AI Guideline for Global Collaboration, Risk Management

Policy Express

By LIN Yuchen

Over the past year, the rapid evolution of AI technologies and applications has created both unprecedented opportunities and growing risks. To address both, the Chinese government has drafted the AI Safety Governance Framework 2.0 in collaboration with professional institutions, research organizations, and leading enterprises.

The new framework was released on September 15 during the 2025 National Cybersecurity Awareness Week. It is a significant upgrade of the first version launched last year, which was closely tied to the Global AI Governance Initiative and drew widespread international attention.

Framework 2.0 refines risk classifications, introducing graded approaches to different levels of risk, and establishing dynamic mechanisms to update countermeasures.

It reflects China's efforts to balance innovation with governance, while promoting global consensus on AI security, ethics, and regulation. It is designed to shape a safe, trustworthy, and controllable AI ecosystem, while encouraging collaboration across borders, industries, and sectors. It also signals China's commitment to multilateral cooperation, ensuring inclusive sharing of AI's technological benefits, and promoting equitable distribution of development opportunities worldwide.

Photo shows an intelligent unmanned aerial vehicle at an exhibition held in Dubai, United Arab Emirates. (PHOTO: XINHUA)

AI is reshaping economies, societies, and ways of life, representing both a new frontier for human progress and a source of risks that cannot be ignored.

Guided by the principle of human-centered and beneficial AI, Framework 2.0 stresses inclusive but prudent innovation, risk- based agile governance, a balance of technical and managerial safeguards, and open international cooperation. It calls for a secure environment for innovation, guarding against threats to national security, public interest, and individual rights.

It highlights the importance of monitoring technological trends, classifying risks dynamically, and assigning clear security responsibilities to developers, service providers, and users. At the same time, it underscores the need for trustworthy AI applications that avoid uncontrollable risks to human survival and development.

The framework details various risk categories. They range from technical issues (such as bias, robustness, and adversarial attacks), to data risks (including poisoning and privacy leakage), application security risks (vulnerabilities, critical infrastructure misuse, or malicious exploitation), and finally, broader societal risks (such as disinformation, crime facilitation, and potential weaponization).

For each category, it provides technical measures, governance tools, and operational guidelines for research and deployment.

With this update, China seeks to establish an AI governance model that advances security and innovation in equal measure, while promoting dialogue and cooperation worldwide to safeguard the shared future of AI.

Space Docking: Locked and Loaded

By BI Weizi

Tianzhou- 9's docking at the rear docking port of Tianhe, the core module of China's space station Tiangong, this July, was romantically described in local media as a "kiss in space." Performed at an altitude of 400 km, this feat represented the pinnacle of human ingenuity and technological achievement.

The space station's core module houses its control center and five docking mechanisms, which are deployed at the front and rear to support the docking and berthing of visiting spacecraft.

The docking mechanism consists of two parts: active and passive. The active docking mechanism, mounted on one end of the spacecraft, features three petal- like guide plates. Each plate has two locking tongues, a set of buffers, 12 docking locks, and dual sealing rings. The passive part, mounted on the other end, is a relatively simple structure that awaits the arrival of the spacecraft. So, how do the two spacecraft dock?

Before docking, the two spacecraft cannot be perfectly aligned. To overcome this challenge, guide plates come into play, interlocking like fingers to allow the two vehicles to align as they approach each other. During insertion, the spacecraft's locking tongue is squeezed into the lock cavity, slides past the space station's latch and then quickly pops out, much like a door lock at home. This completes the first capture action, establishing a flexible connection between the two vehicles.

The impact energy of a 10- tonne spacecraft chasing a 100 - tonne space station would be catastrophic if no measures were taken. To address this, the spacecraft is equipped with a buffer system that works in a similar way to a car's shock absorbers. Using spring dampers and friction brakes, this system dissipates the impact energy within seconds, to achieve low- impact capture and highly efficient buffering. This makes the impact virtually imperceptible to the astronauts.

The docking ring on the spacecraft then retracts automatically and gradually approaches the space station. Twelve docking locks, driven by steel cables, simultaneously lock into place. This compresses the sealing ring, creating an airtight seal between the two spacecraft. The two spacecraft are now firmly connected, completing the space kiss.

Docking is a core technology for human spaceflight. Without it, delivering packages in space and regularly rotating space crews would be impossible. In the future, China's docking mechanism products will be used in major national projects such as Mars exploration and manned lunar landings, significantly contributing to space exploration.

Sci-tech Powers High-quality Growth

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In the new energy sector, China has repeatedly broken its own world records for photovoltaic crystalline silicon cell efficiency and single- unit offshore wind turbine capacity.

According to official data, the world's highest- capacity offshore wind turbine is currently the 26- megawatt unit that was installed off the coast of east China's Shandong province in late August. With an average annual wind speed of 10 meters per second, a single unit can generate 100 million kilowatt-hours of clean electricity every year.

Cumulative sales of new energy vehicles in China have surpassed 40 million units, with production and sales ranking first globally for 10 consecutive years.

Future industries taking shape

China is proactively shaping future industries by investing in cutting-edge technologies. In AI, several domestically developed large language models have achieved internationally advanced levels, with some boasting accuracy rates exceeding 95 percent. Over 100 benchmark application scenarios for artificial intelligence have been created.

Humanoid robots are making strides in integration with embodied intelligence. Key technologies such as multimodal perception and brain- inspired computing have advanced, facilitating applications in automobile manufacturing, logistics handling, and power grid inspection, laying the groundwork for a trillion- yuan- scale industry.

Moreover, clinical applications have enabled paralyzed patients to stand and walk and restored light perception in blind individuals. Domestically developed brain pacemakers have been fully commercialized and implanted in over 30,000 Parkinson's patients across 400 hospitals in eight countries, emerging as a new engine for high- quality development for people's health.

2025 Pujiang Forum: Cultivating Fertile Ground for Innovation

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Shanghai and Hangzhou were cited as examples of regions blending innovation with urban life. "The traditional Silicon Valley model usually isolated innovation in suburbs, but now we see 'Silicon Alley' — integration into the city," said Sheng Shihao, chairman of the Zhejiang Federation of Humanities and Social Sciences Circles. He highlighted how young entrepreneurs are redefining innovation: "They are 'definers', not 'followers'."

AI reshaping innovation paradigms

With China producing over 26 percent of the world's data and leading in AI patents, the forum also addressed AI's cultural impact. Zhang Zheng, senior principal scientist at Amazon Web Services (AWS) and director of the AWS Shanghai AI Institute, suggested tapping into "dark data" — logical mathematical and code texts — to train AI in reasoning and analytical capabilities, enabling it to explore complex solution spaces.

While demand for AI talent is surging, reports indicate a shortage of five million professionals in China, with algorithm engineer job postings growing 44 percent year on year. "We need people who can collaborate with AI, not be replaced by it," Zhang said.

Ji Xiaohua, founder of Guokr, an Internet content provider for science and technology education, said AI is making innovation more participatory. "When AI- generated content puts the 'wand of creation' in everyone's hands, the public evolves from consumers to co- creators," Ji said. "When rational questioning, hands-on verification, and open collaboration become social habits, innovation becomes part of our national spirit and era ethos."

While AI accelerates research, concerns about "academic garbage" persist. "In the AI era, maintaining research integrity is key," said Saskia Steinacker, chief digital officer at Springer Nature. "New tools help detect problematic documents more quickly and effectively. Technology is an enabler — the goal is to empower researchers, build trust, and drive meaningful impact."

Building an innovation culture ecosystem

Global perspectives were also shared at the forum. "Innovation starts with leadership," said Steve Hoffman, founder of Founders Space, a leading incubator for startups, in his video message. "You must shift mindsets and change how you interact with teams and clients."

Hoffman, known as the "godfather of Silicon Valley venture capital," stressed the importance of identifying inherently innovative individuals. "They may be disruptive or even hard to deal with, but supporting them can drive organizational innovation," he said.

"To develop science and technology, we must cultivate innovation culture in Chinese soil with a 'tradition of curiosity'," said Tong Shijun, president of New York University Shanghai.

He advocated combining wonder with concern, blending knowledge pursuit with practical application, and integrating "what people do," "what people have," and "what people are" to harmonize curiosity with Chinese culture.

Global Journal Observatory

ChemSocRev: Home for High-impact, Authoritative Reviews

By Duncan Graham

Duncan Graham. (COURTESY PHOTO)

Chemical Society Reviews (ChemSocRev) is the Royal Society of Chemistry's leading review journal. It publishes high-impact, authoritative and reader-friendly review articles covering topics at the forefront of the chemical sciences.

The journal has a long history — starting as the *Quarterly Review of the Chemical Society* in 1947 and growing into one of the most influential and highest recognized journals in every area of chemistry.

The journal's scope covers all topics in chemistry, and those at the interface of chemistry and other disciplines such as materials science, nanoscience, physics, engineering and biology — giving it reach and influence spanning all the research community.

Bringing together scientists and investigators

All of our reviews are written by experts in their field, who provide their own analysis and insight on developments, trends and future directions. *ChemSocRev* has published many articles by senior researchers, including Nobel laureates such as David MacMillan (2021 Nobel Prize in chemistry), Frances Arnold (2018 Nobel Prize in chemistry) and Sir J. Fraser Stoddart (2016 Nobel Prize in chemistry).

We have also published many high-profile reviews by Chinese scientists, including several reviews which have been cited over 3,000 times.

Moreover, the journal is also very supportive of early career researchers. Every two years we publish an Emerging Investigator issue, highlighting review articles by scientists typically in the first six years of their independent career.

ChemSocRev also supports chemists through its annual Lectureship, an award which recognizes mid- career scientists who have firmly established themselves in their independent careers and continuously publish innovative and pioneering work. Besides such valuable scholarly recognition, an awardee will receive a financial honorarium and an invitation to speak at one or more high-profile international conferences.

Scholarly publication for the community

As editor-in-chief, I am working with the journal's editorial board, comprising eminent scientists worldwide, to set the direction, scope and standards of the journal, ensuring that it represents the needs of the global chemistry community.

The board also plays a very strong role in attracting high quality articles, inviting leading researchers globally to submit review articles. Our board members also assess the articles we publish so that they meet the high standards of quality and importance that our readers expect.

The editorial board has had strong representation from China for many years, from Professor Tian Zhongqun from Xiamen University and Bu Xianhe from Nankai University, both academicians of the Chinese Academy of Sciences. Their contributions as associate editors have improved the journal's representativeness of research excellence in China and its real international impact.

A long-term member of the editorial board, Professor Tian is a very strong advocate both for the journal and for Chinese authors. We have worked with him for more than 10 years and I'm so glad to co- author a review with him and others very recently in this journal, to provide a half-century historical perspective on surface- enhanced Raman spectroscopy.

'Valuable guides' for researchers

ChemSocRev publishes two main article types: Review Articles and Tutorial Reviews. While Review Articles give a very high- quality state- of- the-art account of the subject matter, Tutorial Reviews are particularly important because they are written to be accessible to researchers from other disciplines, or those at senior undergraduate level. All Tutorial Reviews include several key learning points, which give readers the main points to take away from the article.

Last but not least, without the strong support from our readers, authors and reviewers, *ChemSocRev* could not be at the forefront of the chemical sciences. We are deeply honored and grateful for such trust. We will continue to work with chemical scientists across the globe to advance the chemical sciences and to make our world a better place for all.

The author is the editor-in-chief of ChemSocRev and a professor at the University of Strathclyde, the UK.

Journal Review

ChemSocRev is the Royal Society of Chemistry's most influential review journal, distinguished by its commitment to "high- impact, authoritative" reviews. Through its unique positioning and rigorous quality standards, *ChemSocRev* leads knowledge dissemination and scholarly discourse in the chemical sciences.

Its reviews have to be of the highest quality and international impact, and the authors are asked to incorporate independent analysis and forward- looking perspectives into their reviews rather than merely summarize or list existing literatures.

A defining feature of *ChemSocRev* is its interdisciplinary nature, which ensures that each review has both depth in discussing cutting-edge developments of a field and breadth in connecting concepts across various disciplines. Therefore, researchers globally can rely on *ChemSocRev* as a hub to build knowledge and an incubator to foster transformative ideas.

I particularly recommend the journal's innovative "Tutorial Review" articles that go beyond the traditional review paradigms. Primarily intended for students and investigators from other areas, these reviews demand authors perform a dual academic role: they are both experts who systematically construct knowledge around a core scientific question, and tutors explaining complicated theories and key experimental setups in simple language.

——*Tian Zhongqun, an academician of Chinese Academy of Sciences, and a professor of Chemistry.*