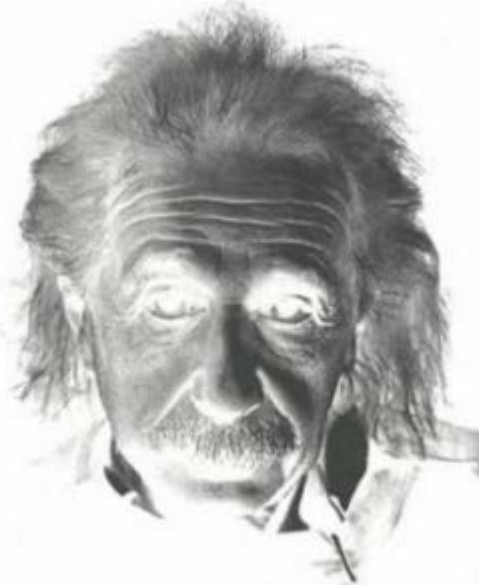


Platonic theory of spacetime

Search this site



"I want to know God's thoughts; the rest are details."



Download ZIP
(chakalov.zip)

Download all in a zip file ([51,706,221 bytes](#)). Check out [What will be the fate of spacetime engineering?](#) (2.09.2021, 1 page), [Note on Physical Theology](#) (30.08.2021, 1 page), [Notes on Spacetime Engineering](#) (30.08.2021, 21 pages), [The Physics of Life](#) (25.08.2021, 34 pages), [Quantum of Spacetime: Zenon Connection](#) (25.04.2021, 26 pages), [Experimental Tests of Spacetime Engineering](#) (8.01.2021, 15 pages), [Is There Gravitational Energy?](#) (28.12.2020, 10 pages), [The so-called GW150914 is FRAUD](#) (20.10.2020, 21 pages), [Can Penguins Drink Warm Water?](#) (24.07.2020, 11 pages), [Can Geometry Produce Work?](#) (21.06.2020, 48 pages), [Quantum Spacetime](#) (14.03.2017, 20 slides), [Über Die Gravitationsfeldrelativitätstheorie](#) (20.03.2020, 16 pages), [Gravitational Energy](#) (22.02.2020, 13 pages), [How to Bind Matter to Matter?](#) (5.02.2020, 6 pages), [Brain-Controlled Cold Plasma](#) (27.11.2019, 28 pages), [Time and Continuum: Zenon Manifold](#) (15.08.2019, 31 pages), [The Physics of Life: Flipping a Quantum Coin](#) (20.01.2019, 14 pages), [Spacetime Engineering](#) (2.04.2019, 16 pages), and the main paper

[Platonic Theory of Spacetime](#) (10.02.2019, 46 pages).

Regarding [GW parapsychology](#), read [Kip Thorne](#) and examine the facts in pp. 1-6 in my report [The so-called GW150914 is FRAUD](#).

Forget [GW parapsychology](#). It is an [insult to our intelligence](#). Read my email to many experts in GR at [this http URL](#).

God ([John 1:1](#); Luke 17:21) exists as mathematical object (p. 15 in [facts.pdf](#)), in line with the doctrine of *trialism* (pp. 11-12 in [q_coin.pdf](#)). This is the path to [quantum gravity](#), [physical theology](#), and [spacetime engineering](#).

Notice that I am interested only and exclusively only in the new [hyperimaginary numbers](#) (p. 15 in [quantum.pdf](#) and p. 21 in [BCCP](#)), which may offer solutions to various problems in number theory, point-set topology, and set theory. Thus, I cannot address any issue, which is not directly related to my [hyperimaginary numbers](#), and will have to ignore it. The physical part of my project is already completed: check out the list of online papers above. [Nobody showed any interest](#).

I also had a project about new digital EU currency ([GULDEN](#)), but it did not spark any interest either.

D. Chakalov

[chakalov.net](#)

2 September 2021, 13:20 GMT



Swing the carrot (potential future) toward your desired destination, and the donkey will carry you and the cart there.

Notes on Spacetime Engineering

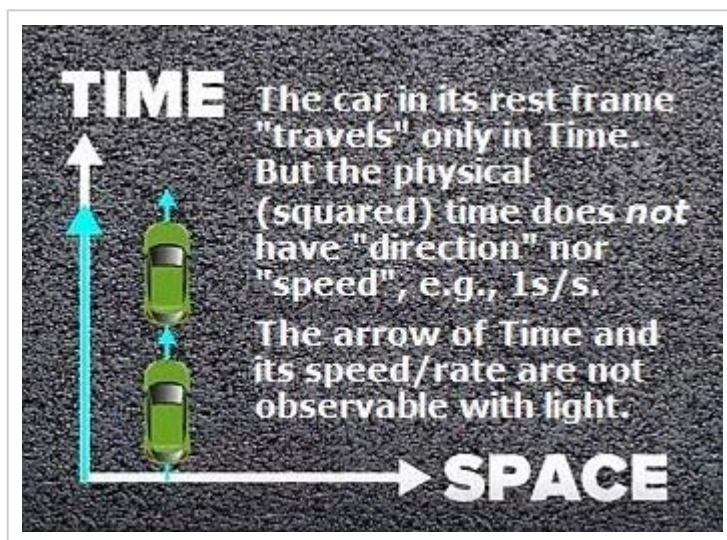
Abstract

Brief and biased notes on spacetime engineering, for open-minded people with little knowledge in physics and math.



[SE.pdf](#), 21 pages

30 August 2021, 15:05 GMT



See Fig. 9a and Fig. 9b, and pp. 8-9 in [Intro.pdf](#).

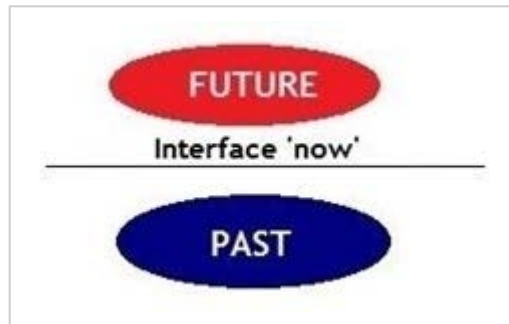
The Physics of Life

Abstract

The first off question in the physics of Life is the following: given the fact that the human brain is equipped with mind, consciousness, volition, and memory (abbreviated MCVM), what could be the physics of this chunk of wet warm matter? The two have nothing in common, yet they are perfectly correlated. The solution is based on the Platonic world and the global Heraclitean Time. It leads to a new pre-geometric theory of spacetime, called Platonic theory of spacetime. The latter is suggested as the only possible conceptual solution to the problems in quantum gravity and quantum cosmology. As a corollary, the possibilities for physical theology and spacetime engineering with MCVM are briefly explored.



[Intro.pdf](#), 34 pages + [explanation.pdf](#)



Quantum of Spacetime: Zenon Connection

Abstract

The origin of Time and Continuum is addressed with the so-called Zenon Connection (Sec. 4 and p. 7), with emphasis on (i) the infinitesimal displacement of physical objects in 4D spacetime, (ii) Planck's quantum of action, and (iii) the quantum of Time interpreted as the atom of geometry (p. 4 in [test.pdf](#)). We start with Zeno's paradox of motion (Fig. 4): the elementary chunk of spacetime, called quantum of spacetime, is neither 'zero' nor some finite viz. divisible entity. Secondly, we suggest a new type of 'quantum jump' connecting two consecutive physicalized states in the irreversible past, denoted Q1 and Q2 (Sec. 3) in the 'atom of geometry' (Fig. 2). This new quantum jump, called Zenon Connection (ZC), builds up the perfect Continuum of 4D spacetime along the global Heraclitean Time (Sec. 4 and Fig. 6). And thirdly, we suggest that the new future potential state in the atom of geometry (Fig. 2) is the Platonic pregeometric state of the entire Universe as ONE, which cannot be observed with light (p. 5 in [test.pdf](#)). The theory has unique predictions, one of which is [spacetime engineering](#).

Dedicated to the 163rd birthday of [Max Planck](#), 23 April 1858.



quantum.pdf, 26 pages
25 April 2021, 12:50 GMT

An outline is provided at pp. 10-13. Does light propagate in 4D spacetime (p. 12)? **JAIN**.



test.pdf, 15 pages
8 January 2021, 14:55 GMT

Is There Gravitational Energy?

Abstract

It is argued that gravitational energy *per se* does not exist (p. 2 and p. 4). Explanation at p. 3. The spacetime of 'the Universe as ONE' is modeled with so-called Zenon manifold equipped with Zenon Connection (p. 5), and [two modes of spacetime](#) are introduced, called local (also physical; see the drawing at p. 3) and global or Platonic (p. 3). To understand the theory, the reader is advised to start with explaining the Earth tides (p. 2).



gr_energy.pdf, 10 pages
28 December 2020, 10:50 GMT

The hottest places in Hell are reserved for those who, in times of great intellectual crisis, prefer to [stay silent](#).

The so-called GW150914 is FRAUD.

We do not tolerate GW parapsychology ([T_V_S.jpg](#)). Read the abstract at pp. 13-14 and the announcement of my latest video lecture on 21 September 2020 [here](#).



facts.pdf, 21 pages
20 October 2020, 10:30 GMT

Can Penguins Drink Warm Water?

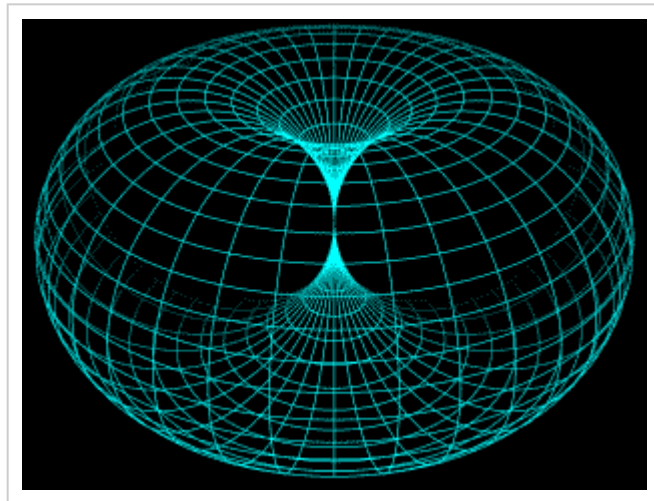
Abstract

A gentle reminder of the origin of gravity and [GW150914](#), with illustrations.



Unruh.pdf, 11 pages
24 July 2020, 14:40 GMT

Old version: [vixra:2006.0233](#), 2020-07-22



Can Geometry Produce Work?

Abstract

Can [non-tensorial](#) Christoffel symbols produce work? Consider two kitchen scales, A and B, on a table [at rest](#), and two apples on them, with different weight, say, an apple with 200g on scale A, and an apple with 400g on scale B. How would you relate their "trajectories" in 4D spacetime to non-tensorial [Christoffel symbols](#), so that the former will produce different weight? Obviously, the apple with weight 400g on scale B will (i) resist [acceleration](#) harder than the apple with weight

200g on scale A. Obviously, something is (ii) doing work by pressing simultaneously the scales A and B on the table. Obviously, (i) = (ii), but what is it? Perhaps the answer to this question will be the cornerstone of quantum gravity and physical theology. To that end, I propose two-day conference **GRAVITY 21** on 26-27 March 2021 in Munich, EU (p. 13). See also my video presentation at YouTube on 21 September 2020 (p. 27ff).



GR_textbook.pdf, 48 pages
21 June 2020, 10:53 GMT
Old version: [viXra:2003.0425vJ](#)

Time and Continuum: Zenon Manifold

Abstract

Ensuing from first principles, I suggest pre-geometric theory of spacetime [1], in which the apex of [light cone](#) 'here and now' is not modeled with dimensionless point [2], but with non-trivial mathematical object along *null intervals*, endowed with brand new structure, topology and dynamics (contrary to [Robert Geroch](#) [3]), and defined on so-called Zenon manifold [4].



[zenon.pdf](#), 31 pages
August 15, 2019, 10:30 GMT

Read my brief notes [here](#), [here](#), [here](#), and [here](#).

Brain-Controlled Cold Plasma

Hypothetical quantum fluids at room temperature, dubbed brain-controlled cold plasma (BCCP). It is argued (p. 6) that the genuine quantum state (dubbed '[John](#)') does not live on the light cone. It is UNcolorizable (Kochen-Specker Theorem, pp. 13-14) and cannot in principle be measured with/by its color-able, physicalizable 4D "jackets", although the latter can be treated with "probabilities" ([Erwin Schrödinger](#)) that sum up

to unity. Der Herrgott würfelt nicht! (Albert Einstein). God casts the matrix (p. 7 and p. 11), not the dice.



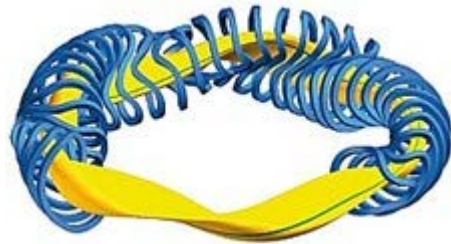
[BCCP.pdf](#), 28 pages

November 27, 2019, 11:15 GMT

Old version: [viXra:1908.0417vF](#), 2019-11-08

Read Erwin Schrödinger from 1935 at [this http URL](#).

Quantum "superposition" of classical states is an oxymoron.



Can We Replicate Stellar Nucleosynthesis?

It is argued that the genuine stellar nucleosynthesis cannot be replicated with the artificial conditions in stellarator-type fusion (Wendelstein 7-X in Germany) or tokamak fusion (ITER in France). We need quantum gravity to understand how quantum tunneling works in the presence of gravity, and then model quantum tunneling in plasma under strong gravity. As of today, the task of generating energy by fusing atoms together is not scientifically feasible. Wendelstein 7-X and ITER will not work. They may only look "exciting", like Titanic.



[Wendelstein_7-X.pdf](#), 8 pages

August 8, 2019, 22:00 GMT

Also [viXra:1908.0009](#), 2019-08-06

Spacetime Engineering

Abstract

Explanation of spacetime engineering, tailored for general audience.

Dedicated to 140th birthday of [Albert Einstein](#).



[st_eng.pdf](#), 16 pages

April 2, 2019, 12:55 GMT

Also [viXra:1902.0098](#), 2019-04-02

The Physics of Life: Flipping a Quantum Coin

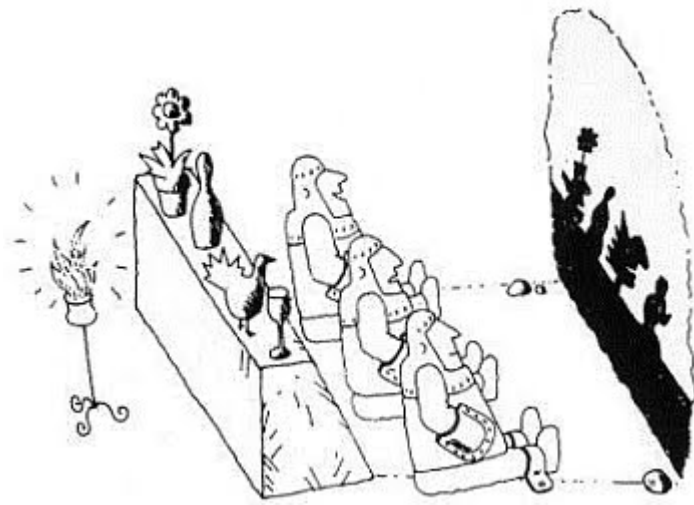
Abstract

If [Schrödinger's cat paradox](#) is difficult to understand, consider flipping a quantum coin. At the end of the day, the physics of life shows a hint to quantum gravity and spacetime engineering.



[q_coin.pdf](#), 14 pages

January 20, 2019, 16:55 GMT



Platonic Theory of Spacetime

D. Chakalov

Abstract

Commemorating 110 years of Hermann Minkowski's lecture RAUM UND ZEIT, given at the 80th Meeting of the German Society of Scientists and Physicians (Gesellschaft Deutscher Naturforscher und Ärzte) in Cologne on 21 September 1908 and based on the crucial contributions to the theory of Special Relativity by Hendrik Lorentz, Albert Einstein and Henri Poincaré, I am happy to announce my video lecture, entitled: Platonic Theory of Spacetime.

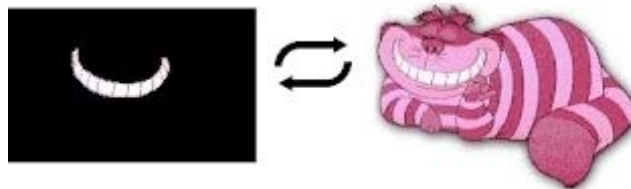


[about_spacetime.pdf](#), 46 pages

10 February 2019, 15:50 GMT

Also [viXra:1802.0397](#) 2018-11-13

Watch my [announcement](#) (1min 46s) at [this http URL](#).



Gravity-Matter Duality

D. Chakalov

Abstract

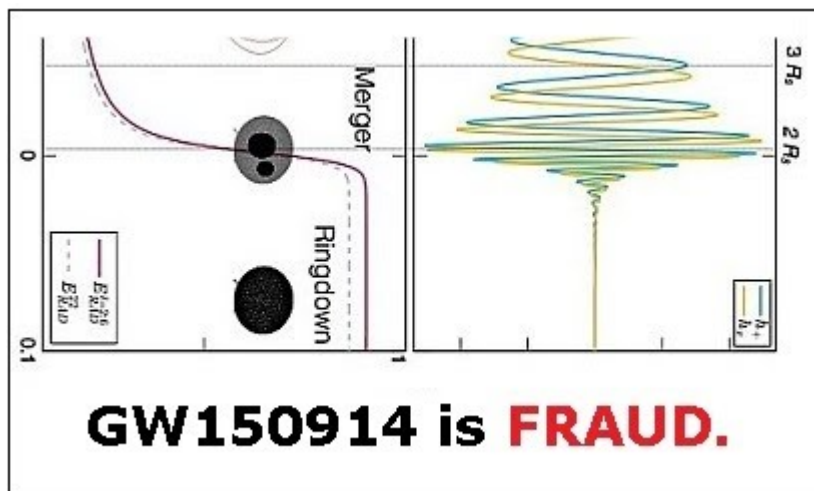
Gravity-matter duality is suggested as the first step toward quantum gravity, ensuing from the idea that the phenomenon dubbed 'gravitational field' is a new form of reality, known as *Res potentia* – "just in the middle between possibility and reality" (Heisenberg, [Slide 7](#)). The essential similarities and differences between gravity-matter duality and wave-particle duality are briefly examined, with emphasis on the proposed joint solution to exact localization of gravity and "quantum waves" at spacetime points. The latter are endowed with brand new structure and topology due to the fundamental flow of events suggested by Heraclitus – *Panta rei conditio sine qua non est*.



[gm_duality.pdf](#), 9 pages
November 1, 2017, 17:40:13 GMT

Also [viXra:1707.0400vE](#), 2017-11-01

My objections to EU-funded Einstein Telescope and LISA can be downloaded from [this http URL](#).



According to the proponents of [GW astronomy](#), the wave pattern (shown above) of binary black hole (BBH) merger dubbed GW150914 1:1 matches the wave pattern of *very strong* GWs at the immediate vicinity of *the same* BBH merger over [one billion](#) years ago, because the latter was absolutely not altered due to [non-linear interactions](#) of *very strong* GWs with matter and fields in the cosmos for over one billion years, before being detected by LIGO on 14 September 2015. No. We do not accept "[ghosts](#)" that would "act" without being [acted upon](#) for over [one billion](#) years, even if they are backed by [Nobel Prize](#):

The 2017 Nobel Prize for physics was awarded to a FRAUD.

D. Chakalov

Abstract

After a brief recall of the widely known, and still unsolved problems of the coupling of gravity to matter and the non-linear transport of mass-energy (equivalent to "200 solar masses per second") by gravitational waves (GWs), it is concluded (p. 19) that the alleged "detection" of GWs and black holes on 14 September 2015, dubbed [GW150914](#), is impossible, and therefore is **FRAUD**. I also provide various conditions under which the conclusion can be proven false and refuted. For example, regarding the origin of GW energy, **if** the so-called "mixed procedure" ([Jose Pereira](#)) can be derived from non-linear GW effects ([MTW p. 968](#)) due to arbitrary GW amplitude ([Michele Maggiore](#)) inducing stresses in matter ([Robert Wald](#)), say, in a plastic bottle (p. 21) at distance 1 AU from [GW150914](#), the conclusion by Hermann Weyl on the [linearized approximation of GR](#) (p. 19) will be refuted. Then **all** projects in [GW astronomy](#), including Laser Interferometer Space Antenna ([LISA](#)), will be duly [vindicated](#), and I'll eat my hat.



[FRAUD.pdf](#), 25 pages
December 30, 2017, 19:32:15 GMT

[viXra:1712.0017vA](#), 2017-12-30 12:45:17 GMT

Panta Rei: The Evolution Equation

D. Chakalov

Abstract

It seems possible to suggest the evolution equation in cosmology, which permits unlimited *creatio ex nihilo* from the quantum vacuum, without leading to catastrophic events. The *physicalized* presentation of the Universe is interpreted as 'Brain of the Universe', which gives access to 'God's thoughts' (Albert Einstein) with spacetime engineering performed by the human brain embedded in the Brain of the Universe.



[CEN.pdf](#), 22 pages
June 25, 2017, 10:44:09 GMT



Penrose-Norris Diagram

D. Chakalov

Abstract

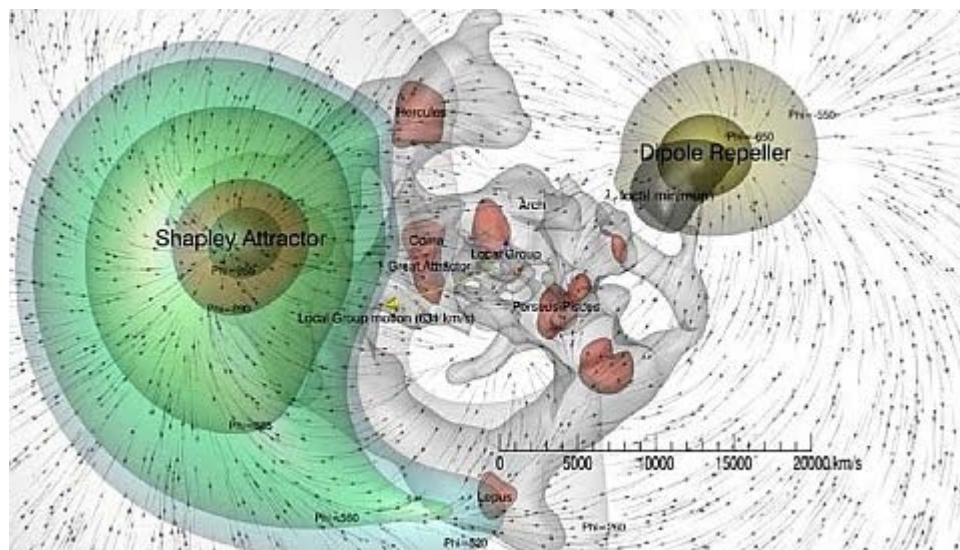
Brief outline of Penrose diagram and related topics.



[Penrose_diagram.pdf](#), 7 pages
June 21, 2017, 13:52:00 GMT

Also [viXra:1705.0219v8](#), 7 pages, 2017-06-21.

The new theory of gravity seeks to **reproduce** all effects of gravity (p. **3** in [holon.pdf](#)) by tweaking the Platonic *matrix* of rods and clocks: "spacetime has its own rods and clocks built into itself" ([MTW p. 396](#)).



Gravitational Holomovement and Rotation

D. Chakalov

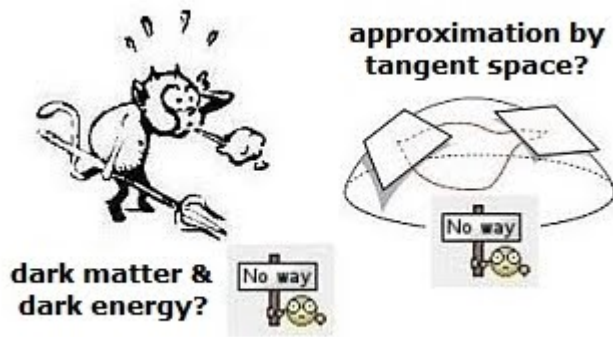
Abstract

We model the *physicalized* manifestation of the Universe as bootstrapped 'Brain of the Universe' and seek evidence for its [brain-like](#) functional organization, resulting from the **Holon** of the Universe facilitated by space-like correlated gravitational holomovement and rotation. The orthodox model of gravity, based on "[tangent vectors](#)" and "[curvature of spacetime](#)", is replaced with the proposal that the *physicalized* clocks and rulers are very flexible 'jackets' (cf. John's jackets parable in [CEN.pdf](#)), which can slow down or speed up viz. shrink or expand, leading to perfectly correlated Brain of the Universe living in so-called 'relative scale' (RS) spacetime. The question of [Universal Mind](#), complementing the Brain of the Universe, pertains to physical theology and the doctrine of *trialism*, and was examined in previous publications (Sec. 6 in [spacetime.pdf](#)).



[holon.pdf](#), 6 pages
June 25, 2017, 11:20:21 GMT

Old version: [viXra: 1705.0147v3](#), 6 pages, 2017-05-12



The Spacetime

D. Chakalov

Abstract

Ensuing from first principles, the theory of spacetime and its metaphysical axioms are introduced as prerequisites to physical theology and the so-called relative scale spacetime.

Comment: Dedicated to our Lord and Savior [Jesus Christ](#).



December 24, 2016, 1,586,148 bytes, [36 pages](#), 13:13:13 GMT.
Also [viXra 1601.0209\[vF\]](#), 36 pages, 2016-12-24 13:32:11 GMT.

Notice the new hyperimaginary numbers (see ref. [3] on [p. 28](#)). I am interested [only and exclusively only](#) in these new numbers, which are expected to provide solutions to various problems in [point-set topology](#), [set theory](#), and [number theory](#). The alleged [local differential geometry](#) is **false**. We need totally new *global* boundary conditions to define a [closed and conserved](#) Universe in the **past**, which is **coupled** (*Sic!*) to an [evolving](#) Universe in the **future** (Fig. 7 on [p. 8](#)). The non-linear [coupling](#) between the **past** and the **future** states of the Universe, corresponding to the phenomenon of *transience* ([Heraclitus](#)), requires hyperimaginary numbers, and also opens the road to spacetime engineering ([p. 34](#)) and to the *origin* of gravity and [inertia](#).

Details in pp. 59-64, p. 67, p. 77, pp. 80-83, p. 85, and pp. 103-161 in <http://www.god-does-not-play-dice.net/gravity.pdf>
(3,016,431 bytes, 15 February 2018, 19:43:54 GMT)

Check out also [gravity_rotation.pdf](#) (3 pages, August 3, 2016).

What are the basic building blocks of the universe?
What are the forces by which they interact with one another?
Why is the universe larger than a football ?

Quantum Spacetime

You cannot look twice at the same river, Heraclitus

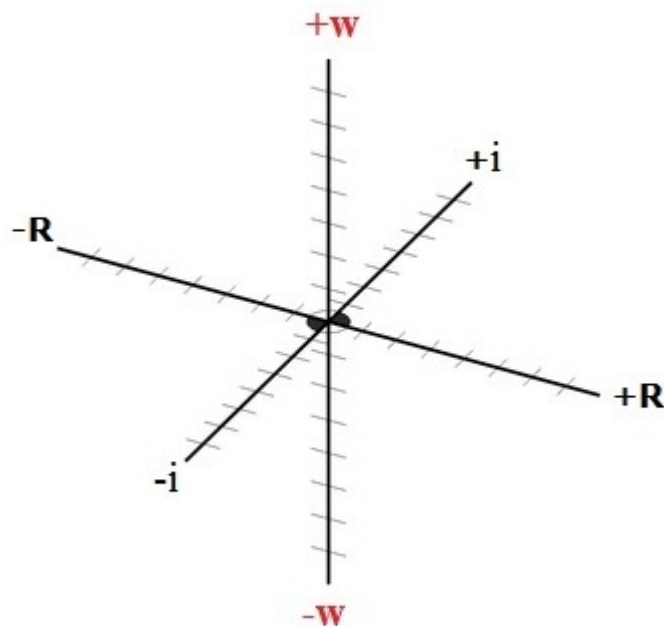
Dedicated to 138th birthday of Albert Einstein, 14 March 2017

DOWNLOAD



The slides of my talk 'Quantum Spacetime' can be downloaded from [this http URL](#). Regarding Slides 10 and 15, check out Ivo van Vulpen at [this http URL](#): "Why is the universe larger than a football ?"

D. Chakalov, March 14, 2017, 00:51:23 GMT



Hyperimaginary Numbers

D. Chakalov

Abstract

The idea of *hyperimaginary numbers* is suggested as the first step toward the mathematical basis of *res potentia* (Plato), presented in the right-hand side of the evolution equation $|\mathbf{w}|^2 = |\mathbf{m}|^2 + |\mathbf{m}_i|^2$. The real and imaginary (*tachyonic*) components in the right-hand side are always balanced, leading to $|\mathbf{w}|^2 = 0$ — the *physicalized* world is made of positive mass-energy only, $|\mathbf{m}|^2$, which is always balanced (not "conserved") by equal amount of $|\mathbf{m}_i|^2$, once-at-a-time, ever since The Beginning ([John 1:1](#)). God is interpreted as mathematical (hyperimaginary) object residing "inside" the 4D instant here-and-now ([Luke 17:21](#)), and conceptual solutions to fundamental problems in point-set topology, set theory, and number theory are briefly described.



[hi_numbers.pdf](#), 26 pages, 7 February 2018, 16:00:45 GMT
[viXra:1611.0084vH](#), 26 pages, 2018-02-07, 16:15:04 GMT

The [full manuscript](#) will be available only on Christmas 2016, upon request. I will elaborate on the main, and certainly not original, statement made on p. **3** in '[Hyperimaginary Numbers](#)' that the physical world (*res extensa*) offers only the necessary condition for its existence, while the Platonic matrix of *res potentia* is the sufficient condition: "It's a bundle¹⁸." All this is encapsulated in the so-called Arrow of Space (AoS), because what we call 'time' is not just 'change in space', but 'change **of** space' as well: it's a bundle. Hence I model the entire physical world as the 'Brain of the Universe', and suggest AoS based on Fig. **3** in '[Hyperimaginary Numbers](#)', along with specific applications of the equation $|\mathbf{w}|^2 = |\mathbf{m}|^2 + |\mathbf{m}_i|^2$ for Mathematics, quantum gravity and cosmology, and spacetime engineering.

D. Chakalov
November 12, 2016

Gravitational Wave Miracles?

D. Chakalov

Abstract

The hypothesis of gravitational wave, suggested by Albert Einstein in 1916, still poses outstanding challenges, which have to be resolved by the theoretical physics community as soon as possible.



September 10, 2016, [gw_miracles.pdf](#), 6 pages.
Also [viXra:1607.0377v6](#), 2016-08-31, 4 pages.



Consider a spherical cow ...

GW150914: Are Cows Spherical?

D. Chakalov

Abstract

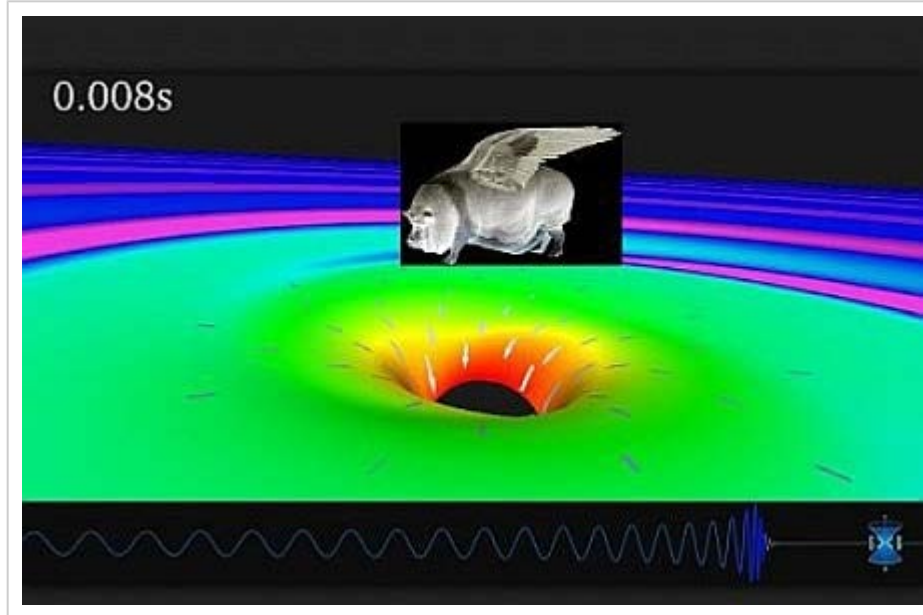
I argue that vacuum spacetime with $T^{ab} = 0$ is highly exaggerated approximation, like the famous 'spherical cow'. If you are a cowboy and wish only to count the number of cows in your herd, you may of course think of them as 'spherical objects'. But imagine the following situation: as you walk in your grassland, you notice that the grass on a loan has been hardly pressed to the ground, as if some heavy object has passed through your grassland. Would you say that some brand new spherical cows have rolled over the grass? That will be just like [GW150914](#), the alleged discovery of gravitational waves and black holes in vacuum spacetime.



July 20, 2016, 405,967 bytes, [GW150914.pdf](#), 8 pages.
Also [viXra: 1606.0228v5](#), 2016-07-19, 8 pages.

Check out also

<http://www.god-does-not-play-dice.net/gravity.pdf>
http://www.god-does-not-play-dice.net/kip_slide_5.jpg



<http://www.god-does-not-play-dice.net/excerpt.jpg>

GW150914 is a **FRAUD** supported by at least **1522 fraudsters**:
 "As this event turned out to be a binary black hole merger, there is little expectation of a detectable electromagnetic signature. (...) In classical general relativity, a *vacuum* BBH merger does not produce any EM or particle emission whatsoever."
 (LIGO & VIGRO, [arXiv:1602.08492v2 \[astro-ph.HE\]](#), p. 1 and p. 9)

Vacuum spacetime with $T^{ab} = 0$ is highly exaggerated approximation, like a 'spherical cow'. If **1522** people claim to have detected the **pattern** of perfect spherical cows rolling downhill like a football, don't buy it. It is like **pink unicorns dancing with red herrings**. Proof: a "vacuum" with $T^{ab} = 0$ cannot contain any *gravitational* energy, so the gravitational field **cannot** "do work on matter and vice versa". Yet **Kip Thorne** claims that **GW150914** was "by far the most powerful explosion humans have ever detected except for the big bang", only it did **not** produce "any EM or particle emission **whatsoever**." What a stinky **nonsense**.

If you disagree, you'll have to explain the "connection between compact binary mergers and short Gamma-Ray Bursts" (Valerie Connaughton *et al.*, [arXiv:1602.03920v3 \[astro-ph.HE\]](#)) and associate **GW150914** with the "transient signal at photon energies > 50 keV (Sic! - D.C.) that lasted 1 s and appeared 0.4 s after the GW signal" (Avi Loeb, [arXiv:1602.04735v2 \[astro-ph.HE\]](#)), which **INTEGRAL** did **not** detect (Vova Savchenko *et al.*, [arXiv:1602.04180v2 \[astro-ph.HE\]](#)). All this in **vacuum spacetime**, $T^{ab} = 0$, which means that "the most powerful explosion humans have ever detected except for the big bang" (**Kip Thorne**) could be produced and manifested **only and exclusively only by Weyl curvature** that "governs the propagation of gravitational radiation through regions of space devoid of matter", without "any EM or particle emission **whatsoever**." What a pathetic **nonsense**.

GW150914 is a **FRAUD**. Don't ever say that you knew nothing about it.

Gravitational Wave Astronomy: RIP

D. Chakalov

Abstract

As an epitaph of the project for so-called GW astronomy, I suggest the famous saying by Confucius: "The hardest thing of all is to find a black cat in a dark room, especially if there is no cat". Specific examples are drawn from [GW150914](#) and [LISA Pathfinder](#), to explain why [GW astronomy](#) was born dead [from the outset](#). Since the issue of energy transport by gravity is crucial to General Relativity, in the second part of the paper I offer a hypothesis about the origin of gravitational radiation in Relative Scale (RS) spacetime, and outline hypothetical applications of spacetime engineering for producing ecologically clean and unlimited energy by polarization of the so-called light vacuum.

Comment: Due to the sensitive nature of [clean unlimited energy sources](#) from spin-0 gravitational radiation, the full paper is available only upon request ([Matthew 7:6](#)).



May 18, 2016, 850,549 bytes, [11 pages + more](#).

Potential Reality I: Relative Scale Spacetime

D. Chakalov

Abstract

Ensuing from first principles, a new theory of spacetime has been suggested, called 'relative scale spacetime'. It denounces the absolute size of objects at different length scales, thanks to which the phenomena known as quantum state ("just in the middle between possibility and reality", Heisenberg) and Einstein's "total field of as yet unknown structure" are unified as potential reality of quantum-gravitational origin (dubbed causal field), endowed with relative-scale metric. At macroscopic scale, it produces what is known as gravitation, without any dark matter nor dark energy.

Comment: Dedicated to the centenary of Einstein's General Relativity.

Read the final version ([8 November 2015](#), 44 pages, 2,199,898 bytes) in [rs_spacetime.pdf](#).



Notice the interpretation of [John 1:1](#) & [Luke 17:21](#) in physical theology, Case IV in Table 1 on p. **8** in [rs_spacetime.pdf](#). [St. Thomas Aquinas](#) raised the question in 13th century (*Summa Theologiae*, Part I, Question 85, [Article 8](#)): "*Punctum non ponitur in definitione lineae communiter sumptae.*" ('A point is not included in the definition of a line as commonly assumed'). It's all about Mathematics.

Check out also pp. 17-38 in [note.pdf](#) and pp. 24-28 in [horizon.pdf](#).

I had the impression that have understood the so-called [fictitious force](#) in [General Relativity](#) only once, in June 1972 at age 20. It was a beautiful feeling, which lasted until the end of 1973 and [never came back](#). How can we understand something that *acts* like a force and is related to [the entire spacetime](#), but is **not** a force? Perhaps "inertial effects arise from the gravitational field of a moving universe" ([Dennis Sciama, 19 August 1952](#)), provided that its "motion" ([the flow of time](#)) and "rotation" are defined with respect to the [Universe as ONE](#).

Download the *red herrings* known as "event horizon" and "gravitational-wave astronomy" ([horizon.pdf](#), 29 pages and [note.pdf](#), 38 pages), my message to the Human Brain Project ([HBP.pdf](#), 10 pages), the abstract of the first paper introducing the so-called *biocausality* ([January 1990](#)), the final version of Relative Scale Spacetime from [viXra: 1410.0194](#) (2015-11-08 18:34:20, 44 pages) and my comments on it ([comments.pdf](#), 77 pages and [censorship.pdf](#), 27 pages), and the PDF copy of the old (now archived) website plus additional papers, [Indefinable.pdf](#) (413 pages, 13,030,908 bytes, 5 August 2018).

Forty-nine years ago (January 1972), I started this project with the hope to understand the physics of the human brain and learn to harness its tremendous latent abilities (see ref. [\[63\]](#) in [rs_spacetime.pdf](#)). The reason for seeking new physics was explained on [16 July 1997](#), [16 July 1998](#), and [20 December 1998](#), but nobody showed any interest. I created this website on 21 October 2013, to present my project 'Maximal Set Theory' (see Table 1 on p. **14** in [spacetime.pdf](#)), but it did not attract any attention and I decided to archive it (pp. 252-350 in [Indefinable.pdf](#)). As [Upton Sinclair](#) explained, "It is difficult to get a man to understand something, when his salary depends on his not understanding it."

More in my forthcoming book *The Physics of Life* (manuscript in preparation, ETA 6.01.2022)

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There is no matter as such! All matter originates and exists only by virtue of a force which brings the particles of an atom to vibration and holds this most minute solar system of the atom together. We must assume behind this force the existence of a conscious and intelligent Geist (bewußten intelligenten Geist). This Geist is the matrix of all matter.

[Geheimrat Max Planck](#)