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## "G-D's Physics" New Scientific Paradigm Resolves the "Gravitational Enigma"!

### Jehonathan Bentovish (Bentwich), Ph.D\*

*Note:* Dr. Bentovish is affiliated Zefat Academic Center, but is now seeking one of the leading Physics Universities in the World to further assist him in validating the New "G-d's Physics" Paradigm of 21st Century Theoretical Physics

\*Corresponding author: Jehonathan Bentovish (Bentwich), Ph.D, Email: drbentwich@gmail.com.

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#### Abstract

The New "G-D's Physics" Twenty-First Century's Scientific Paradigm ("Computational Unified Field Theory, "G-D'S PHYSICS") resolves the "Gravitational Enigma" (GE): A complete unification of Relativity Theory and Quantum Mechanics and the Four Forces; The "G-D'S PHYSICS" New "A-Causal Computation" Paradigm is empirically validated based on its two (initial) "Critical Predictions" regarding the "Proton-Radius Puzzle" and "Universe's Non-Continuous Accelerated Rate of Expansion" (UNCARE). Additionally, the "G-D'S PHYSICS" "Computational Duality Principle" negates the basic "Self-Referential Negative Computational System" (SRNCS) structure of RT's Einstein's Equations, instead pointing at a singular higher-ordered "Universal Computational Principle" (UCP) simultaneously computing all exhaustive spatial pixels in the universe at the incredible rate of " $c^2/h$ " =1.36<sup>-50</sup> (sec')! The "G-D'S PHYSICS" resolves GE and unifies GRT & QM (and four basic physical features) based on its discovery of a novel "Universal Computational Formula" (UCF)!

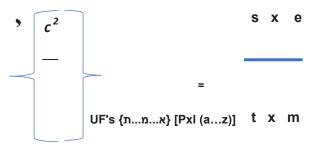
#### **1. Introduction**

Most likely the greatest unresolved Enigma of Twenty-first century Physics is the "Gravitational Enigma": i.e., relating to the principle inability to unify between the Gravitational Force and the Three other Forces (Weak & Strong Nuclear Forces and Electromagnetic Force); which is also associated with the inability to unify between General Relativity Theory (GRT) (in which the Gravitational Force is key), and Quantum Mechanics (QM) (in which this Gravitational Force is lacking); Or more generally, the quest for a singular "Unifying Field Theory" (as Einstein termed it), or a "Theory of Everything" (as termed contemporarily) that could resolve the apparent "theoretical-inconsistency" between these two RT and QM Models. Such a satisfactory UFT should ideally also offer a complete unification of the four basic physical features of "space", "time", "energy" and "mass" (e.g., whereas Einstein's RT was only able to unify between "space" and "time", "energy" and "mass" and describe a "curvature" of "Space-Time" by "massive-objects", but not completely unify between these four basic physical features).

Indeed, the resolution of the fundamental "Gravitational Enigma" is closely associated with the current state of Twenty-first century's "Paradigmatic-Crisis", as clearly defined by Kuhn's well-known analysis of the "Structure of Scientific Revolutions" 64: Such a "Paradigmatic-Crisis" of the Old "Material-Causal" Paradigm underlying both RT & QM is signified by the existence of an apparent "theoretical-inconsistency" between these two RT & QM "pillars", and its principle inability to account for the accelerated expansion of the physical universe - i.e., assumed to be explained by purely hypothetical "Dark-Matter" and "Dark-Energy" concepts (hypothesized to account for up to 95% of all the mass and energy in the universe) – but which yet could not be detected experimentally (even after two full decades of intensive attempts to do so)61,67?! According to Kuhn's accepted analysis, when such a fundamental "Paradigmatic-Crisis" occurs (in any given scientific discipline), this inevitably leads to the discovery of a New Scientific Paradigm (NSP) which can resolve those apparent "theoretical-inconsistencies" found in the Old ("Material-Causal") Paradigm, offer an alternative (satisfactory) explanation for the unexplained accelerated expansion of the universe, e.g., closely related with the abovementioned "Gravitational Enigma", and most significantly also identify at least one "Critical Prediction" that is unique to this NSP - which once validated experimentally, inevitably leads to a "Paradigmatic-Shift" from the Old ("Material-Causal") Paradigm to the NSP!

Fortunately, such a NSP has been discovered entitled: the "Computational Unified Field Theory" ("G-D'S PHYSICS") 1-60 shown capable of resolving the apparent "theoretical inconsistencies" between RT & QM, discarded "Dark-Matter" and "Dark-Energy" as "superfluous" (i.e., "non-existent"!) and offers an alternative explanation for the accelerated rate of the universe's expansion – thereby resolving the "Gravitational Enigma"! Succinctly stated, this New "G-D'S PHYSICS" Paradigm was able to resolve the apparent "theoretical inconsistency" between RT & QM based on its discovery of a singular (higher-ordered) "Universal Computational Principle" (UCP) which simultaneously computes every exhaustive spatial pixel in the universe – at the incredible rate of " $c^2/h$ " = 1.36<sup>-50</sup> (sec') thereby producing an extremely rapid series of "Universal Frames" (comprising the entire physical universe at every such "minimal time-point")! This is because the apparent "theoretical-inconsistency" between RT & QM arises from RT's strict "Speed of Light Barrier" (SLB) for the transmission of any signal (or effect) across space and time, as opposed to the empirically validated "Quantum Entanglement" phenomenon in QM indicating that a measurement of one given "entangled particle" instantaneously affects another "entangled particle" separated by a distance greater than can be traversed by the SLB?! But, since the New "G-D'S PHYSICS" Paradigm discovered the UCP's simultaneous computation of all exhaustive spatial pixels in the universe for every consecutive UF's frame, then this explains and resolves the apparent RT-QM "theoretical-inconsistency" by recognizing the UCP's "Single Spatial-Temporal" (SST) Relativistic SLB, "Multi Spatial-Temporal" (MST) Quantum "wave" phenomenon - i.e., including those two "entangled particles" occupying "equivalent-points" along this MST "wave", as "embedded" within the UCP's simultaneous computation of all Exhaustive Spatial Temporal (EST) points comprising every consecutive UF's frame/s!

Indeed, the New "G-D'S PHYSICS"'s was shown capable of completely unifying between RT & QM based on the additional discovery of a singular higher-ordered "Universal Computational Formula" (UCF):



**Figure 1:** THE UNIVERSAL COMPUTATIONAL FORMULA (UCF):

This UCF embeds key Relativistic and Quantum relationships (and laws) within this singular (novel) UCF (e.g., The Relativistic "Energy-Mass Equivalence", and Quantum "Heisenberg's Uncertainty Principle's Complimentary Pairs") as can be seen from the UCF's two (respective) Relativistic and Quantum Formats:

UCF's Relativistic Format: e x s/t = m x ( $c^2/h$ )

UCF's Quantum Format: t x m x  $(c^2/h) = s x e$ 

Additionally, the New "G-D'S PHYSICS" postulates that the UCP's simultaneous exhaustive computation of all spatial pixels in the universe (for every consecutive UF's frame/s) is based on the UCP's (two out of three) "Computational Dimensions" of "Framework" ("frame" / "object") and "Consistency" ("consistent" / "inconsistent") yielding the four basic physical features of "Frame" – "consistent" ("space") or "inconsistent" ("energy"), and "Object" – "consistent" ("mass") or "inconsistent" UCP's

computations), "mass" and "time" (i.e., "Object" – "consistent" ("time") four basic physical features!

#### 2. Methods & Results:

Recently, the New "G-D'S PHYSICS" Paradigm of 21st century Theoretical Physics has obtained initial empirical validation based on two of its unique "Critical Predictions", i.e., regarding the "Proton-Radius Puzzle" findings and the "Non-Continuous Accelerated Expansion of the Universe" (NCAEU), which are different from the corresponding predictions of either RT or QM!

#### a) The "Proton-Radius Puzzle" Findings:

Based upon the (above) UCF's UCP's associated (novel) "computational definition" of the four basic physical features as UCP's "Object" – "consistent" ("mass") or "inconsistent" ("time"), or "Frame" – "consistent" ("space") or "inconsistent" ("energy") computational measures of any given object (e.g., relative to the entire "Frame" of the universe, or relative to its own "Object" composition) across a given series of UF's; A unique "Critical-Prediction" of the New "G-D'S PHYSICS" Paradigm pertains to the greater "Object-consistency" (e.g., "spatial-consistency") of a relatively "more massive" particle such as the Muon, relatively to a "less-massive" particle such as the electron. This novel "computational definition" of the UCP's computation of any given object (e.g., particle) is:

# $$\begin{split} M: &\sum [Oi\{o-x, o-y, o-z\} \ [UF(n)] \\ &= O(i \dots n\{o-x, o-y, o-z\} \ \{UF(i \dots n)\} \ / \ h \ * \ n\{UF's(i \dots n)\} \end{split}$$

wherein the UCP's computational measure of the "mass" value of any given object is computed based on the number of times in which the "Object-consistent" "internal" {o-x,o-y,o-z} values across a given series of UF's frames remains constant (e.g., identical):

Therefore, the "G-D'S PHYSICS"'s unique "Critical-Prediction" predicts that relatively "more-massive" particles such as the (negatively charged) "Muon" would be measured as more "Object-consistent", e.g., "spatially-consistent") than an equivalently (negatively charged) "electron" particle, across a given series of UF's! This unique "Critical Prediction" of the New "G-D'S PHYSICS" has been precisely validated through the "Proton-Radius Puzzle" findings; since the "Muon-replaced" Hydrogen Atom's "Proton-Radius", i.e., affected by the presence of the more massive "Muon" (which "sinks into the Proton) was found to "shrink", e.g., possess a "smaller Proton-Radius" than the equivalent Proton radius of the Standard Hydrogen Atom encircled by the less massive electron particle, thereby supporting the unique "Critical Prediction" of the New "G-D'S PHYSICS" Paradigm! Indeed, this "Proton-Radius Puzzle" findings cannot be explained by QM that still cannot fully account for this phenomenon: the "three-body force"63, interactions between gravity and the weak force, or a flavour-dependent interaction68,72, higher dimension gravity62, a new boson, and the quasi-free hypothesis  $\pi$ + 65.

## b) The "Universe's Non-Continuous Accelerated Rate of Expansion" (UNCAER):

Another unique "Critical Prediction" of the New "G-D'S PHYS-ICS" Paradigm regards the "Non-Continuous Accelerated Expansion of the Universe" (UNCARE), which is based on the "G-D'S PHYSICS"'s "Collective Human Consciousness Focus" (CHCF) hypothesizing that whenever there exist a large group of human-beings focusing on this singular UCP, this leads to such an UNCARE, i.e., in which the universe's accelerated rate of expansion increases (significantly)! This unique UNCARE "Critical Prediction" of the "G-D'S PHYSICS" differs from RT's corresponding prediction of a "constant" accelerated expansion rate of the universe! This is because according to RT's Einstein's Equations (EE) the "constant" accelerated rate of the universe's expansion results from a set of three "Exceptional Expulsive Effects" (EEE), i.e., comprising: (a) The "Big-Bang" (BB) initial nuclear event that created the universe; (b) The "Cosmological Constant" (CC); The (purely hypothetical) "Dark-Matter" and "Dark-Energy" concepts assumed to expulse the various galactic elements - which are all "constant" factors, predicting a "constant" accelerated rate of the universe's expansion! According to each of these three EEE's, the rate of the universe's expansion should remain "constant" since each of these factors represents a "constant" event or phenomenon: The BB initial nuclear event created all of the mass and energy in the universe, as well as an initial "expulsive impetus" for the universe's rate of expansion; The Cosmological Constant - is stipulated to possess an "expulsive effect" "causing" an accelerated expansion of the universe is postulated to remain "constant"!; So are the purely "hypothetical" concepts of "Dark-Matter" and "Dark-Energy" - which (as mentioned) could not be detected despite two decades of intensive experimentations61,67 are still hypothesized to cause the expulsion of various galactic elements at a "constant" rate!

Surprisingly, this UNCARE "Critical Prediction" of the "G-D'S PHYSICS" has been validated experimentally through the recently documented "Cosmological-Astronomical Gap in the Universe's Expansion Rate" (CAGUAR)73-76. Results indicate that the universe's initial Cosmic Microwave Background (CMB) measurement rate of expansion indices is approximately 67 Kilometers per second per megaparsec – the current Astronomical measures are of 74 kilometers per second per megaparsec', indicating that the universe's accelerated expansion rate are significantly higher currently than at the earlier stages of the universe's existence, thereby supporting the "G-D'S PHYSICS"'s UNCARE "Critical Prediction", but not RT's EEE's "constant" (accelerated) rate of the universe's expansion!

Empirically, a basic (unexplained) "gap" exists between the universe's measured initial Cosmic Microwave Background (CMB) measurement rate of expansion indices, e.g., of approximately 67 Kilometers per second per megaparsec – as opposed to 74 kilometers per second per megaparsec in later Astronomical measures of the universe's (contemporary) rate of expansion

Hence, two unique "Critical Predictions" of this new "G-D'S PHYSICS" "A-Causal Computation" Paradigm have been validated experimentally, e.g., associated with the "Proton-Radius Puzzle" (PRP) and the "Cosmological-Astronomical Gap in the Universe's Expansion Rate" (CAGUER) substantiating the New "G-D'S PHYSICS" as more valid than the Old "Material-Causal" Paradigm underlying both RT & QM.

#### 3. Discussion

Based on these two initial empirical validations of the two ("Proton-Radius Puzzle" and " UNCARE") findings, the New "G-D'S PHYSICS" "A-Causal Computation" Paradigm offers an entirely different (satisfactory) solution for the key (unresolved) "Gravitational Enigma" associated with GRT's Old "Material-Causal" Paradigm: According to another "Computational Duality Principle" "G-D'S PHYSICS"'s Postulate, the basic "Computational Structure" of GRT's Old "Material-Causal" Paradigm, e.g., termed: a "Self-Referential Negative Computational System" (SRNCS) is "computationally flawed", i.e., it inevitably leads to both "logical-inconsistency" and ensuing "computational indeterminacy" - which are contradicted by GRT's Computational System's proven empirical capacity to determine the accelerated rate of the universe's expansion, thereby pointing at the singular higher-ordered UCP that simultaneously computes all exhaustive spatial pixels in the universe!

Specifically, the GRT's SRNCS Computational Structure assumes that it is solely based on the direct physical interactions (di) between GRT's basic "Curved Space-Time" (due to the presence of certain "massive-objects") "Contractive-Stable Universe" [C-STMo : CSU], e.g., describing a universe that is fundamentally "contracting" or being "stable" (i.e., "constant"); and the three (abovementioned) EEE's "expulsive-effects", e.g.: BB, CC, and DE – all describing a (constant) "accelerated-expansion" of the universe produces such a SRNCS Computational Structure:

#### GRT's SRNCS:

PR{[C-STMo : CSU], [EEE-BB, CC, DE/DM]} → "Not C-ST-Mo : CSU" / di ?!

Wherein it is assumed that GRT's fundamentally assumed "Contractive-Stable Universe" (e.g., due to the curvature of Space-Time by certain "massive objects") : [C-STMo : CSU] seems to both "exist" and "Not exist" at the same "di" computational level, e.g., constituting a basic "logical-inconsistency" and associated "computational indeterminacy" implying an (apparent) inability of such a SRNCS System to determine the "existence" or "non-existence" of this {[C-STMo : CSU]!? But, since empirically the universe is in fact expanding (at an accelerated rate!), e.g., "Not {[C-STMo : CSU]"; therefore, according to the CDP there must exist a singular higher-ordered UCP that simultaneously computes all exhaustive spatial pixels comprising the entire physical universe (for each UF's at the rate of " $c^2/h$ " = 1.3 $6^{-50}$  sec')!

Surprisingly, this "G-D'S PHYSICS"'s UCF also offers an alternative satisfactory explanation for the key "Gravitational Enigma": The New "G-D'S PHYSICS"'s UCF's simultaneous computation of every exhaustive spatial pixel's four basic physical features creates regions of relatively "high-mass; low energy" (signified by the large "red" circles in Figure 2) as opposed to other "low-mass; high-energy" regions (represented as the "alternating" – small "light-blue" and "white" circles in Figure 2)! This implies that those " low-mass; high-energy" regions would not appear consistently (e.g., represented as "appearing" in the "light-blue" circles, but "disappearing" in the alternating "white circles") across any given series of UF's – as opposed to the consistent presentation of the other "high-mass; low-energy" across the UFs' series, giving rise to what appears as the "curvature of Space-Time" by "massive" objects!? Hence, the New "G-D'S PHYSICS" Paradigm offers an alternative (satisfactory) explanation for GRT's "curvature of Space-Time" by "massive-objects" through the UCP's simultaneous (differential) computation of relatively "stable: high-mass; low energy" regions as opposed to "instable: low-mass; high-energy" regions which gives rise to the appearance of "curved Space-Time by

UF1

massive-objects"! This "G-D'S PHYSICS"'s resolution of the "Gravitational Enigma" based on the UCP's simultaneous computation of all exhaustive spatial pixels in the universe (for every consecutive UF's) was also shown to completely unify Relativistic and Quantum Models, as well as between the four basic physical features (for the first time in Physics!) as well as between the Four basic Forces (as different computational by-products of those four basic physical features)!

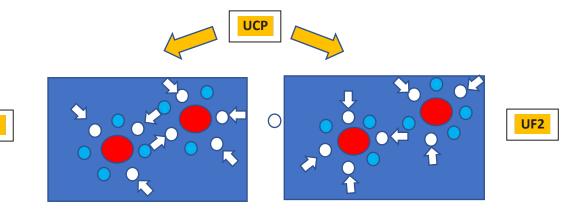


Figure 2: "G-D'S PHYSICS"'s UCP's Simultaneous Differential Computation

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