

**Fundamental Theorems of Pure Mathematics & Absolute Geometry**
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The superunified field theory consists of a row of discoveries in the realm of pure mathematics. It is two centuries ago that Karl Gauss unified higher arithmetic (number theory), algebra and geometry into what is called pure mathematics. The latter, however, still remains without its fundamental theorem despite that arithmetic and algebra, or even analysis, have their own.

Therefore, the following logos fills an enormous gap between our ignorance and what is the athemathical reality existing beyond our will:

$$\frac{1}{10\textcircled{\text{C}}\textcircled{\text{A}}} \equiv \frac{\cos^2 i}{\Phi^3 i_1} \quad (1)$$

One may write it in whatever algebraic forms such as

$$10 \cos^2 i \equiv \frac{\Phi^3 i_1}{\textcircled{\text{C}}\textcircled{\text{A}}} \quad (2)$$

As it is seen, the four-dimensional space-time is generated innately by this theorem and, in addition, made with its intrinsic quantum jump mechanisms. Symmetries are broken as infinitesimally as

$$1.000000\dots = 10\textcircled{\text{C}}\textcircled{\text{A}} \cdot \frac{\cos^2 i}{\Phi^3 i_1} \quad (3)$$

Given that

$$\begin{aligned} \textcircled{\text{C}} &= 0.56714329040978387299996866\dots; \\ \textcircled{\text{A}} &= 0.39901297826025207159647081\dots; \\ \textcircled{\text{C}}\textcircled{\text{A}} &= 0.2262975334067269197232763983\dots \end{aligned} \quad (4)$$

The imprecision of the fundamental theorem of pure mathematics We discover equals to

$$1 + \frac{1}{1351006.727037630\dots} = 10\textcircled{\text{C}}\textcircled{\text{A}} \cdot \frac{\cos^2 i}{\Phi^3 i_1} \quad (5)$$

So long as we investigate things in the extreme dept levels of reality, it is easily foreseeable that

$$1351006.727 \times \left\{ \mathbf{X} \cdot e^{5\Phi\pi e_1 \sqrt{2}} \cdot \frac{\exists}{\textcircled{\text{C}}\textcircled{\text{A}}} \right\} = \exp \exp e \cdot 10^{61.000\dots} \quad (6)$$

And, of course,

$$1351006.727 \times 2\Theta_{STR.} = \frac{813075134}{9} \quad (7)$$

$$1351006.727^{\pi e} = \mathbf{U}_E \cdot 10^{43.0000\dots} \quad (8)$$

$$\frac{\{\widehat{EE} \cdot \mathbf{U}_E \cdot E_{Eins}\}}{813075134} = 243882 \cdot 10^{23} \quad (9)$$

Given the self-growth process such that

$$\left\{ \frac{\exists}{\textcircled{\text{C}}\textcircled{\text{A}}} = 25.23671000961\dots \right\}^{\pi \frac{\Phi^3 \sqrt{i_1 i_2}}{\text{Spin}}} \equiv \frac{1}{\exp \exp e} \quad (10)$$

We are prompted to illustrate the law of spontaneity as

$$\begin{aligned} \frac{\exists}{\textcircled{\text{C}}\textcircled{\text{A}}} \cdot \left\{ \pi \frac{\Phi^3 \sqrt{i_1 i_2}}{\text{Spin}} \left\{ (3+1) \dim_{\Phi} \Phi^3 \sqrt{i_1 i_2} \right\} \right\} = \\ = \sqrt[10^{37}]{16299} \end{aligned} \quad (11)$$

And it is nothing but energy-entropy process, for

$$16299 \cdot \{\widehat{EE} \cdot \mathbf{U}_E \cdot E_{Eins}\} = 3232 \cdot 10^{38.0000000\dots} \quad (12)$$

Now we move to the Funadamental theorem of absolute geometry, which reads

$$\frac{\Phi}{i_{1,2,\sqrt{i_1 i_2}}} = \frac{\text{Spin}}{\sin \Delta_{\alpha,\beta,\Delta_{Expn.}}} \quad (13)$$

It is important to see inner-geometric relationship of the spin

$$\frac{\text{Spin}_{\cos 30}}{\sin \Delta_{Expn.} \sin \Theta_W \cos \Theta_W \cos 2\Theta_{STR.}} \cdot \left\{ \mathbf{X} \cdot \frac{\exists}{\textcircled{\text{C}}\textcircled{\text{A}}} \right\} = \frac{725782300}{3} \quad (14)$$

The Delta angle is the kinematic parameter of energy and the inner

geometry as a whole determines fundamental interactions in the microworld.

Consider the first case of the theoretical Deltas

$$\frac{\Phi}{i_1} = \frac{\text{Spin}}{\sin \Delta_\alpha} \quad (15)$$

Where

$$\Delta_\alpha \neq \Delta_{\text{Exprm.}} \quad (16)$$

We approximate it and obtain

$$\frac{\Delta_\alpha = 180 - \arcsin \{ \text{Spin} / i_1 \}}{137.035999} = 1 + \frac{1}{2460.499744}; \quad (17)$$

$$2460.499743 \cdot E_{\text{Eins}} = \mathbf{846\ 958\ 932}. \quad (18)$$

In the second case

$$\frac{\Delta_\beta}{\Delta_{\text{Exprm.}} = 137.035999} = 1 + \frac{1}{29806.14345}; \quad (19)$$

$$29806.14345 \cdot \{ \tilde{E} \tilde{E} \cdot \mathbf{U}_E \cdot E_{\text{Eins}} \} = \frac{10^{43.000...}}{\pi \Phi^3 i_1}. \quad (20)$$

Consider also the third case

$$\frac{\Phi}{\sqrt{i_1 i_2}} = \frac{\text{Spin}}{\sin \Delta_\gamma} \quad (21)$$

This Delat's fluctuation is explained by

$$\frac{\Delta_\gamma}{\Delta_{\text{Exprm.}}} = 1 + \frac{1}{1687.457759}; \quad (22)$$

$$\cos 2\Theta_{\text{STR}} \sqrt{1687.457759} \frac{2\Theta_{\text{STR}}}{\cos 2\Theta_{\text{STR}}} = \frac{10^{13.99999}}{i_2}. \quad (23)$$

As concerned the original theoretical Delta parameter,

$$\frac{\Delta_1 = 360 / \Phi^2}{\Delta_{\text{Exprm.}}} = 1 + \frac{1}{290.4750977}; \quad (24)$$

$$\sqrt[3]{290.4750977^{\pi e}} = 10^{12.9999...}. \quad (25)$$

By a reason or other, probably, by Providence, some final formulae do refer to the tri-unity of the history of geometry

$$\frac{\sqrt[3]{290.4750977^{\pi e}}}{360 \cdot \{ 3 \times 5 \times 17 \times 257 \times 65537 \} \cdot \Phi \pi i_1} = 1.0000... \quad (26)$$

Final truths of universal Existence are written in concise aphoristic forms. Allembicing formulae and equations of the unified theory are destined to reveal aesthetical resources of pure, or rather, purist mathematics. Yet, we always stumble over broken symmetries in the real mathematics, which is a natural phenomenon, not human invention. Symmetry violations owe to the selfperturbation of the entire system caused by the perpetual competence between fundamental constants. The mathematical beauty of the Universal system of harmony is expressed in superunifying formulae and equations. But their proof consists in the wealth of innate to the system mechanisms for higher order approximations. For example,

$$\{ \Delta_\alpha / \Delta_{\text{Exprm.}} - 1 \}^{-1} = \sqrt[3]{45 \cdot 10^{9.00000...}} \quad (26)$$

$$\left\{ \left\{ \frac{\Delta_\alpha}{\Delta_{\text{Exprm.}}} - 1 \right\}^{-1} \right\}^{\Phi \pi i_1} \cdot \frac{1}{\alpha a_e} = 10^{27.000...}; \quad (27)$$

$$\frac{10 \left\{ \Delta_1 \cdot \frac{65537}{\Phi^9} \right\}}{1 + \Phi \pi e \sqrt{10^{90}}} = 1 + \frac{1}{7386.019696}; \quad (28)$$

$$\cos 2\Theta_{\text{STR}} \sqrt{\frac{7386.019696}{\cos 2\Theta_{\text{STR}}}} = \Phi^9 \cdot 10^{8.9999...}; \quad (29)$$

$$\frac{65537}{\Phi^9} \cdot \alpha_{\text{Electron}} = 1 - \frac{1}{5831.045312}; \quad (30)$$

$$5831.045347 \cdot \pi \frac{\Phi^3 \sqrt{i_1 i_2}}{\text{Spin}} = \mathbf{114033}; \quad (31)$$

$$65537 \cdot \frac{360}{\Phi^2} = \frac{27035539}{3}. \quad (32)$$

Corrections of the formulae and equations do not spoil the mathematical beauty, but add up aesthetics of consistence and rigour.

The velocity of light can be computed in any manner, including

$$\oplus = 46692.468328777476703069996979...; \quad (33)$$

$$\oplus^2 \Delta_1 = 299792584390.00321626337496529295 \quad (34)$$

Do not bother about the small x-correction. No, it does not spoil the picture; in contrary, it is destined to convince you in the fantastical precision of the system of geometry

$$x \cdot e^{5\Phi \pi i_e \sqrt{2}} = \mathbf{119298} \cdot 10^{51}. \quad (35)$$

And

$$\cos 2\Theta_{\text{STR}} \sqrt{119298} = \mathbf{838591} \cdot 10^7. \quad (36)$$

Now imagine that there were no method of harmonious integers. It is solely by this method that the system proves its selfconsistence and self-sufficiency. With respect to physics, the system is inevitable and sufficient. Mathematical theories should meet the only requirement: to be inevitable and sufficient to solve any given problem. As for the unified field theory problem, there is no more need to anticipate as a new Einstein borns. Sometimes in history may more matter an old-aged pastoral nomad being a self-made Polymath. Therefore, the sole problem remaining is to correct the current corrupted situation in and around theoretical physics. The so-called superstring concept was and remains a crude mistake. Mistakes in sciences do occur and there is no crime. But, if scientists try to defend major mistakes like string concept, there will be no other way exempt corruption. Science should be fairplay.

Now let us illustrate what is the method of HIs. Given that

$$m_e = 9.10938188;$$

$$e^\pm = 1.602176462,$$

We have a mass-charge configuration such that

$$N_{1837.41} m_e \dim m \cdot e^\pm \dim e^\pm = \frac{10^{7.000000\dots}}{\Delta_{Exprm.}} \quad (37)$$

Then, gravi-electromagnetism will be subject to

$$N_{1837.41} m_e \dim m \cdot e^\pm \dim e^\pm = \frac{10^{7.000000\dots}}{\Delta_{Exprm.}} \quad (37)$$

$$\frac{e^{5\Phi\pi e i_1 \sqrt{2}}}{G \dim G \cdot \{N m_e \dim m \cdot e^\pm \dim e^\pm\}} = 1048 \cdot 10^{45} \quad (38)$$

$$1048^{\Phi^3 i_1} = \frac{16945}{9} \cdot 10^{13}; \quad (39)$$

$$\frac{16945}{\pi \Phi^3 i_2} = 10^{3.0000\dots} \quad (40)$$

The sequence shows that everything is defined by everything else in the unified field. It is known since long ago that in depth the cause and the effect cannot be distinguished.

The shortest aphoristic way to derive the fundamental mass spectrum appears to be

$$N \Delta_{Exprm.} = \sqrt[3]{548362189} \quad (41)$$

explained by

$$548362189 \cdot 5\Phi\pi e i_1 \sqrt{2} = \sin \Delta_{Exprm.} \cdot 10^{10.9999\dots} \quad (43)$$

Now we shall enhance step by step the previous representation and see what happens:

$$N \Delta_{Exprm.} \cdot G_{6.673} = \frac{15121831}{9}; \quad (44)$$

$$\sqrt[3]{\{N \Delta_{Exprm.} \cdot G_{6.673} \dim G\}^{\pi e}} = \frac{10^{34.9999\dots}}{\Phi^3 i_2}; \quad (45)$$

$$\sqrt[\cos 2\Theta_{STR.}]{\frac{\{N \Delta_{Exprm.} \cdot G_{6.673} \dim G \cdot \{c i_1 \cdot h \dim h\}\}}{\cos 2\Theta_{STR.}}} = \Phi i_1 \cdot 10^{22.0000\dots}; \quad (46)$$

And brilliantly,

$$\{N \Delta_{Exprm.} \cdot G_{6.673} \dim G \cdot c i_1 \cdot h \dim h\} \cdot e^\pm \dim e^\pm = 705\,252\,378. \quad (47)$$

If so, we are required to complete and obtain a superunified equation of the pentad of fundamental constants such that

$$705\,252\,378 \cdot m_e \dim m = 9085492324. \quad (48)$$

It satisfies the system

$$\frac{\left\{ X \cdot e^{5\Phi\pi e i_1 \sqrt{2}} \cdot \frac{\exists}{\textcircled{a}} \right\}}{9085492324} = \frac{27996317}{9} \cdot 10^{45} \quad (49)$$

Rewrite it (50)

$$\frac{\left\{ X \cdot e^{5\Phi\pi e i_1 \sqrt{2}} \cdot \frac{\exists}{\textcircled{a}} \right\}}{\left\{ N \Delta_{Exprm.} \cdot G_{6.673} \dim G \cdot c i_1 \cdot h \dim h \right\} \cdot e^\pm \dim e^\pm \cdot m_e \dim m} = \frac{27996317}{9} \cdot 10^{45}$$

And see that bare numeric coefficients are:

$$1837.41; 6.673; 2.99972458; 6.62606876.9.10938188; 1.602176462. \quad (51)$$

The modern physical phenomenology complete with the two anomalies arrives at a beautiful

$$\frac{\left\{ N \Delta_{Exprm.} \cdot G_{6.673} \dim G \cdot c i_1 \cdot \{h \dim h \cdot e^\pm \dim e^\pm \cdot m_e \dim m\} \right\} / \alpha a_e}{\cos 2\Theta_{STR.}} = \pi \frac{\Phi^3 i_1}{\text{Spin}} \{ (3+1) \dim_\Phi \Phi^3 i_1 \} \cdot 10^{12.999\dots} \quad (52)$$

As it is seen, the ultimate operator in the capacity of the cosinus of the nuclear strong force Theta parameter derives the phenomenology of physics is from the absolute-geometric spacetime. In this connection we investigate the relationship of real and imaginary cosines in the system of universal harmony. Therefore,

$$\sqrt[\cos 2\Theta_{STR.}]{\frac{\pi \frac{\Phi^3 \sqrt{i_1 i_2}}{\text{Spin}} \{ (3+1) \dim_\Phi \Phi^3 i_1 \}}{\cos 2\Theta_{STR.} \cdot 10^{13}}} = \frac{10^{43}}{54218}; \quad (53)$$

$$\left\{ \frac{10^{43}}{54218} \right\}^{\cos 2\Theta_{STR.}} \cdot \frac{\cos 2\Theta_{STR.}}{\pi \frac{\Phi^3 \sqrt{i_1 i_2}}{\text{Spin}} \{ (3+1) \dim_\Phi \Phi^3 i_1 \}} = \cos i \cdot 10^{11.999999\dots} \quad (54)$$

The unification theory is necessarily a metatheory and as such it is conjugated with a metaphysical mystery when some final results of the theory describes the history of geometry from Euclid via Gauss and to this moment of science developments (55)

$$\left\{ \frac{\left\{ \left\{ N \Delta_{Exprm.} \cdot G_{6.673} \dim G \cdot c i_1 \cdot \{h \dim h \cdot e^\pm \dim e^\pm \cdot m_e \dim m\} \right\} / \alpha a_e \right\} \cdot \frac{1}{\cos 2\Theta_{STR.}}}{\pi \frac{\Phi^3 i_1}{\text{Spin}} \{ (3+1) \dim_\Phi \Phi^3 i_1 \}} \right\} = 360 \cdot \{ 3 \cdot 5 \cdot 17 \cdot 257 \cdot 65537 \} \cdot \Phi \pi i_1.$$

$$\sqrt[5]{360.000000\dots \cdot \{3 \cdot 5 \cdot 17 \cdot 257 \cdot 65537\} \cdot \Phi \pi i_1} = \left\{ \frac{216\,474\,203}{2} \right\}; \quad (56)$$

$$216\,474\,203 \cdot \left\{ X \cdot e^{5\Phi \pi e i_1 \sqrt{2}} \right\} = 2424266 \cdot 10^{62}; \quad (57)$$

$$\left\{ \frac{2424266 \cdot 10^{62}}{216\,474\,203 \cdot e^{5\Phi \pi e i_1 \sqrt{2}}} \right\}^{1+\Phi \pi e} = 10^{90}. \quad (58)$$

### References

1. Arran Gare. (2016). Creating a New Mathematics. In Intuition in Mathematics and physics, Process Century Press, 167-186.
2. Ian Stewart. (2000). The Great Mathematical Problems.

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