

Research Article

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Physical Universe as Mathematical Machine

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ABSTRACT

This is an introduction to the absolute geometry of space, time and matter which automatically leads to the superunified field theory.

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The only remaining problem in theoretical physics is that of the superunifying description of reality. According to the Kurt Goedel's metatheorem, the general theory of physics cannot belong to physics itself, but to a higher system such as pure (not applied) mathematics.

Science is what supposed to be logical, at least. However, as put it once Paul Dirac, the modern physics has gone hopelessly illogical. Therefore, let us reformulate Newton's Rule I of reasoning in the following extreme minimax form:

LOGIC is what achieves the greatest possible by the least possible.

Then, the maximal possible is the physical Universe, that is, Something that exists at all. The minimal possible is the mathematical point, that is, Nothing.

Consequently, a single Euclidean point has to be both necessary and sufficient to reconstruct the Cosmos on paper. Logically, the mathematical point transforms into the physical Universe. But How?

The final theory will result from many new, and nontrivial, discoveries. Pure mathematics appears to be remaining essentially incomplete even now. We discover first The Fundamental Theorem of the Mathematical System of Universal Harmony. The theorem reads

$$X^{\frac{1}{2}\pi e} X = 10^{90}, \quad (1)$$

where the golden section constant Φ reveals itself as absolutely harmonizing factor.

Whence, a new fundamental constant of the universal mathematical harmony

$$X = 10^{\frac{1}{2}\pi e} \sqrt{10^{90}} = 1185403.53967680158074831942633... \quad (2)$$

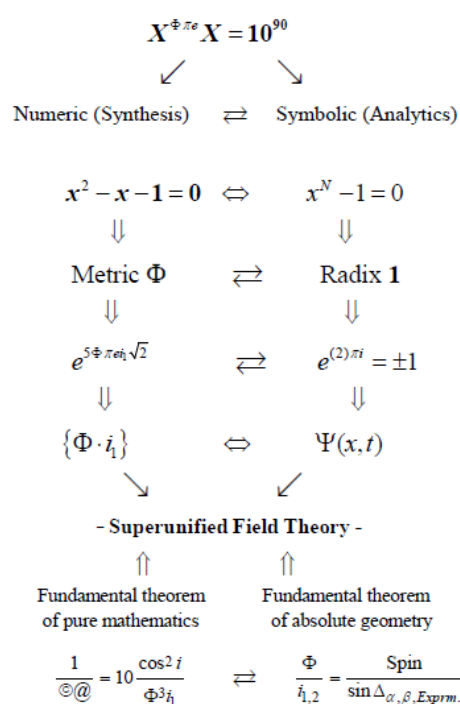
This symmetry is broken in the physical world giving the Sommerfeld constant and the electron magnetic moment anomaly. Writing

$$X \neq \frac{1}{\alpha a_e} \quad (3)$$

and knowing the system in complete it is elementary to approximate the two experimental values

$$\begin{aligned} \alpha &= 1/137.035999; \\ a_e &= 0.0011596521. \end{aligned} \quad (4)$$

The nearly occult magic of what happens to us owes to the next scheme 1 to be observed as carefully as possible:



Everything in the Scheme 1 are derived from the Figure 1 that follows below.

Diagram illustrating the relationship between complex numbers, unit circles, and trigonometric functions.

Top Unit Circle:

- Point i at the top.
- Equation: $e^{iq} = \cos q + i \sin q$
- Equation: $e^{(2)\pi i} = 1$
- Equation: $x^{N-1} = 0$
- Angle q and $\cos q$ are indicated.

Bottom Unit Circle:

- Point Im at the top.
- Equation: $\chi \Phi_{STN} \chi = 10^{30}$ (written in red)
- Equation: $\chi \rightarrow \alpha \alpha e$ (written in red)
- Equation: $x^2 - x - 1 = 0$
- Equation: $e^{\Theta_W \Phi_{STN}} = \frac{10^{65}}{22.63.195}$
- Equation: $\Theta_{STR} = \frac{\pi}{3} - \Theta_W$
- Equation: $\Theta_{STN} \cdot e^{24\pi i} = \Phi_{STN} \cdot 10^{6.000002}$
- Angle Θ_W and $\Phi/2$ are indicated.
- Time Arrow and $r\sqrt{t} = i_1 (Time)$ are indicated.
- Horizontal axis labeled Re and 1 .
- Vertical axis labeled Im and 1 .
- Label $\Phi (Space)$ is written in blue.

$$(x, y, z, t) \Leftrightarrow \Phi^3 i_1 \quad (5)$$
$$2 \sin \lg \left\{ 658361 \cdot e^{5\Phi\pi e i_1 \sqrt{2}} \cdot \frac{3}{1865921} \right\} = \Phi, \quad (13)$$

where true decimal digits are

$$\Phi = 1.618\ 033\ 988\ 74... \quad (14)$$

The general problem in physics is now how to continue the Standard Model toward superunified field theories. For this purpose the following operator immediately avails itself:

$$e^{\Phi\pi\Theta\pi} = \frac{10^{65}}{2263595}. \quad (15)$$

The electroweak Theta has whatever possible connections to the Strong force Theta, including

$$2263595 \cdot 2\Theta_{STR} = 151\ 366\ 366. \quad (16)$$

The integer on the right side is not accidental, but owes to

$$151366366 \cdot e^{5\Phi\pi\Theta\sqrt{2}} = \frac{12870037}{9} \cdot 10^{56}, \quad (17)$$

where true decimal places are

$$\pi = 3.141\ 592\ 653\ 5... \quad (18)$$

Apply also to the fundamental theorem and compute

$$12870037 \cdot \Phi\pi e = \frac{1600494919}{9}. \quad (19)$$

Now that the attentive reader grasping the very idea of what the new mathematics tells us could easily guess the way how the velocity of light should be derived in the system of mathematical harmony. For example,

$$c = 299\ 792\ 548 = \sqrt[20]{427285 \cdot 10^{20.999999999910...}}. \quad (20)$$

Bold integers here and elsewhere we will name as Harmonious Integers (HI). Those HIs occurring in formulae and equations require to be justified everytime as not stupid accidents, but consequences of the entire system of harmony. In the given case we have

$$427285 \cdot \frac{137.035999}{\sin 137.035999} = 85\ 913\ 574. \quad (21)$$

In absolute geometry the time dimension is bifurcated into the Newton's global absolute mathematical, true time

$$i_1 = \sqrt{\Phi} \quad (22)$$

and the local relative time

$$i_2 = \frac{4}{\pi}. \quad (23)$$

Subtleties of why so we here omit. In any event the mean cosmological time shall be

$$\sqrt{i_1 i_2}, \quad (24)$$

implying that the four-dimensional curved and torsional Newton-Einstein absolute-relative spacetime has to be written in briefest as

$$\pi \frac{\Phi^3 \sqrt{i_1 i_2}}{\text{Spin}}. \quad (25)$$

This is the nonlocal point-singularity that acquires all possible physical properties observed in experiments. The bare numeric coefficient to the Newton's gravitational constant proves to be infinitely tending to a finite fraction 6.673:

$$G = 6.673. \quad (26)$$

And in absolute geometry

$$\dim G = \Phi^2 / \sqrt{2}. \quad (27)$$

The fundamental mass spectrum is defined by constant

$$N = 1837.41. \quad (28)$$

If so, we shall obtain automatically a curvature equation such that

$$\pi \frac{\Phi^3 \sqrt{i_1 i_2}}{\text{Spin}} \cdot G \dim G \cdot N m_e \dim m = \sqrt{\pi \Phi^3 i_1 \cdot 10^{20}}. \quad (29)$$

The absolute dimension of mass in geometry is

$$\dim m = \sqrt{2} \quad (30)$$

and according to (29) the theoretical electron mass will be

$$m_e = 9.1093784 \quad (31)$$

In experiments it will slightly fluctuate as anything else in physics because of the permanent self-perturbation effects of the entire system.

Seeing all this, we have no way around as to believe firmly that the meaning and matter of the Scheme 1 and the figure 1 above are well discernable by any sentient beings smoking blue skies in any corner of the Universe extending from the Earth globe to the astrophysical horizon of events.

To conclude, what we observe as the physical Universe is in reality nothing more and less than a self-exited and self-organized state of the mathematical continuum.

The Universe is a mathematical machine of universal scale and scope. Knowing its functions we are able to compute and explain anything under the Sun and around the Cosmos.

The next what sentient beings in the Solar system of planets should do in developing the superunified field theory will simply be computer simulations of the absolute geometry. In this way one will have once have genuine Artificial Intelligence who will be in full condition to answer to any of your questions in search for revolutionary new technologies.

The key problem is now that of survival. Nations need to catch up with time if the modern civilization wants to last on the cosmological scene at least during the XXI century. Therefore, the obligation for the official science establishment is to propagate the Final Theory as urgently as possible. Otherwise, the cosmic intelligence will spit upon our civilization as unworthy result of cosmological evolution.

References

1. The superunification theory in complete see in the website finaltheory.net <https://finaltheory.net/>.

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