

The Underlying Logic of New Mathematics-Artificial Intelligence—Review of Wang Yiping's Team's Circular Logarithm Theory (Part 1)

China Circular Logarithm Team Review Group

In February 2026, the Journal of American Science (JAS) and American Association of Journals (AAJ) published in English and Chinese respectively the article "The Integration of Classical Analysis and Logical Analysis—Demonstrating the Analysis of High-Order Mathematical Equations and High-Density Information Transmission" by Wang Yiping, founder of China's logarithm circle, along with its cover photo.

Deepseek's AI-powered intelligent reporting system assessed the content as comprehensive and the wording as precise.

Professor Wang Yiping and his research team from China have made a significant breakthrough in the interdisciplinary field of mathematics and artificial intelligence, successfully overcoming key technical challenges in high-density information transmission. By innovatively combining complex mathematical theories with advanced artificial intelligence algorithms, the study has significantly improved the efficiency and stability of information transmission, laying an important foundation for the future development of communication technologies. This achievement not only demonstrates the outstanding capabilities of China's scientific research teams in cutting-edge technology fields, but also provides new ideas and methods for global information science and intelligent system research.



Deepseek's AI intelligence report, described in just 171 characters, along with the subsequent follow-up coverage by a prominent journalist, sparked intense reactions both domestically and internationally. Numerous websites reposted the article, with some authoritative research institutions quickly removing it after publication. Others remained skeptical, questioning whether it was government-funded or civilian research. Some outright rejected it, while others boldly expressed support. For instance, People's Daily's "Attitude Technology" published articles on logarithmic circles three times—May 2021, April 2023, and March 2026—reflecting the fierce debate between the old and new "mathematics-AI" paradigms.

In March this year, China concluded the "Two Sessions" and formulated the "15th Five-Year" national strategic development plan, particularly emphasizing the "independence, autonomy, and innovation" of scientific development and fundamental theories. The National Development and Reform Commission announced: a new round of mega infrastructure projects, with six networks fully under construction. The estimated annual investment scale exceeds 7 trillion yuan. A strategic layout targeting new productive forces is being implemented. Among them are the "computing power network" and "artificial intelligence+". This coincides with the opportune timing for the publication of "The Integration of Classical Analysis and Logical Analysis—Demonstrating the Solution of High-Degree Mathematical Equations and High-Density Information Transmission" by Yuan's logarithmic theory.

The underlying logic we refer to is like the 'rules' of our thinking—it helps us comprehend complex concepts, much like the foundation of a building. Though not immediately apparent, it plays a vital role in supporting our entire thought process. For instance, in programming, this includes the core principles behind data structures, algorithms, and programming languages.

The foundational logic of New Mathematics-AI is rooted in the core of circular logarithm theory: It enhances computational power through mathematical methods while preserving the invariance of physical properties via computer logic $(0/1)^K$ (where $K=+1, \pm 0, -1, \pm 1$). This approach enables high-density information network transmission, fundamentally revolutionizing traditional low-density $(0/1)^K$ transmission. By fundamentally improving computational power, it synergizes with physical performance enhancements to achieve mutually reinforcing results.

The basis of the article shows that Bayesian theory, Einstein's theory of relativity, and Wang Yiping's logarithm are all a set of mathematical theory system, which describe the world with a simple formula of dimensionless logic.

In his seminal work *Ancient and Modern Mathematical Thoughts*, Klein identified two fundamental unresolved challenges in mathematical development. The core proposition asserts that classical mathematics could be infinitely expanded and integrated with set theory (logical mathematics), though constrained by the paradoxes of infinity and axiomatic incompleteness. This pivotal insight became known as the "Klein Conjecture." The solution was ultimately achieved through the dimensionless logical circle (circle number) method.

The concept of "number having positional value" in ancient Chinese mathematics first appeared in the "Mo Jing Jing Xia". The "Mo Jing Jing Xia" mentions: "less than two and more than five", and its "Jing Shuo Xia" further

explains: "Five has one; one has five, ten, two". These contents reflect the early understanding of the concept of positional value, indicating that there was already an understanding of how numbers represented different values in different positions, which is the embryonic form of positional notation. In addition, the oracle bone inscriptions of the Shang Dynasty also contain materials on the decimal positional notation system, which was the simplest calculation tool and the most advanced counting system in the world at that time. Therefore, the "Mo Jing Jing Xia" is the earliest known ancient text to record the concept of "number having positional value". The division of numerical positional values led to significant development in mathematical knowledge, and the establishment of the decimal positional system and the advancement of abacus calculation were the main markers of mathematical progress.

The oracle bone inscriptions of the Shang Dynasty already featured numerical systems including 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, as well as 100,1,000, and 10,000, with the largest number reaching over 20,000. This counting method later evolved into the decimal system with a carry-over rule for tens, which became a revolutionary invention in the fields of numerology and computation. The principle "the method of calculation begins with positional values" was proposed.

In the 17th century, China's Ming Dynasty reached its peak in national strength, science and technology, and mathematics, with mathematics leading the world. Western countries, through missionaries, spread Christianity to China and also brought back Chinese culture, including mathematics, to Europe.

In the 18th century, many mathematicians in Europe were born from missionaries, and the mathematics they established was based on "numerical analysis," making it difficult to claim that it had "no relation whatsoever to China."

Western mathematics has developed two generations of mathematical systems, classical analysis and logical (set theory) analysis, but has not made substantial progress since 1930 when Godel's "incompleteness theorem" was proved (Klein).

The logarithmic circle theory, rooted in resolving the integration of classical analysis and logic (set theory), has extended its interdisciplinary application to artificial intelligence. It introduces the "dual logic (numerical/bit value) code" framework, overcoming the challenges of mechanical interpretable neural network reverse engineering and solving the "high-density information transmission technology" dilemma for robotics and computing. This innovation fundamentally transforms the underlying logic framework and processes of mathematics and AI, significantly enhancing efficiency and stability.

Modern algebra is home to three seminal conjectures: the Goldbach Conjecture, the Four Color Theorem, and Fermat's Last Theorem. This paper presents these conjectures, specifically addressing the flawed argument in Wiles' proof of Fermat's Last Theorem. The original proof claimed that 'ellipses and circles belong to two distinct systems and cannot be interchanged, 'thereby asserting the theorem's validity. Our proof demonstrates that ellipses and circles can indeed be interchanged through circular logarithmic operations, with each step incorporating a 'random self-validation mechanism for error correction.' This refutes the claim that 'Fermat's Last Theorem is invalid,' ultimately leading to the resolution of the BSD Conjecture.

Goldbach's Conjecture states that "the sum of two prime numbers is even, while the sum of three prime numbers is odd." Fundamentally, it explores how symmetry and asymmetry can be balanced and exchanged in even functions. The article demonstrates that the numerical center point cannot be balanced or exchanged, whereas the zero point of the infinite axiom's circular logarithmic value can achieve balanced exchange and decomposition. This establishes a mathematical foundation for solving general solutions of monomials in higher powers.

This article presents a circular logarithm-based proof of the four-color theorem (a quartic equation). The introduction of computers enables "high-density information transmission." Solving the four-color theorem through circular logarithm is straightforward: it involves converting the quartic equation into a circular logarithm to determine the general solution for four elements. However, traditional methods using quartic or cubic equations are symmetric algorithms and thus inapplicable. The challenge lies in the diverse color combinations among the four elements. The circular logarithm provides a $\{4\}^n$ pattern where adjacent edges in graph blocks never repeat colors: $\{1-1, 2-2, 1-3, 3-1, 0-4, 4-0\}$. Each four-element combination forms a basic graph block, and four such blocks constitute a standard layer containing $\{16\}^n$ standard layers with non-repeating adjacent colors. In statistical computations, what if encountering non-standard "basic graph blocks, standard layers, or defective states"? This highlights how traditional mathematical methods, constrained by axiomatic incompleteness, cannot prove the four-color theorem. Computer-based proofs of the four-color theorem lack interpretability.

For instance, in solving the "Continuous CH Problem," mathematicians first identified a third infinite construct set—the dimensionless logical circle (logarithmic circle). This set demonstrates infinite expansion, integrating classical analysis with logical analysis (set theory), while featuring the unique "infinite axioms" of the dimensionless logical circle, including balanced exchange and random self-proofing error correction mechanisms. This breakthrough resolved the challenges of "axiomatic incompleteness" and "infinity," laying the groundwork for solving a series of

century-old mathematical problems centered on "multiplicative combinations and additive combinations."

For instance, in the study of the "Goldbach Conjecture-Riemann Zero Point Conjecture", researchers first discovered that the even terms in the decomposition of any numerical function exhibit "symmetry and asymmetry". Specifically, the balance at both ends of the numerical center point cannot be directly reversed. However, once the balance is converted to the bit-value center point, it becomes reversible. If the bit-value center point is removed, the numerical function returns to an unexchangeable state.

The third infinite construction set of dimensionless logical circle proved the Goldbach conjecture "the sum of two prime numbers is even, the sum of three prime numbers is odd", and the Riemann zero point conjecture bit value center zero point stability and the prime number distribution and the rule of movement of the prime number theorem.

For instance, in solving the "Hodgson Conjecture," the method of bit value and bit value center zero points in bit value logarithm was first applied to effectively eliminate the "remainder term," enabling the expansion of arbitrary functions and spatial forms (including polynomial differential equations) into simple integer forms. Specifically, arbitrary functions and spatial forms are expressed as circular power functions during their transition to circular functions or shapes, a process referred to as "path integration and historical records."

For instance, in solving the "P=NP problem," the first proof using bit-value logarithm and bit-value zero-center method demonstrated that both complex polynomial (NP) and simple polynomial (P) share "isomorphic consistent computation time," meaning they can be converted into a unified computational form. In artificial intelligence algorithms, this approach eliminates the need for traditional iterative methods, significantly reducing computational complexity.

Mathematically speaking, von Neumann algebra is closely related to subfactors and plays a pivotal role in the algebraic processing of quantum predicate logic. It facilitates Turing machine logic information transmission, establishing a "one-to-one" correspondence (where one logical information drives one logical character) to approximate computational inefficiencies in complex programs through iterative methods, ultimately reaching the ceiling of computational power. Beyond physical material advancements enabling high-density information transmission, many researchers aspire to enhance algorithmic concepts through mathematical foundations. However, no viable breakthrough has been identified to date.

The four-color theorem introduces computer systems with 2^{2n} and 4^{2n} configurations, respectively, termed "2-qubit" and "4-qubit" systems. While the information transmission capacity of 2^{10} remains at "1", the 4^{10} configuration achieves a 1048-fold increase. This advancement results in merely 10-20% higher power consumption and 80% reduced economic costs. Why not embrace this innovation? It demonstrates that beyond physical capabilities, mathematical enhancements can significantly boost information transmission capacity without altering existing information logic, thereby revolutionizing fundamental logical frameworks and manufacturing processes.

(A) 、New Mathematics-The Proposal of Circular Logarithm

The logarithmic circle (dimensionless logical circle) represents an advancement in quantum algebra, innovatively proposing "(distinct, asymmetric) multi-quantum group combinations: extracting 'characteristic modes' (geometric/arithmetic averages) and the unique 'infinite axiom' random self-validation mechanism of the dimensionless logical circle. This achieves high-density information transmission from existing" one-to-one "to" one-to-many "(where a single logical information drives multiple logical characters) without altering the fundamental nature of (0/1) logical information transmission. It fundamentally enhances the efficiency and stability of artificial intelligence. Internationally, it has been defined as the " Wang Yiping Theory, "" New Mathematics, "and" New Underlying Logical Framework and Process for Artificial Intelligence."

The various reaction information related to the logarithm of the circle are summarized as follows:

- (1) Why Does the Principle of Relativity Become the Cross-Science Field of Mathematics-Artificial Intelligence?
- (2) What are the specific methods employed?
- (3) What key mathematical-AI challenges have been addressed?
- (4) What are the positive economic implications?

The team at Yuan Duoshi and its founder Wang Yiping demonstrated that traditional Cardan formulas and spherical coordinates can only handle symmetric solutions of cubic equations (defined as 'symmetric distribution with the numerical center point repeated at one root element and two root elements on either side of the center'), which imposes limitations on their application.



For the first time, a dimensionless circular algebraic method was employed to successfully address the "general solution of monomial quadratic/triomial equations" (including symmetric and asymmetric distributions with numerical centers between one and two root elements), thereby resolving a complex problem in three-dimensional complex analysis. This demonstrates that "traditional algebraic methods (including dynamic polynomial calculus) have significant limitations in equation computation." The method also solved the "general solution of monomial quartic, quintic, heptic, and nonic equations."

Furthermore, the third infinite construction set is discovered in the continuous CH problem, which is called dimensionless logic circle (circle logarithm) and the special infinite axiom balance exchange combination decomposition and random self-verification mechanism of error correction, a series of century mathematical problems are solved and the theorem is composed, and the theory of "Wang Yiping circle logarithm" is established. Contemporary mathematics has spawned numerous schools, algorithms, and formulas rooted in numerical analysis. The fundamental solution (asymmetry analysis) of a single-variable cubic equation remains incompletely understood, compounded by the axiomatic incompleteness of numerical analysis. Algebra (including quantum algebra) remains confined to quadratic equations, with analytical scope limited to binary operations (including calculus-based dynamic control). Artificial intelligence algorithms similarly stagnate at the 2^n quantum computing level. In essence, current mathematical-artificial intelligence systems are not yet prepared to transcend the binary-to-trinary 3^{2n} phase into the triadic state of 'three giving birth to all things.'

(B) 、 Technical background

Here, we explore why the core concept of logarithmic circle adopts the principle of relativity, forming a dimensionless logical circle.

The "dimensionless logic circle" is a kind of "dimensionless system engineering theory" which is based on the "principle of relativity" of "multiplication combination unit (geometric mean) divided by addition combination unit (arithmetic mean)" of "group combination".

They originated from Galileo's principle of relativity in 1626, Bayes' theorem in 1763, Einstein's theory of relativity in 1905, and Wang Yiping's logarithm in the early 21st century. All these theories describe the world through a simple "one-inch-long formula," becoming the third infinite construction set beyond classical analysis and logic (set theory).

Traditional "classical analysis" and "logical analysis (set theory)" cannot resolve fundamental mathematical issues and are not widely accepted. The conventional Quantum Algebra, which employs quantum bit computation, is based on the traditional "quadratic equation" (binary) algorithm by von Neumann-Turing that assumes "discrete-symmetry." This approach fails to meet the zero-error requirements of neural networks, which demand infinite computational power.

There is an urgent need for new algorithms and theories in mathematics, physics, and artificial intelligence, making the emergence of dimensionless logical circles (logarithmic circles) an inevitable historical development.

The logarithm of the circle (dimensionless logical circle) is an extension of Quantum Algebra, with the unified formula:

$$W=(1-\eta^2)^K W_0; (1-\eta^2)^K = \{-1, 0, +1\};$$

Where: W denotes any unknown event (geometric mean); known events; W_0 characteristic modulus (arithmetic mean $(1-\eta^2)^K$ ($K=1, 0, 1, 1$)). The logarithm of the circle can be infinitely expanded. If any two of the above three elements are known, mathematical-physical-artificial intelligence domain operations can be performed.

The foundational framework of new mathematics and artificial intelligence: By adopting the concept of dimensionless logical circles (logarithmic circles), this system preserves the inherent nature of mathematics and AI while maintaining the "infinite true propositions." Through variations in properties within the $\{0, 1\}$ range of dimensionless logical circles and a randomized self-validation mechanism, it transforms these into "infinite inverse propositions." This approach overcomes the challenges of "infinite" and "axiomatic incompleteness," establishing an independent mathematical system characterized by autonomy, "infinite axioms," and a randomized self-validation mechanism for truth and falsehood.

(C) 、 Circular Logarithm Formula and Gegenbauer Formula

China's logarithm theory was published in an international peer-reviewed journal on February 19, 2026. Shortly after, in early March 2026, another international peer-reviewed journal published a Gegenbauer polynomial, generating significant publicity. It was described as an "elegant solution that captivated physicists."

In order to avoid the contradiction of "priority", the difference between the two formulas is analyzed with an objective, fair and scientific attitude.

(1) The circle logarithm formula: The orthogonal polynomial cluster that can be randomly inverse calculated on the definition of "Newton polynomial" $\{-1, 0, +1\}$ enters the dimensionless logical circle $(1-\eta^2)^K$ in three-dimensional

space.

"Wang Yiping's Circular Logarithm" was granted China national intellectual property protection in July 2023. See the "Work Registration Certificate". This article was published in an international formal journal on February 19,2026.

formula:
$$W=(1-\eta^2)^K W_0;$$
number field:
$$(1-\eta^2)^K=\{-1,0,+1\}^K;$$

Formula computation: Given boundary functions and characteristic mode averages, the Newtonian polynomial cluster satisfies the definition of an orthogonal polynomial cluster defined on $\{-1,0,+1\}^K$. This method converts the problem into a circular logarithm $(1-\eta^2)^K$, numerical/bit values, and position center zero points, eliminating traditional iterative methods to achieve "one-step" computation. It significantly reduces operational procedures and enables mechanical interpretable neural network reverse engineering. This approach can be widely applied in the "mathematics-physics-biology-artificial intelligence" domain under a new mathematical framework.

Circular logarithm: On February 20,2026, SeepseekR4 identified the 'deep mathematical structure'.

(2) , Gegenbauer formula: the Gegenbauer polynomial satisfies the definition of the orthogonal polynomial cluster on $\{-1,+1\}$ (currently not reversible calculation), and enters the dimensionless logical circle $(1-t^2)$ in two-dimensional space.

The Gegenbauer formula was published in an international peer-reviewed journal on March 5, 2026, 14 days later than the logarithm of pi formula.

formula:
$$W(t)=(1-t^2)f_N(t)$$
number field:
$$(1-t^2)=\{-1,+1\};$$

During the derivation of the formula, the instability of the computational process arises due to the lack of explicit treatment of the central point. Currently, it remains applicable only within the localized scope of "physics," such as neural networks and quantum computing, with limited applications. It is anticipated to see widespread adoption in mathematics, artificial intelligence, and biology.

The Gegenbauer formula: On March 5, 2026, Gemini identified a deep mathematical structure.

The two formulas share the same mathematical model. What are the key features of their calculations?

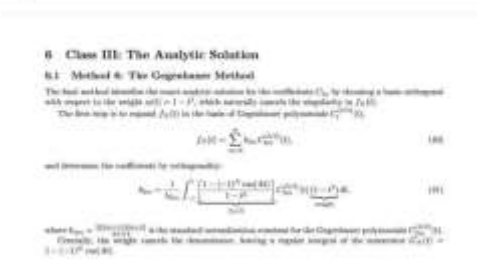
The circular logarithm formula requires no mathematical modeling, operating through "operations independent of mathematical models and specific (mass) elements." Given any two of the three elements—boundary function, arithmetic mean, or circular logarithm—zero-error computation can be achieved. The system employs "dual logic (numerical/bit value) codes" that realize "infinite axiomatization" and mutual inversion, enabling balanced exchange and a randomized self-validation error-correction mechanism. This one-step approach achieves zero error, forming a new mathematical framework. The $(1-\eta^2)^K$ function on computers is highly powerful, consistently meeting the needs of artificial intelligence for multi-ary "high-density information transmission," fundamentally enhancing computational power. Zero-error high-performance algorithms can reach any cosmic scale.

The Gegenbauer formula utilizes the Gegenbauer polynomial (satisfying certain conditions) and applies the Weida theorem iteration method (dimensionality reduction) to approximate binary values of $(1-t^2)$ through 31 iterative steps. However, the $(1-t^2)$ function lacks sufficient computational power, currently meeting the requirements for binary low-density information transmission in AI computers.

China welcomes the Gegenbauer formula team and domestic and international mathematics-artificial intelligence workers and scholars for exchange and cooperation, achieving win-win results.

(D) Computing Power and Economic Benefits

High algorithms and high computing power can significantly reduce memory space requirements. The combination of data bytes in memory generates distinct computational capabilities. By maintaining (0/1)K invariance and selecting different byte combinations, high-density information transmission is achieved. Fundamental algorithmic reforms enhance computational efficiency. In contrast, traditional computers employ conventional planar



也是此次AI给出的王者之选。



最优雅的解法，让物理学家心动了

格根鲍尔多项式， Gegenbauer polynomials， 记作 $C_\lambda^{(\lambda)}$ (3/2)(t))。

这是一种定义在[-1,1]上的正交多项式族，而它的权函数 $w(t) = 1 - t^2$ ，恰好能自然地消去被积函数的奇点。

这不是凑巧，这是Gemini识别出的深层数学结构。

data processing (binary) with byte-level search operations.

Circumference logarithmic computer: This system employs multi-dimensional byte search for data processing in three-dimensional data processing (multi-ary byte). It utilizes different dimensional byte transmissions, expands optical disk storage quantum through transistor circuit integration in existing computers, and achieves varying quantum bit computational power.

(2-bit binary) $\{2\}^{10}=1.0\times 10^3$, with a character processing capacity of "1", termed $\{2\}^{2n}$ -bit;

(3-bit ternary) $\{3\}^{10}=5.9\times 10^4$, a 5.9-fold increase in character processing capacity, termed $\{3\}^{2n}$ -bit;

(5-bit quinary) $\{5\}^{10}=9.76\times 10^6$, a 953-fold increase, termed $\{5\}^{2n}$ -bit;

(7-bit heptary) $\{7\}^{10}=2.82\times 10^8$, a 27,500-fold increase, termed $\{7\}^{2n}$ -bit;

(9-bit nonary) $\{9\}^{10}=3.34\times 10^9$, a 33,400-fold increase, termed $\{9\}^{2n}$ -bit;...

Currently, (binary 2-bits) can reach up to 255 bits. This includes the "Jiuzhang" and "Zuchongzhi" developed by the team of Pan Jianwei from China. The "Jiuzhang-3" has been launched, with the number of photons increased from 26 to 255, and the speed of processing specific problems has already surpassed traditional supercomputers by 1000 quadrillion times = 1×10^{23} . In other words, without altering the existing (0/1) current chip architecture, the level has already reached 128-256, and their potential (with slight modifications, as different base quantum bits require different circuit designs) is sufficient to handle logical circular quantum computers. This demonstrates that adopting a dimensionless logical circular virtual world for "high-density information transmission" is a powerful solution for algorithmic reform.

$$\{2\}^{(255)}=\{9\}^{(26)}=111.5\times 10^{(26)} \text{ (9-bits)}$$

The current data processing center operates at the $\{2\}^{(255)}$ qubit level, which requires substantial power consumption, material usage, and high operational costs. Comparative analysis of computational power demonstrates that the $\{9\}^{(26)}$ qubit level achieves 80-95% reduction in energy and material consumption under equivalent computational capacity. This advancement enables informatization, miniaturization, environmental sustainability, cost efficiency, and shortened processing time.

The analogy of dimensionless logic circular reasoning illustrates information transmission density: It resembles fishing in a vast river. Traditional computers (binary) use rods to cast their lines. Even after refining numerous algorithms—like updating rods with different designs and performance metrics—they still rely on low-density, one-to-one information transmission.

The dual-logic circular code system in the circular logarithm computer (multi-precision) functions like a fish net, allowing users to select configurations with adjustable mesh sizes (performance) and product codes (xxxx). Each mesh can capture multiple bit-computing power units of varying specifications, ensuring stable high-density information transmission in the computer's one-to-many architecture.

(E) 、 Prospects for development

(1) 、 He pioneered the dimensionless logical circular reasoning in mathematics: As documented by American mathematician Morris Klein in *Ancient and Modern Mathematical Thoughts*, "The entire development of mathematics after 1930 still faces two unsolved major problems: proving the integration of unrestricted classical analysis with set theory, and establishing (new) mathematics based on rigorous intuition, or determining the limits of such approaches. The root of these difficulties lies in the infinity used in infinite sets and infinite procedures."

The dimensionless logical circle (logarithm of circle) clearly establishes the existence of a new mathematical structure, the third infinite construction set, and successfully solves the "fusion of classical analysis and set theory" and a large number of century mathematical problems, thus realizing the great unification of mathematics.

The "dimensionless logical circle" described here is a mathematical model that does not involve specific (mass) elements within the $\{0,1\}$ interval. It demonstrates the distinction and unity between central points and zero points, ensuring the function achieves "zero-error" analysis and synthesis as a universal rule. Mathematics, physics, and artificial intelligence are poised to collectively realize the dimensionless logical circle operation method.

(2) 、 This pioneering work established a unified dimensionless logical circular operation framework for both macroscopic and microscopic realms in physics. In December 2024, media reports highlighted the discovery of "neutrinos" by physicists, with mathematician Tao Zhixuan and his colleagues proposing a groundbreaking "neutrino calculation formula" hailed as a textbook-level achievement. The circular logarithmic analysis reveals that the essence lies in calculating "a special case of cubic equation symmetry (not a general solution)." The "neutrino asymmetry" phenomenon, characterized by random equilibrium transitions, was formally described in the computational formula published in *The American Journal of Science* (P1-204,2024.12).

For example, in April 2015, the paper "On Point Quantum Gravity Field: Electromagnetic Field and Relativity Construction" was published in the journal "Ge Wu" based on the principle of circular logarithm.

For instance, in February 2026, media reported that GPT-5.2 corrected 40 years of physics errors by spending 12 hours proving and deducing how to simplify numerous complex formulas of 'many-body scattering amplitude' in particle physics into a single new and straightforward formula.

Regarding this achievement, Yuan Duoshu remarked: Currently, there is no satisfactory solution in the world of mathematics and physics for the computation of multi-particle combinations (mathematically termed higher-order equations). The application of iterative methods involves complex procedures, relying on approximate calculations. Perhaps better methods may emerge in the future.

The logarithmic circle theory for higher-order equations relies on the 'infinite axiom' to correspond to simple formulas and procedures, enabling direct, error-free solutions in a single step. Consequently, it is concluded that the new physical formulas derived by GPT-5.2 are likely within the scope of 'dimensionless logical circle operations.' Mathematical physics is expected to achieve a unified implementation of dimensionless logical circle operations.

(3) pioneered a new foundational logic architecture and process framework rules for artificial intelligence. The high-density information transmission has dramatically enhanced computational power, enabling the creation of computers with varying specifications and standards tailored to diverse user needs. The computational foundation of "multi-ary" byte systems has evolved beyond the singular "binary" byte, achieving a fundamental transformation in computing power (which can be integrated with physical material properties). This advancement has effectively expanded computer types, adapting to more emerging industries and creating vast opportunities for artificial intelligence. The core innovations in AI, robotics, and computing efficiency, performance, and stability have driven the realization of miniaturization, intelligence, cost-effectiveness, and environmental sustainability. Embodied AI is poised for widespread application.

The China logarithm team has overturned the traditional mathematical foundation, underlying logic architecture, and chip programming rules with a concise and perfect logarithm formula, ushering in a new era of unified mathematics and potentially leading a new trend in global scientific reform. (End)