

DOI: <https://doi.org/10.24297/jap.v21i.9518>**Sayed`s Theory of Everything (S-TOE): The Acting Unified Forces in the Universe for Cosmological and Subatomic Scale****Sayed Ali El-Mongy**

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Abstract

Allah, the Creator, is the only Singular Super Force. A unified theory for the **major forces** gravity, weak, electromagnetic and strong nuclear forces is an intractable challenge to the scientists. This article is an innovative theory for unification of all forces in the universe; S-TOE. My published theory on quantum gravity was the first step. The main parameters and equations of the starting spherical singularity bubble of the early universe; acceleration, wavelength, radius, pressure and speed, were simply derived; named Sayed`s unified forces formula (SUFF). The violation of light speed at the early beginning of universe was dramatically found; 3.93×10^{27} m/s. The wavelength (λ) was also calculated and found to be 1.321×10^{-15} m. The difference, between the calculated force (9.29×10^{24} N) using SUFF and the Planck force (1.2103×10^{44} N) **is might be** due to contribution of other predicted forces. The calculated acceleration matches with Planck acceleration. Uniquely in this theory, the dark matter, dark energy and antimatter are among the acting forces control the universe. The Sayed`s forces diagram (SFD) is postulated and given. The anti-force term and concept is introduced to describe the opposite role of dark energy and matter. All the mentioned forces work together to keep the universe stable, expandable and equilibrium. Finally, it can be stated that some of the major universal constants need essential revision.

Keywords: Sayed`s theory of everything (S-TOE), Unification of forces, Sayed`s forces diagram (SFD).

I. Introduction

The unification of the major four forces controlling the universe is considered the most challenging argument and dilemma to be solved by scientists (1,2,3). Unifying theories that define the large-scale cosmological structure of the universe with those that describe the minuscule quantum world of the subatomic particles has been a challenge for over a century (4). Physicists working to find a so-called grand unified theory aim to unite the electroweak force with the strong force to define an electronuclear force, which models have predicted but researchers have not yet observed. The final piece of the puzzle would then require unifying gravity with the electronuclear force to develop the so-called theory of everything (5). The author of this article has published several articles dealing with innovative topics including theory of the unified quantum gravity (3, 6-11).

This article is a theory unifying and explaining all the known and predicted forces that control the universe at its beginning and in the time being. It is called Sayed`s theory of everything (S-TOE).

II. Literature survey

The unification of the major forces in the universe has been given and achieved for two of them. While, theory for everything (TOE) is still the intractable problem and challenge for the scientists all over the world. In this part of the article, the effort done by scientists related to TOE is covered:

- Before the Big Bang – the universe underwent a breathtaking cosmic expansion, doubling in size at least 80 times in a fraction of a second. This rapid inflation, fueled by a mysterious form of energy that permeated empty space itself, left the universe desolate and cold. (12)
- Around 13.7 billion years ago, everything in the entire universe was condensed in an infinitesimally small singularity, a point of infinite denseness and heat (13)
- The Planck Era (All four known forces are unified) is prior to 10^{-43} s after the Big Bang, when we believe that the four basic forces of nature, 1) gravity, 2) nuclear strong force, 3) nuclear weak force, and 4) electromagnetic force were combined into a single "super" force (14).



- The scientists understand that there are four fundamental forces – gravity, electromagnetism, and the strong and weak nuclear forces – that are responsible for shaping the universe we inhabit (15).
- The approximate ratio of forces when normalized to the force of gravity is as follows Gravity 1.0 , Weak 1.0×10^{25} , Electromagnetic 1.0×10^{36} and Strong 1.0×10^{38} (16).
- Unification of gravity, relativity and quantum mechanics was recently given by the author; Sayed’s quantum gravity theory (SQGT) (3).
- The fundamental forces nature and particles can be seen in the following tables (17)
Table 1 : Characteristics of the major four forces (hyper physics).

Fundamental Force Particles

Force	Particles Experiencing	Force Carrier Particle	Range	Relative Strength*
Gravity acts between objects with mass	all particles with mass	graviton (not yet observed)	infinity	↓ much weaker ↓ much stronger
Weak Force governs particle decay	quarks and leptons	W^+ , W^- , Z^0 (W and Z)	short range	
Electromagnetism acts between electrically charged particles	electrically charged	γ (photon)	infinity	
Strong Force** binds quarks together	quarks and gluons	g (gluon)	short range	

- The Standard Model shows that the electromagnetic and the weak forces are unified for energies above 100 GeV. Similarly, the strong force seemingly so different unifies with the other one at energies above 10^{15} GeV. The model excludes the gravitational force (18).
- The work of three physicists (Noble prize laureates in 1979), Glashow, Weinberg, and Salam, showed that the electromagnetic and weak nuclear forces can be understood as a single interaction. Electroweak unification is an important step toward the goal in physics of uniting all four fundamental interactions (19).
- The theory presented in a book seeks to solve the problem of how to unify gravity with the other forces of nature, and thereby end 50 years of complete stagnation in theoretical physics (20).
- Fig. 1, A graphic of the separation of the fundamental interactions as the temperature of the universe decreased in the initial fractions of a second after the big bang. The electromagnetic and weak interactions, unifiable as the electroweak interactions, were the last interactions to separate (19, 21).



Fig. 1, A graphic of the separation of the fundamental interactions.

- Another kind of fifth force, which arises in Kaluza–Klein theory, where the universe has extra dimensions, or in supergravity or string theory is the Yukawa force, which is transmitted by a light scalar field (i.e. a scalar field with a long Compton wavelength, which determines the range). (22).
- Some theories beyond the Standard Model include a hypothetical fifth force, and the search for such a force is an ongoing line of experimental physics research. In supersymmetric theories, some particles acquire their masses only through supersymmetry breaking effects and these particles, known as moduli, can mediate new forces. Fifth forces have also been suggested to explain phenomena such as CP violations, dark matter, and dark flow. (23).
- Physicists would like to show that all the forces, including gravity, are the consequences of a single symmetry principle. But this prejudice to have a 'beautiful' theory is a human desire and may not necessarily be respected by nature (24).
- Researchers have proven that a fundamental law of physics applies in the quantum realm (25).
- The task of unification has fallen to subsequent generations of physicists, who have broken the problem into myriad parts. What started as the grand vision of a singular genius has morphed into slow, grinding labor carried out by different teams of physicists, each trying to solve a small piece of a vast cosmic puzzle. (26).
- Dark matter, the invisible material that makes up the vast majority of the universe's mass, may collect itself to form atoms, a new simulation shows, It still has mass, so it still has gravity. But there may be additional forces that operate only among the dark matter particles and do not interfere with normal matter at all (27,8,9).
- We have ordinary matter that makes up you and me, that's 5% of the universe. Dark matter is 25% of the universe and dark energy is 70% of the universe. It is amazing. That means we don't understand 95% of the universe, which means there's a discovery there for some bright scientist to make (28, 8).
- One consequence of LQC is that it predicts at the smallest of scales, the Planck length (10^{-35} m) and Planck time (10^{-43} seconds), both space and time become quantized, leading to a smallest length and duration. No theory of everything will be complete without an understanding if this conjecture is true (29).

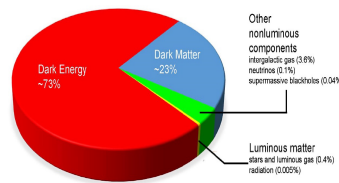


Fig. 2, The visible and invisible components of the universe.

- A model is compliant with the *JWST* observations. It stretches the age of the Universe to 26.7 Gyr giving enough time to form massive galaxies (30).

III. Derivation formulas of Sayed's Theory of Everything (S-TOE):

It may be predicted that there are multiple forces (not only the four defined forces) control the universe as will be elucidated. For simplification, the equations of the four forces; gravity, electromagnetic, weak and strong, can be given as follows (31).

$$F = G m_1 m_2 / d^2 \tag{1}$$

$$F_{static} = K_e q_1 q_2 / d^2 \tag{2}$$

$$F(r)_w \approx g^2 e^{-\alpha r} / r^2 \tag{3}$$

$$F(r)_s = \alpha / r^2 + \sigma \tag{4}$$

Where, the weak force $F(r)_w$ deals with radioactive (e.g. beta) decay. The α is the range of the weak force and (g) is a measure of the strength of the force. While, the strong force $F(r)_s$ holds protons and neutrons together (e.g. between quark and antiquark); (α) and σ are constants.

The following figure number 3 shows the wave constants and equations compared to classical constants; the wave equations can be used to calculate particle energies beyond the electron (32).

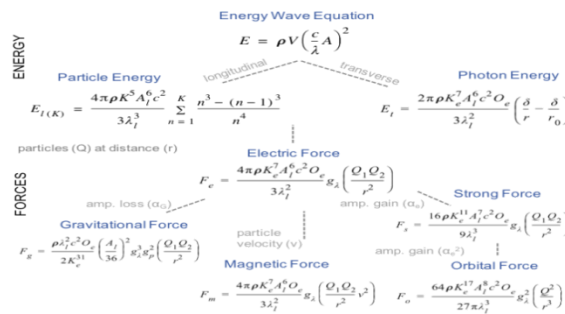


Fig. 3: Forces and Energy wave equations (32)

There is in nature a maximum force, or maximum momentum change per time: $F \leq c^4/4G = 3.0258(4) 10^{43}$ N (33). At high energies, the four forces begin to merge. If the transitions were violent, then the universe could have been briefly filled with gigantic bubbles. Outside these bubbles, the unified forces remained. But inside the bubbles, the cosmos would have been completely different, with the forces split off from each other. The expanding edges of the bubbles could accelerate any nearby particles to incredibly high speeds (34).

Suppose the universe began with the densest infinitesimal singularity of a spherical bubble containing all the merged and unified forces. The sphere surface area (A) is (10,11) :

$$A = 4 \pi r^2 \tag{5}$$

Where, r is the radius of the spherical bubble. The pressure (P) in the bubble can be defined (11) as follow

$$P = F/A \tag{6}$$

Where, F is the total forces in the bubble and A is its surface area. By substituting equation 5 in 6, the pressure and forces can be expressed as:

$$P = F / 4 \pi r^2 \tag{7}$$

The total forces in the bubble can be given as follows:

$$F_{total} = \sum F_n \tag{8}$$

Where, n represents all forces in the bubble (n= 1,2,3,4,...). The total (F_{total}) (net) force acting on a mass (m) is expressed by (3,6)

$$F_{total} = \sum F_n = ma \tag{9}$$

Where, (a) is the acceleration (m/s²). Considering the mass–energy equivalence of Einstein; $E = mc^2$, and the quantum form of energy; $E = hc/\lambda$, where c is the speed of light (m/s), h is the Planck’s constant (j.s or N.m.s) and λ is the wavelength (m). The mass can be defined as follow (3):

$$m = hc/\lambda c^2 = h/\lambda c \tag{10}$$

By substituting equation 10 in 9, it produces;

$$F_{total} = \sum F_n = a.h/\lambda.c \tag{11}$$



This formula was validated by check its units as follow:

$$N = (m/s^2) (J.s) / m. (m/s)$$

$$N = (m/s^2) (N.m.s) / m. (m/s), \text{ equating units of the both sides; Newton (N) = Newton (N).}$$

By merging equation 11 and 7, the pressure in the bubble is;

$$P = a.h / 4 \pi \lambda c r^2 \quad (12)$$

Taking into consideration rearrangement of eq. 12, the radius of the starting bubble is given to be:

$$r^2 = a.h / 4 \pi \lambda c P \quad (13)$$

$$r = \sqrt{a.h / 4 \pi \lambda c P} \quad (14)$$

By substituting equations 1-4 in equation 11, the produced one can be given as:

$$a.h / \lambda.c = F_{\text{total}} = \sum F_4 = \sum [(G m_1 m_2 / d^2) + (K_e q_1 q_2 / d^2) + (g^2 e^{-\alpha m r} / r^2) + (\alpha / r^2 + \sigma)] \quad (15)$$

This equation is called **Sayed's Unified Four Forces Formula (SUFFF)**.

Based on the formulas 11 and 15, the speed (c), acceleration (a), pressure, radius and vibrational wavelength (λ) of the starting spherical bubble of the universe can be formulated to be:

$$\lambda = (a h / c). (1 / F_{\text{total}}) \quad (16)$$

$$a = (\lambda c / h) (F_{\text{total}}) \quad (17)$$

$$c = (a h / \lambda). (1 / F_{\text{total}}) \quad (18)$$

Based on the previous derived equations, it can be concluded the following major and signature indications and observation:

- **The wavelength (λ)** of the bubble is inversely proportional to the merged/unified total forces
- **The acceleration (a)** of the bubble is directly proportional to the merged/unified total forces
- **The speed (c)** of light of the bubble is inversely proportional to the merged/unified total forces
- **The pressure (P)** of the bubble is correlated to Wavelength, Acceleration and Planck's constant
- **The radius (r)** of the bubble is a function in; h, a, c, p and λ .

Using the abovementioned equations, the following parameters that control the universe at its early beginning can be calculated as shown in table 1 (6):

Table 1: The Comparison and ratio of the parameters of the early universe with SUFFF

Parameter	Planck's Scale	S-TOE / Sayed Forces	Ratio
Force (N)	1.2103×10^{44}	9.296×10^{24}	1.30×10^{19}
Speed of light (m/s)	3×10^8	3.93×10^{27}	1.31×10^{19}
Pressure (N/m ²)	4.633×10^{113}	2.836×10^{93}	16.3×10^{19}
Wavelength (m)	1.015×10^{-34}	1.321×10^{-15}	0.768×10^{-19}
Acceleration (m/s ²)	5.56×10^{51}	5.599×10^{51}	- 1

It can be concluded that the *speed of light at the beginning of universe was not as Einstein value*. It can also observe that the bubble was highly accelerated rather than the current universe value; $1.36 \times 10^{-14} \text{ m/s}^2$. The huge difference



between the Planck force and the calculated value (9.296×10^{24}) may be explained as a result of *light speed violation* and contribution of the other **invisible forces**. It could be stated that some of universal constants has to be revisited and revised.

III.1. The first Approach

The known four forces; gravity, electromagnetic, weak and strong, in the universe can be given as follow;

$$F_{\text{total}} = a \cdot h / \lambda \cdot c = F_{\text{net}} = \sum F_4 = (F_{\text{gravity}} + F_{\text{weak}} + F_{\text{electromagnetic}} + F_{\text{strong}}) \quad (19)$$

This equation is another form of **Sayed's Unified four Forces formula (SUFFF)**. The equation 19, can be used to calculate the parameters; h, a, c and λ . For example, the wavelength can be expressed as;

$$\lambda = (a \cdot h / c) \cdot [1 / \sum \{(G m_1 m_2 / d^2) + (g^2 e^{-\alpha m r} / r^2) + (K_e q_1 q_2 / d^2) + (\alpha / r^2 + \sigma)\}] \quad (20)$$

In the case of separated forces, the equation 20 can be given for force of gravity as:

$$\lambda = (a \cdot h / c) \cdot [1 / F_{\text{gravity}}] = (a \cdot h / c) \cdot [1 / (G m_1 m_2 / d^2)] \quad (21)$$

This equation is similar to our quantum gravity force equation ($F = 16 \pi^2 I_p^2 h c / \lambda^2 \cdot r^2$) given in reference 3.

In the case of separated forces, the equation 20 can be given for the other forces as:

$$\lambda = (a \cdot h / c) \cdot [1 / F_{\text{electromagnetic}}] = (a \cdot h / c) \cdot [1 / (K_e q_1 q_2 / d^2)] \quad (22)$$

$$\lambda = (a \cdot h / c) \cdot [1 / F_{\text{weak}}] = (a \cdot h / c) \cdot [1 / (g^2 e^{-\alpha m r} / r^2)] \quad (23)$$

$$\lambda = (a \cdot h / c) \cdot [1 / F_{\text{strong}}] = (a \cdot h / c) \cdot [1 / (\alpha / r^2 + \sigma)] \quad (24)$$

III.2. The Second Approach

In this approach, the starting bubble of the early universe contained all type of matter and forces including the dark matter and energy. Based on this concept, the total force acting in the bubble can be given as following summation:

$$F_{\text{total}} = \sum F_6 = \sum (F_{\text{gravity}} + F_{\text{weak}} + F_{\text{electromagnetic}} + F_{\text{strong}} + F_{\text{dark matter}} + F_{\text{dark energy}}) \quad (25)$$

The equation 25 predicts the existence of multiple forces including the dark energy and matter in the starting bubble of the early universe. Using the same abovementioned treatment, derivation and equations and by merging eq. 25 in eq. 11, the following formulas can easily be given:

$$a \cdot h / \lambda \cdot c = \sum (F_{\text{gravity}} + F_{\text{weak}} + F_{\text{electromagnetic}} + F_{\text{strong}} + F_{\text{dark matter}} + F_{\text{dark energy}}) \quad (26)$$

This equation is called **Sayed's Unified Six Forces Formula (SUSFF)**. The abovementioned parameters can be given as follow:

$$\lambda = (a \cdot h / c) \cdot [1 / \sum (F_{\text{gravity}} + F_{\text{weak}} + F_{\text{electromagnetic}} + F_{\text{strong}} + F_{\text{dark matter}} + F_{\text{dark energy}})] \quad (27)$$

$$a = (\lambda \cdot c / h) \cdot [\sum (F_{\text{gravity}} + F_{\text{weak}} + F_{\text{electromagnetic}} + F_{\text{strong}} + F_{\text{dark matter}} + F_{\text{dark energy}})] \quad (28)$$

$$h = (\lambda \cdot c / a) \cdot [\sum (F_{\text{gravity}} + F_{\text{weak}} + F_{\text{electromagnetic}} + F_{\text{strong}} + F_{\text{dark matter}} + F_{\text{dark energy}})] \quad (29)$$

$$c = (a \cdot h / \lambda) \cdot [1 / \sum (F_{\text{gravity}} + F_{\text{weak}} + F_{\text{electromagnetic}} + F_{\text{strong}} + F_{\text{dark matter}} + F_{\text{dark energy}})] \quad (30)$$

The six acting forces are presented in the following diagram; called **Sayed's forces diagram (SFD)**:



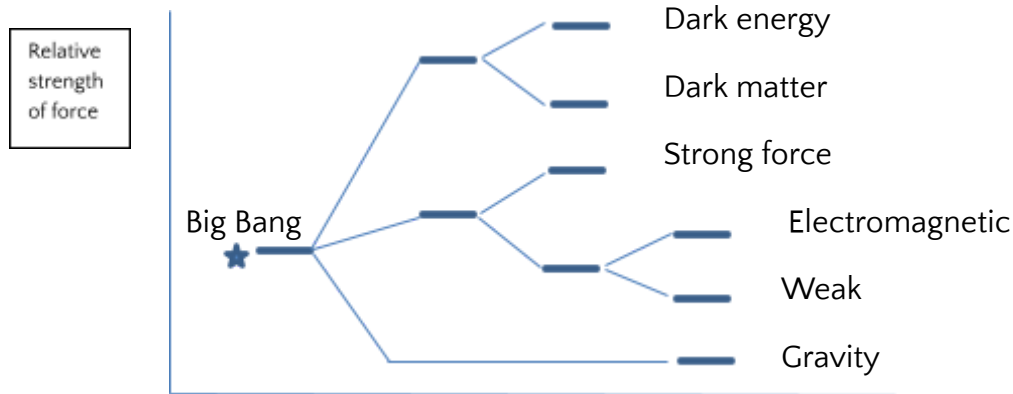


Fig. 4: Sayed’s Diagram of forces control the universe

The figure 4 shows the acting forces; including dark matter and energy, control the universe as a function in their relative strength. The term; **Anti force with negative sign**, is introduced to describe the opposing role of dark matter against dark energy.

A new particle discovered; dubbed X17, requires the existence of a fifth force of nature. The new force could move physics closer to a grand unified theory of the universe, or even help explain dark matter (35). A new force, called quintessence, was proposed to explain the discovery of dark energy (35).

Scientists of Fermi laboratory measurements of the muon's magnetic 'wobble' can't be explained by the Standard Model of particle physics – potentially hinting at some unknown fifth force (36).

The equation 25 can also be written as follow:

$$F_{total} = \sum F_7 = (F_{gravity} + F_{electromagnetic} + F_{weak} + F_{strong} + F_{dark\ matter} + F_{dark\ energy} + F_{antimatter}) \tag{31}$$

Where, the mutual transformation of matter–antimatter (e.g. annihilation of $\beta^+\beta^- = 2\gamma$ quanta) is potential source of energy to be considered in the universe. The equation 31 can also be rearranged with equation 11 to be the following expressions:

$$a\ h / \lambda\ c = \sum (F_{gravity} + F_{electromagnetic} + F_{weak} + F_{strong} + F_{dark\ matter} + F_{dark\ energy} + F_{antimatter}) \tag{32}$$

The acceleration, for example, can be given; taking into consideration antimatter, as follow:

$$a = (\lambda\ c/h) [\sum (F_{gravity} + F_{electromagnetic} + F_{weak} + F_{strong} + F_{dark\ matter} + F_{dark\ energy} + F_{antimatter})] \tag{33}$$

This abovementioned expressions and equations reflect that all the mentioned forces are worked together in the early beginning and to keep stability, expandability and equilibrium of the current universe.

The SuperCDMS's experimental detector can now rule out dark matter particles down to about a fifth of a proton's mass and potentially even lower masses. There are roughly 1×10^9 dark matter particles passing every second, at 1 in 10^{36} chance of interaction (37).

A published paper indicates that the “Theory of Everything” itself should explain in details the creation/origination of all theories and equations in physics (38).

A number of unification theories view leptons and quarks as being different states of the same particle One of the consequences of such theories is that the proton would be an unstable particle with a lifetime of 10^{30} yr. (39). Other physicists, meanwhile, don't believe the universe is quite as comprehensible, and, in their opinion, this makes the search for a TOE a waste of time (40).

IV. Conclusion

This article is Sayed's theory of everything (**S-TOE**) to assess the microscopic and macroscopic parameters of the early and current universe. Equations and formulas (**SUFF**) predicting the unified forces in the densest singularity bubble at the early beginning of the universe were derived. The dark energy and dark matter are proposed among forces that control the universe. The forces are presented in Sayed's forces diagram (**SFD**). The theory shows **violation of light speed**; the calculated value is 3.93×10^{27} m/s. The ratio between the calculated and the current force is 3.098×10^{19} . This may be due to contribution of other invisible forces. The nature of dark matter and energy is a hot topic to be studied.

Acknowledgment

Allah (God)- My Lord , the visible and invisible universe are a strong direct function in your absolute force, uniqueness and greatness. Allah is the Almighty Creator and Sustainer of everything in the universe. Allah is similar to nothing and nothing is comparable to Him. Allah has no plural or gender as stated in the Holy Quran of the Prophet Mohamed PBUH.

Conflict of interest

There is no any conflict of interest with anyone concerning this article.

References

1. Robert Delbourgo, 2020,"An Eventful Journey to Unification of All the Fundamental Forces", *University of Tasmania, Australia*. <https://doi.org/10.1142/11546> . <https://www.worldscientific.com/worldscibooks/10.1142/11546#t=aboutBook>. Abstract.
2. James Russell Farmer, 2021,"Grand Unification: of the four fundamental forces of physics", ISBN-13 : 979-8670102285. <https://www.amazon.com.be/-/en/dp/B096YFG1XS>. Reviewed in the United States on 29 March 2023. Abstract.
3. Sayed A. El Mongy, 2023, "Theory of the Unified Gravity: Sayed's Quantum Gravity Force (SQGF) as a Function in Wavelength and Planck Length with Inevitability of Light Speed Violation", *Journal of Advances in Physics* Vol 21 (2023) ISSN: 2347-3487. DOI: <https://doi.org/10.24297/jap.v21i.9414>
4. Tereza Pultarova, 2022 , "The Theory of Everything: Searching for the universal rules of physics. <https://www.space.com/theory-of-everything-definition.html>).
5. Jeremy Rehm, Ben Biggs, 2021, "The four fundamental forces of nature", <https://www.space.com/four-fundamental-forces.html>).
6. Sayed A. El-Mongy, (2021), "Revolutionary Approach for Fusion of the Classic, Relativity and Quantum field Theories: Sayed's Acceleration Equation and Probable Violation of $E=mc^2$ ", *Journal of Advances in Physics*, Vol 19. DOI: <https://doi.org/10.24297/jap.v19i.9048>
7. Sayed A. El-Mongy, (2020), "Hawking Radiation is Nothing: Developed Correlation of Entropy with Black Hole Areall, *Journal of Advances in Physics* Vol 18. DOI:<https://doi.org/10.24297/jap.v18i.8905>
8. Sayed Ali El-Mongy, 2022, "Unity of the Universe: New and Global Theory Correlating the Ratio of Hydrogen - Helium to Dark Energy - Matter: Sayed's Golden Formula (SGF)ll *Journal of Advances in Physics* Vol 20 (2022) ISSN: 2347-3487. DOI: <https://doi.org/10.24297/jap.v20i.9246>
9. Sayed Ali El-Mongy, (2022) —Creator of the Universe Adjusted the Dark Energy/Dark Matter Ratio and Baryons to be Function In π and $e\pi$: Predicted and Deciphered by Sayed's Theoremll, *Journal of Advances in Physics* Vol20 ISSN: 2347-3487, DOI: <https://doi.org/10.24297/jap.v20i.9223>
10. Sayed Ali El-Mongy, 2020, "New Theorem and Formula for Circle Arc Length Calculations with Trigonometric Approach Application in Astrophysics", *Journal of Advances in Physics* Vol 17 (2020) ISSN: 2347-3487 <https://rajpub.com/index.php/jap>, DOI: <https://doi.org/10.24297/jap.v18i.8914> .



11. Sayed A. El-Mongy, 2022, "Novel Arithmetic Equations for Mass Energy Equivalence, Newton's Rings Radius, Wavelength and Speed of Light, Fine Structure Constant and Ideal Gas Law Correlated with $e\pi$ Based on Sayed's Theorem" *Journal of Advances in Physics* Vol 20(2022) ISSN: 2347-3487 <https://rajpub.com/index.php/jap> 48 . DOI: <https://doi.org/10.24297/jap.v20i.9214>
12. https://www.tiktok.com/@astrophotography_basics/video/7186260803220163846. 2023.
13. Andrew May, Elizabeth Howell, 2023, "What is the Big Bang Theory?". <https://www.space.com/25126-big-bang-theory.html>.
14. Dale E. Gary, "Cosmology and the Beginning of Time", Intro to Astronomy, Lect. 26,NJIT. <https://web.njit.edu/~gary/202/Lecture26.html#:~:text=The%20Planck%20Era%20is%20prior,a%20single%20%22super%22%20force.>
15. <https://universe.nasa.gov/universe/forces/>
16. Matthew Cepkauskas, 2019,"Strong and Weak Force Proposed Equations", Proceedings of the International Multi-Conference of Engineers and Computer Scientists 2019 IMECS 2019, March 13-15, 2019, Hong Kong)
17. <http://hyperphysics.phy-astr.gsu.edu/hbase/Forces/exchg.html>
18. Nobel Committee for Physics 2023. <https://www.nobelprize.org/prizes/themes/forces/>
19. Charles Baltay , 2019, "Electroweak interaction", <https://doi.org/10.1036/1097-8542.227375>. <https://www.accessscience.com/content/article/a227375>
20. Sky Damos, 2023, "The Complete Guide to Quantum Gravity" Features Similar Worlds Interpretation, Space Particle Dualism, Charge Mass Dualism, Entropic Expansion, Chromogravity, Electrogravity and Conscious Set Theory).
21. <https://www.quora.com/What-is-equation-theory-of-everything>, Pearson Education 2004.
22. https://en.wikipedia.org/wiki/Fifth_force
23. https://en.wikipedia.org/wiki/Fundamental_interaction#).
24. Marcus Chown, 2021, "Why a theory of everything may never be possible – or any use", BBC Science Focus Magazine, <https://www.sciencefocus.com/space/theory-of-everything/>).
25. JACKIE APPEL, 2023," The Classic Principle of Least Action Now Exists in the Quantum Realm", *New Scientist*.
26. Corey S. Powell, 2015,"After Einstein, a New Generation Tries to Create a Theory of Everything", A new generation of physicists hope to succeed where Einstein failed), *Scientific American*.
27. Paul Sutter, 2023,"Dark matter atoms may form shadowy galaxies with rapid star formation, <https://www.space.com/dark-matter-atoms-form-stars-galaxies-simulations>).
28. Don Lincoln, 2017,"Searching For the Theory of Everything: The Torch Podcast, <https://www.wondriumdaily.com/searching-for-theory-of-everything>).
29. Don Lincoln, 2017, "God's Thoughts: Practical Steps Towards a Theory of Everything", FERMILAB-17-561-E. V1.2.)
30. Rajendra P. Gupta, 2023, "JWST early Universe observations and Λ CDM cosmology *MNRAS* 524, 3385–3395 (2023) <https://doi.org/10.1093/mnras/stad2032>. Monthly Notices of Royal astronomical society.
31. Alex R. Howe, 2020, "What Is the Equation for the Strong Nuclear Force?", <https://sciencemeetsfiction.com/2020/12/29/what-is-the-equation-for-the-strong-nuclear-force/>
32. <https://energywavetheory.com/equations/#constants>
33. Christopher Schiller, 2021, "Motion Mountain", *The Adventure of Physics, Volume II, Relativity and Cosmology, Edition 31*
34. Paul Sutter, 2023,"Giant 'bubbletrons' shaped the forces of the universe moments after the Big Bang, new study suggests", *Life Science Newsletter, series 254*).
35. Eric BetzMar, 2020, "What is the Fifth Force?", *Discover magazine*. <https://www.discovermagazine.com/the-sciences/what-is-the-fifth-force>).
36. JONATHAN CHADWICK, 2023, "A new force of nature? Scientists close in on a fifth force as they discover a mysterious subatomic particle disobeying the laws of physics", *Daily mail, UK*. <https://www.dailymail.co.uk/sciencetech/article-12396355/A-new-force-nature-Scientists-close-fifth-force-discover-mysterious-subatomic-particle-disobeying-laws-physics.html>.
37. Monisha Ravisetti, 2023, "We still don't know what dark matter is, but here's what it's not", *Space.com*. <https://www.space.com/dark-matter-detector-tights-limits-inelastic-collisions>).



38. Prince Jessii, 2021, "The God Equation: Theory of Everything", International Journal of Theoretical and Mathematical Physics 2021, 11(3): 77-98. DOI: 10.5923/j.ijtmp.20211103.01 .
39. David J. Raymond, 2021, "RADICALLY MODERN INTRODUCTORY PHYSICS TEXT II", New Mexico Tech., Libre Texts Book, (<https://LibreTexts.org>).
40. Sarah Scoles, 2023, "Will Scientists Ever Find a Theory of Everything?", Quantum physics, Scientific American. <https://www.scientificamerican.com/article/will-scientists-ever-find-a-theory-of-everything/>

Biography



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