force, aiming for victory under conditions increasingly shaped by disruptive technologies.[28]

The PLA is increasing its efforts in the following areas: command and control, especially AI-enabled decision support systems (AI-DSS); data collection and display, and predictive algorithms to enhance global, multi-domain situational awareness; target selection in air, sea, and space domains and track moving objects; cross-cutting intelligence and sensing capabilities, including AI-enabled synthesis of open-source, text-based information; and cyber security, including communication interference and

---

Georgetown University, October 2021, https://cset.georgetown.edu/wp-content/uploads/CSET-Harnessed-Lightning.pdf.

[24]Tushar Subhra Dutta, "PLA Rapidly Deploys AI Technology Across MilitaryIntelligence Operations," 19 May 2025, Siembiot, https://siembiot.eu/en/cyber-security-news/pla-rapidly-deploys-ai-technology-across-military-intelligence-operations/42601.

[25]Reuters, "China uses DeepSeek AI to power robot dogs, drone swarms, and next-generation military operations," Cybernews, 27 October 2025, https://cybernews.com/ai-news/china-deepseek-ai-power-robot-dogs-drone-swarms-next-gen-military-operations/.

[26]Nathan Beauchamp-Mustafaga, "Exploring the Implications of Generative AI for Chinese Military Cyber-Enabled Influence Operations: Chinese Military Strategies, Capabilities, and Intent," testimony before the U.S.-China Economic and Security Review Commission, 1 February 2024, https://www.rand.org/content/dam/rand/pubs/testimonies/CTA3100/CTA3191-1/RAND_CTA3191-1.pdf; Libby Lange, "Decoding China's AI-Powered Algorithmic Cognitive Warfare," Special Competitive Studies Project, November 2024, https://www.scsp.ai/wp-content/uploads/2024/11/Decoding-Chinas-AI-Powered-%E2%80%98Algorithmic-Cognitive-Warfare-Final.pdf.

[27]Sam Bresnick, Emelia S. Probasco, and Cole McFaul, "China's AI Arsenal: The PLA's Tech Strategy Is Working," Foreign Affairs, 2 March 2026, https://www.foreignaffairs.com/china/chinas-artificial-intelligence-arsenal.

[28] Austin Horng-En Wang, Emily Lathrop, Michael S. Chase, and William Marcellino, The People's Liberation Army's Perspectives on Artificial Intelligence Highlighting Integration as Key to "Intelligentization" Goals (Santa Monica, CA: RAND, 2026).

electronic warfare, with AI-enhanced offensive and defensive capabilities. Many of these efforts aim to narrow the capability gaps between the US and Chinese militaries.[29]

China's nuclear modernisation program, especially its rapidly expanding nuclear arsenal, has been widely reported.[30] Beijing's nuclear NC3 complex is being modernised to reflect advancing capabilities, including the updated land- and submarine-based ballistic missiles.[31] Publicly available information about the extent of AI integration into the nuclear enterprise in China is hard to come by, but it is clear that the PLA is closely monitoring developments in this domain.[32]

The nuclear command and control systems increasingly rely on expert systems—AI programmes that can emulate human decision-making and problem-solving capabilities—and deep learning algorithms (multilayered neural networks that draw on data and can mimic human brains) to enhance situational awareness and cybersecurity. However, malicious actors can use new technologies to deceive or disrupt command and control systems by tampering data, posing a dilemma for decision-makers. Adversaries may also attempt to hide or alter the design of their mobile missile launchers to deceive ISR capabilities. In particular, opponents or third parties may try to "contaminate" the AI training data to induce misclassification, leading to errors in the recognition process.[33] Chinese analysts conclude that trust in AI remains relatively low, with an emphasis on the centrality of human intervention due to the risks associated with AI applications in nuclear NC3 systems. These risks include: (a) unpredictable and

---

[29] Emelia Probasco, Sam Bresnick, and Cole McFaul, China's Military AI Wish List: Command, Control, Communications, Computers, Cyber, Intelligence, Surveillance, Reconnaissance, and Targeting (C5ISRT). Center for Security and Emerging Technology, Georgetown University, February 2026, https://cset.georgetown.edu/wp-content/uploads/CSET-Chinas-Military-AI-Wish-List.pdf.

[30] "Chinese nuclear forces, 2025," Bulletin of the Atomic Scientists, 82, issue 2 (2025), pp. 135-160.

[31] Peter Wood, Alex Stone, and Thomas Corbett, CHINESE NUCLEAR COMMAND, CONTROL, AND COMMUNICATIONS. Montgomery, AL: China Aerospace Studies Institute, Air University, March 2024, https://airuniversity.af.edu/Portals/10/CASI/documents/Research/PLARF/2024-03-11%20Chinese%20Nuclear%20Command%20and%20Control.pdf.

[32] Lora Saalman, AI in Chinese, Indian and US Nuclear Postures, Norms and Systems. Solna: Stockholm International Peace Research Institute, February 2026, https://www.sipri.org/sites/default/files/2026-02/2602_ai_integration.pdf; Jacob Stokes, Colin H. Kahl, Andrea Kendall-Taylor and Nicholas Lokker, Averting AI Armageddon: U.S.-China-Russia Rivalry at the Nexus of Nuclear Weapons and Artificial Intelligence. Washington, DC: Center for a New American Security, February 2026, https://s3.us-east-1.amazonaws.com/files.cnas.org/documents/Averting-AI-Armageddon_TSP-IPS_2025_finalB_021325.pdf.

[33]Zhang Gaosheng [张高胜], "'AI + nuclear weapons' usher in a new dangerous era, increasing the risk of misjudgement [AI+核武器"开启新危险时代，将增加误判风险]," Sina Finance [新浪财经], 11 April 2025, https://finance.sina.com.cn/roll/2025-04-11/doc-inestzxy5130338.shtml; Xu Jing , Wu Hao, and Tang Chuan [徐婧 吴浩 唐川], "The Application and Progress of Artificial Intelligence in National Defense [人工智能在国防领域的应用与进展]," Aerodynamic Missile Journal [飞航导弹], No. 3 (March 2021), pp. 87-92.

unexplainable errors due to the nature of AI algorithms, (b) strategic miscalculation resulting from compressed decision-making time in the fog of war, (c) unintended escalation arising from reliance on AI-driven data analysis that may be compromised, and (d) inherent risks in the use of autonomous weapons.[34]

As a result, Chinese analysts assess that one of the most destabilising impacts of AI on nuclear deterrence will be on the offense-defence balance, as well as on relations between nuclear-weapon states and non-nuclear-weapon states and even between state and non-state actors. The possession of advanced AI technologies means that the ability to disarm a country's nuclear deterrent forces using advanced conventional weapon systems will likely be greatly improved. For instance, improvements in AI-driven ISR systems could threaten the survivability of a second-strike forces through an ability to detect, identify, track, and destroy adversaries' mobile and concealed launch platforms.[35] This ability to locate and strike an adversary's strategic assets could undermine the fundamental principles of nuclear deterrence and so shift deterrence dynamics away from mutual vulnerability. Even in the absence of an intention to conduct pre-emptive strikes, major powers will pursue such capabilities. A lack of strategic trust, uncertainty about intentions, and suspicions that an opponent will leverage AI to gain advantage will drive an arms race in military AI and deeper AI-nuclear integration.[36]

While specific Chinese views on nuclear-conventional entanglement and AI-enabled military capabilities are limited, there is some consensus within the Chinese expert community that there is no clear indication that nuclear-armed states intend to apply AI or autonomous systems to their nuclear weapons. Instead, AI is likely to have a greater impact on the broader architecture of nuclear deterrence. In particular, the AI-enabled nuclear-weapons systems could cover a range of areas, from early warning to C3 and decision-making, and from weapon delivery systems to air and missile defence. While recognizing the potential risks associated with AI applications in nuclear-weapons systems such as crisis instability and escalation there is general confidence that overall

---

[34] 杨智睿 [Yang Zhirui], "简析人工智能在核武器系统中的应用 [A brief analysis of the application of artificial intelligence in nuclear weapons systems]," 科技理论与实践 [Theory and Practice of Science and Technology], 5, no. 2 (December 2024), pp. 123-131; 鲁传颖 [Lu Chuanying], "人工智能重塑国家安全的范式和逻辑 [Artificial intelligence reshapes the paradigm and logic of national security]," 人民论坛 [People's Tribune], 5 February 2025, https://paper.people.com.cn/rmlt/pc/content/202502/05/content_30059346.html#.

[35] Wu, Shi and Xia, "The Impact of AI Technology on Nuclear Weapons."

[36] 陈琪 朱荣生 [Chen Qi and Zhu Rongsheng], "不确定性：为何担心人工智能冲击国际安全? [Uncertainty: Why are we worried about the impact of artificial intelligence on international security?],]," Beijing: Centre for International Security and Strategy (CISS), Tsinghua University, International Security and Strategy Studies Report no. 8, August 2018, https://ciss.tsinghua.edu.cn/upload_files/atta/1583403025100_18.pdf; Zhang, "The Militarization of Artificial Intelligence."

strategic stability can be maintained This reflects the tentative and limited nature of current AI applications, as well as the tendency of nuclear-armed states to prioritise the survivability of their retaliatory capabilities through hardening, concealment, and redundancy, thereby minimising vulnerability to first strikes, including AI-enabled conventional precision strikes.

China and the United States are racing for AI superiority across a broad range of systems and domains of warfare. Given that the cutting-edge AI technology today largely reside in the private sector, both the US military and the PLA are engaged in forging partnerships with private businesses, with China benefiting from the MCF. In contrast, due to its cumbersome acquisition procedures, the Pentagon has yet to fully leverage the Silicon Valley's superb expertise in dual-use and military applications.[37]

PLA analysts clearly recognize the potential of AI military applications, which is increasingly setting their agendas in areas such as unmanned combat platforms, intelligent command and control systems (that will move beyond the traditional OODA), autonomous weapons and defence systems. In this regard, some serious ethical, legal, as well as security questions were raised, including the "black box" problem, given the lack of transparency and complex machine learning models, and so on.[38]

MITIGATING AND MANAGING RISKS OF MILITARY AI: WHERE DOES BEIJING STAND

With the demise of the New START, concerns over increasing arms races in nuclear weapons development, testing, and deployment are growing. Among the new challenges in the already rather gloomy field is the absence of arms control for emerging technologies during a period of intensifying great-power competition and rivalry. Like traditional arms control negotiations, which involved elements of both cooperation and competition, current efforts in discussing, debating and developing cooperative constraining measures on emerging disruptive technologies, especially regarding their military applications have yet to yield any serious consensus. Many of the conditions that led to Cold War arms control negotiated treaties and agreements, do not exist in today's geostrategic environment even as such agreements are urgently needed.[39]

---

[37] Joshua Glonek, "The Coming Military AI Revolution," Military Review, May-June 2024, pp. 88-99.

[38] Zachary Selden, "A New 'Cult of the Offensive?' Elite Perceptions of Artificial Intelligence in Military Affairs in the United States and the People's Republic of China," Foreign Policy Analysis, 2024(orae026), pp. 1-18; Wang Gongjin and Luo Bo, "Artificial Intelligence in the Military Domain: Key Applications and Prospects," National Defense Technology, 46(4), August 2025, pp. 103-109. [王恭瑾，罗钵，人工智能在军事领域的主要应用与前景展望， 国防科技]

[39] Anna Peczeli, "Recalibrating Arms Control for Emerging Technologies," The Washington Quarterly, 47(4), Winter 2024, pp. 155-175.

The need for dialogue on AI governance, its military use in NC3 is clear to all major powers, but incentives and calculations differ. This is especially the case in the US-China context as the two contending powers are entangled in great-power rivalry in the Indo-Pacific. Unlike during the Cold War, when the US and the Soviet Union engaged in serious exchanges, driven by concerns over nuclear war after the Cuban missile crisis, no comparable parallel existed between Washington and Beijing. While limited military CBMs were developed 1998-2015, nuclear dialogue stagnated at the Track II level and official engagement remained even more limited.[40]

Chinese analysts note that the extensive integration of AI into military decision-making support systems, especially in target identification and selection, has greatly enhanced strike speed and precision which has raised serious global governance questions, including ethical use of AI in warfare, such as target selection and AI-enabled strikes causing civilian casualties in violation of humanitarian law.[41]

One related risk of AI-nuclear nexus involves the so-called nuclear-conventional entanglement, as either the co-location of weapons systems, deployment of dual-capable systems, or shared command and control infrastructure. The entanglement may result in situations where strikes on the target's conventional systems can be interpreted as an attempted attack on nuclear systems, inviting launch on warning (LOW) nuclear posture driven by "use it or lose it" dilemma under extreme time pressure.[42]

Chinese perspectives on nuclear-conventional entanglement are based on a divergent understanding of the role of nuclear weapons, the recognition of the challenges caused by the introduction of advanced technologies in their dual-use roles, concerns over the superiority of US nuclear/conventional capabilities and the need for protecting China's small albeit expanding nuclear arsenal. These are aimed at ensuring assured retaliatory capabilities, and balancing the perceived benefits and inherent risks of launching pre-

[40] Michael A. Santoro, "US and China must talk to manage dangers of AI contest in a nuclear age," South China Morning Post, 20 May 2026, https://www.scmp.com/opinion/china-opinion/article/3354110/us-and-china-must-talk-manage-dangers-ai-contest-nuclear-age

[41] Zhang Weihua [张卫华], "Artificial Intelligence in Military Decision-Making and Humanitarian Law [人工智能在军事决策中的应用及其人道法问题]," Chinese Review of International Law [国际法研究], no. 6 (2025), pp. 70-87; Ilaria Carrozza and Bjørnar Sverdrup-Thygeson, "China and the Ethics of Military AI: Debating the Norms of Future Wars," Journal of Contemporary China, 30 January 2026, DOI: 10.1080/10670564.2026.2622660.

[42] Don Snyder and Alexis A. Blanc, Unravelling Entanglement Policy Implications of Using Non-Dedicated Systems for Nuclear Command and Control. Santa Monica, CA: RAND, 2023, https://www.rand.org/content/dam/rand/pubs/research_reports/RRA900/RRA976-3/RAND_RRA976-3.pdf; James M. Acton, "Escalation through Entanglement: How the Vulnerability of Command-and-Control Systems Raises the Risks of an Inadvertent Nuclear War," International Security, 43, no. 1 (Summer 2018), pp. 56-99.

emptive strikes against US dual-use assets in space, specifically in the context of anticipated regional conflict, e.g., scenarios regarding the Taiwan Strait.[43]

China's latest white paper on arms control and disarmament states that the military application of AI should "ensure that human beings take the ultimate responsibility and that all relevant weapons systems are under human control to prevent unauthorized actions," and that it "must be conducted in accordance with International Humanitarian Law and other applicable international laws."[44] In its submission to the UN First Committee in October 2025, the Chinese delegation made the following statement:

China attaches great importance to the huge risks posed by the use of Artificial Intelligence in military domain and advocates that countries should excise restraint in developing Artificial intelligence weapon system, ensuring the use of AI in military domain in compliance with international humanitarian law, and preventing the indiscriminate killing and injuring and malicious use of those weapon systems. All parties should seek common grounds on regulating the use of AI in the military domain through dialogue and cooperation, promote the building of a open, just and effective security governance mechanism, minimize risks to the greatest possible extent, and ensure the use of AI is safe, reliable and controllable.[45]

China has been active in proposing AI governance, including on its military applications. Specifically, Beijing is engaged in promoting arms control discussion under multilateral frameworks, calling for the establishment of an authoritative scientific development review mechanism, and reaching bilateral and multilateral agreements for prohibiting the use of AI-enabled weapon systems, including autonomous weapons, in attacking each other's strategic assets.[46] Nonetheless, Chinese positions on AI military applications, including NC3 remain ambivalent. Beijing is actively exploring both civilian and military potentials of AI research and development

---

[43] James M. Acton, Tong Zhao, and Li Bin, Reducing the Risks of Nuclear Entanglement. Washington, DC: Carnegie Endowment for International Peace, 2018, https://assets.carnegieendowment.org/static/files/Acton_Entanglement_Sept2018.pdf; Caitlin Talmadge, "Would China Go Nuclear? Assessing the Risk of Chinese Nuclear Escalation in a Conventional War with the United States," International Security, 41, no. 4 (2017), pp. 50-92.

[44] Chinese State Council [国务院], "China's arms control, disarmament, and nonproliferation in the new era' white paper [新时代的中国军控、裁军与防扩散"白皮书], 27 November 2025, http://www.mod.gov.cn/gfbw/fgwx/16423994.html.

[45] Permanent Mission of the People's Republic of China to the UN, "Statement by Chinese Delegation at the Thematic Debate on Conventional Weapons at the 80th Session of the UNGA First Committee," 23 October 2025, https://un.china-mission.gov.cn/eng/chinaandun/disarmament_armscontrol/202510/t20251024_11739691.htm#:~:text=China%20attaches%20great%20importance%20to,within%20the%20GGE%20on%20LAWS.

[46] Ministry of Foreign Affairs People's Republic of China, "Position Paper of the People's Republic of China on Regulating Military Applications of Artificial Intelligence (AI)," 14 December 2021, https://www.fmprc.gov.cn/eng/zy/wjzc/202405/t20240531_11367523.html.

while declining to be bound by declarations on AI military use issued by forums such as the Responsible Artificial Intelligence in the Military Domain (REAIM).[47] Analysts suggest that Beijing seeks to preserve maximum flexibility in pursuing military AI and competing with the United States.[48]

The need for dialogue on AI governance, particularly in NC3 applications, is clear to all major powers, yet incentives and calculations differ. This is especially the case in the US-China context, as the two powers are engaged in great-power rivalry in the Indo-Pacific. Unlike during the Cold War, when the US and the Soviet Union engaged in serious exchanges, driven by concerns over nuclear war after the Cuban missile crisis, no comparable parallel exists between Washington and Beijing. While limited military CBMs were developed 1998-2015, nuclear dialogue stagnated at the Track II level and official engagement remained even more limited. There is, however, some interest by both sides, to engage in AI related dialogue, including mutual interest in restricting if not completely banning AI in NC3.[49]

Major nuclear powers are actively engaged in the pursuit of AI application in NC3 systems on the assumption that others are doing the same. Clearly, there is a need for a serious dialogue on specific rules or prohibition regarding AI application in NC3 system within the broader framework of nuclear risk reduction. In this regard, P5 experts have been holding roundtables to discuss issues related to the AI/NC3 nexus and its impact on strategic stability. While perspectives and emphasis vary, the experts suggest that a general declaration from P5 on human in the loop regarding AI application in NC3, regular dialogues nuclear risk reduction, and in-depth discussions among key stakeholders are needed.[50]

This highlights the importance of the United Nations' involvement in introducing resolutions on AI governance, particularly its integration into NC3. In November 2025, two resolutions were adopted, reflecting efforts by member states to better understand the implications of using AI for military purposes, especially in the nuclear domain. The

---

[47] Reuters, "US, China opt out of joint declaration on use of AI in military," The Straits Times, 6 February 2026, https://www.straitstimes.com/world/europe/us-china-opt-out-of-joint-declaration-on-ai-use-in-military; Richard Connor, "China opts out of blueprint on military AI use," DW, 9 October 2024, https://www.dw.com/en/china-opts-out-of-blueprint-on-military-ai-use/a-70180690.

[48] Woojoo Hong, "U.S.-China Competition Looms Large at Seoul Summit on Use of AI in Military," Asia Pacific Foundation of Canada, 9 October 2024, https://www.asiapacific.ca/publication/us-china-competition-looms-large-seoul-summit-use-ai; Kyle Chan, "Competing AI strategies for the US and China," The Brookings Institution, 16 April 2026, https://www.brookings.edu/articles/competing-ai-strategies-for-the-us-and-china/.

[49] Christian Ruhl, "The U.S. and China Need an AI Incidents Hotline," Lawfare, 3 June 2024, https://www.lawfaremedia.org/article/the-u.s.-and-china-need-an-ai-incidents-hotline.

[50] Geneva Centre for Security Policy (GCSP), "P5 Experts' Roundtable on Nuclear Risk Reduction – Co-Convenors' Summary," 14 December 2023, https://www.gcsp.ch/news/p5-experts-roundtable-nuclear-risk-reduction-co-convenors-summary.

two resolutions are: (1) "Artificial intelligence in the military domain and its implications for international peace and security," and (2) "Possible risks of integration of artificial intelligence into command, control and communication systems of nuclear weapons."[51]

Several multilateral fora on AI and its military applications aim to develop consensus on how AI development, deployment and use in military applications must comply with international law and in general maintain, not undermine, international security, peace, and stability. One of the most prominent initiatives include the REAIM initiative which has been mentioned earlier in this section. It focuses on promoting responsible use of AI in military applications, emphasizing ethical considerations, governance, and international cooperation.[52] But while the P5 states have participated in these meetings, several of them have declined to sign the summit declarations.

While a joint P5 statement or position has yet to be formulated, there are bilateral and trilateral statements by P5 states on the importance of maintaining human in the loop about AI's integration into and its role in the nuclear enterprise. In a meeting between Presidents Biden and Xi in November 2024, "the two leaders affirmed the need to maintain human control over the decision to use nuclear weapons. The two leaders also stressed the need to carefully consider the potential risks and develop AI technology in the military field in a prudent and responsible manner."[53] France, UK and the US issued a joint statement, endorsing the principle that principle, stressing it is "especially crucial to maintain human control and involvement for all actions critical to informing and executing sovereign decisions concerning nuclear weapons employment." At the expert level, several P5 track-II meetings or roundtables have been held, organized and convened by Geneva Centre for Security Policy and the Strategic Foresight Group over the last few years. Meanwhile, since 2019, the Brookings Institute and the Center for International Security Strategy at Tsinghua University have also maintained regular dialogues on AI and international security.[54]

---

[51] Alice Saltini, "Lessons from the UN's first resolution on AI in nuclear command and control," Bulletin of the Atomic Scientists, 22 December 2025, https://thebulletin.org/2025/12/lessons-from-the-uns-first-resolution-on-ai-in-nuclear-command-and-control/;

[52] The Global Commission on Responsible Artificial Intelligence in the Military Domain (GC REAIM), "Responsible by Design: Strategic Guidance Report on the Risks, Opportunities, and Governance of Artificial Intelligence in the Military Domain," 24 September 2025, https://hcss.nl/report/gc-reaim-responsible-by-design-strategic-guidance-report/.

[53] The White House, "Readout of President Joe Biden's Meeting with President Xi Jinping of the People's Republic of China," 16 November 2024, https://china.usembassy-china.org.cn/readout-of-president-joe-bidens-meeting-with-president-xi-jinping-of-the-peoples-republic-of-china-3/.

[54] Ryan Hass and Colin Kahl, "Laying the groundwork for US-China AI dialogue," Washington, DC: The Brookings Institution, 5 April 2024, https://www.brookings.edu/articles/laying-the-groundwork-for-us-china-ai-dialogue/.

CONCLUSION

Advanced AI-enabled military capabilities provide significant advantages to those who possess them, from enhancing reliable communication in early warning to enabling faster and accurate processing of data. However, these same capabilities also pose serious risks in nuclear escalation. Chinese perspectives on these issues highlight a strong focus on the developments in major powers' AI-military applications, AI-nuclear nexus, and decision-making systems, with a general consensus that these developments foreshadow as the key for winning future intelligentised warfare. While there is scant information about China's AI/NC3 integration, nor any detailed discussions about China's own developments in the area in the public domain, there nonetheless are reports about AI military applications in various peripheral areas either connected to, or part of NC3. Chinese analysts appear to agree that the application of AI in the military domain will have more impact on conventional weapons than nuclear weapons. There is a recognition, due largely to ethic issues, and risks of losing control, that AI application, and especially in autonomous nuclear-weapon systems, remains tentative and limited, given the uncertainty and risks. This appears to be in line with the debates currently ongoing in the West regarding the benefits and risks of AI applications in the nuclear realm, including the imperative of maintaining human in the loop where AI/NC3 is concerned.

AI military integration, including with the nuclear enterprise, is rapidly evolving and deepening. Given the growing concerns over the "loss" of human control, especially where use of nuclear weapons is concerned, it is imperative that major powers, which are all pursuing various aspects and are at different phases of modernizing their nuclear arsenals, of which the role of AI appear paramount, engage in serious dialogues, develop rules governing AI military applications, including nuclear integration and autonomous weapons development. The following policy recommendations are presented.

- The P5 should discuss the perimeters of AI/NC3 integration and come to common understanding and multilaterise existing bilateral and minilateral commitments to maintaining human control in decisions over nuclear use.
- The UN-led and other multilateral forums on responsible military applications of AI should be supported, with a view to negotiating binding agreements on prohibiting integration of AI in NC3 to play any role in making nuclear use decisions.
- China is rapidly expanding its nuclear arsenal and is one of the two most advanced AI powers. The PLA is interested in, and learning from experiences of other major powers, about introducing and integrating AI in its NC3. Washington should engage Beijing, in both track 1 and track 2 channels, so as to explore and understand the full spectrum of benefits and

risks of AI/NC3 integration regarding strategic stability (first-strike, crisis and arms race). These dialogues will benefit from open and honest conversations with participation from government officials, security studies analysts, AI developers and other technical experts.

ABOUT THE AUTHOR

Jingdong Yuan, PhD, is Associate Senior Fellow at Stockholm International Peace Research Institute (SIPRI). He was previously an Associate Professor at the Centre for International Security Studies, University of Sydney. Dr Yuan's research focuses on Indo–Pacific security, Chinese foreign policy, Sino–Indian relations, China–European Union relations, and nuclear arms control and nonproliferation. He has held visiting appointments at the National University of Singapore, University of Macau, East–West Center, National Cheng-chi University, Mercator Institute for China Studies, Fudan University, Berlin Social Sciences Centre (WZB) and the United Nations Institute for Disarmament Research (UNIDIR). He is the co-author of *Chinese cruise missiles: a quiet force-multiplier* (2014) and *China and India: cooperation or conflict?* (2003), and co-editor of *Engaging China: How Australia Can Lead the Way Again* (2023), *Trump's America and international relations in the Indo–Pacific* (2021), and *Australia and China at 40* (2012). His publications have appeared in numerous journals and edited volumes, including "The United States and Stability in the Taiwan Strait," "External and Domestic Drivers of Nuclear Trilemma in Southern Asia: China, India, and Pakistan," among others.

ABOUT APLN

The **Asia-Pacific Leadership Network (APLN)** is a Seoul-based organization and network of political, military, diplomatic leaders, and experts from across the Asia-Pacific region, working to address global security challenges, with a particular focus on reducing and eliminating nuclear weapons risks. The mission of APLN is to inform and stimulate debate, influence action, and propose policy recommendations designed to address regional security threats, with an emphasis on nuclear and other WMD (weapon of mass destruction) threats, and to do everything possible to achieve a world in which nuclear weapons and other WMDs are contained, diminished, and eventually eliminated.