

https://www.aldebaran.cz/bulletin/2022_06_par.php

Issue 6 – Published February 4, Volume 20 (2022)

© Copyright Aldebaran Group for Astrophysics

Publishing or distributing content is prohibited

Strange science that is forbidden to spread

SSN: 1214-1674,

Email: bulletin@aldebaran.cz

6/2022

Spacetime quantization - parallel worlds

David Zoul

+ polemical comment

(note: I commented on my previous work "Quantification of Spacetime - Multiverse" by Mr. Zoul here:

http://www.hypothesis-of-universe.com/docs/aa/aa_192.pdf

At first glance, space-time appears to us as a continuous smooth continuum, much like looking at the surface of a stormy ocean from a high-flying plane. O.K. We see only a smooth surface, only slightly globally curved into the shape of a globe. As the observer parachutes down and gradually approaches the surface, he sees more and more clearly that it is rippled. When he finally hits the surface, he realizes how far the surface is to an ideally flat and smooth surface. In meter scales, the local curvature of the surface (waves) fluctuates strongly, in centimeter and millimeter scales, even the topological structure of the surface (**which are dimensions**) fluctuates - drops separate, **foam bubbles are formed** (**which are spatiotemporal dimensions**).

Similarly, in our space-time "continuum" the smaller microarrays we observe, the more pronounced will be **the quantum fluctuations of geometry**, **fluctuations in the geometry of dimensions of two quantities, geometry in the absence of dimensions does not make sense until finally in Planck length scales = Planck interval** can fluctuate strongly space topology itself ..., http://www.hypothesis-of-universe.com/docs/c/c_221.jpg . New "micro-universes" may separate, **and Zoul's sci-fi is coming and will disappear again. Ball-geons of coiled dimensions can form and they will act as elements of matter.** In the case of randomly generated sufficiently large fluctuations, their inflation expansion **inflační expanzi** and the emergence of a new "macro-universe" may occur, **as we explained in the previous part AB 3/2022).**

Explaining them is completely different than proving...; Even Hell with Devils can be "explained" by an engaging narrative, and you know part AB 3/2022, I also commented on "my explanation". http://www.hypothesis-of-universe.com/docs/aa/aa_192.pdf

Thus, according to quantum geometrodynamics, the seemingly empty vacuum is the scene of O.K.'s most turbulent microvoids. - spacetime has a kind of "foamy" constantly spontaneously fluctuating microstructure. O.K. My HDV goes on to explain that with this foam, "our Universe" began its genesis after the Big Bang by modifying the curvatures of dimensions **a)** unpacking dimensions and **b)** collapsing dimensions into "exact topological configurations" = packages that have become mass elements and **c)** unpacking the opening foam of the vacuum, ie 3 + 3 D also leads to the physical fields - which are also certain crooked states of 3 + 3 dimensional space-time, etc., .. **as I show my visions in my work HDV.**

You explain "your" fairy tale "(this is not proven) I also explain" my "fairy tale. With the difference that the reader can never be sure and it will not be whether your fairy tale is more scientific because and only because you describe it in combed beauty and in more elaborate mathematics. Test particles = space-time particles will be ruthlessly tossed in such an environment of 3 + 3 chaotic foam dimensions , like our parachutist on a stormy sea.



Obr. 1: Zvětšení mikrofuktuaci kvantového prostoročasu v [dimenzionální redukci](#)

Obr. 1: Representation of quantum space-time microfluctuation in **dimensional reduction** [dimenzionální redukci](#)

Dimensional reduction - a standard mathematical or physical procedure approximating a **certain model** by focusing only on **certain** selected degrees of freedom, while ignoring all other degrees of freedom. * **Simply a Hell model with only one cauldron and one devil.** For example, **we can** convert a difficult-to-imagine five-dimensional variety by dimensional reduction (**we can** also "convert" the 3 + 3 dimensional variety of space-time in HDV to packages http://www.hypothesis-of-universe.com/docs/c/c_423.gif ; http://www.hypothesis-of-universe.com/docs/c/c_421.gif for a **mathematically easier to grasp structure** with a smaller number of dimensions **Easier to grasp mathematics for 25 basic particles of matter** http://www.hypothesis-of-universe.com/docs/ea/ea_006.pdf also one day

someone will do the tangible math for me

Killing's vector field - introduces, - "introduces" or invents, explodes, fantasizes *Hell with devils* because we need it... for description... description... in differential geometry for the description of spacetime symmetries. Again: Spatio-temporal symmetries appear somewhere and vector fields in differential geometry are "introduced" to describe them. The symmetry of the physical system is described by the Lagrangian and leads to the laws of conservation of certain quantities, ie : symmetry leads to the laws (conservation) .., aha, (integrals of motion - especially energy and momentum) even using curvilinear coordinates and in curved spacetime. Again: symmetry even in curved spacetime leads to conservation laws. (?) The Killing vector expresses the components of infinitesimal translation preserving length (so-called isometry). The distribution of the Killing vector at each point of the variety then forms the Killing vector field of infinitesimal isometric generators. That is, Zoula "introduced" the vector field as a generator of isometries, to describe spatiotemporal symmetries... If spacetime has certain symmetry properties (eg spherical, axial or planar) expressed by the existence of appropriate Killing vectors, then a vector can be constructed covariant momentum values, calculated in a coordinate base. Depending on whether the Killing vector is of the temporal or spatial type, this can be interpreted as the law of conservation of energy or momentum. That is: we have introduced an array (in which there is a time or length vector) and this (vector) can be INTERPRETED as the law... aha...;

I am not a physical scholar, but my common sense thinker tells me that there is no balance or law of conservation in the Universe permanently, that the law of conservation is an extreme exception, and that violations of conservation laws are commonplace. In my HDV I promote the principle of alternating symmetries with asymmetries (as a condition of genesis)

Calibration bosons - quantum of calibration fields. If we extend the field potentials in a precisely defined way by any scalar function Q , the fields retain their properties regardless of the choice of this function, or the so-called calibration. No measurable quantity must depend on the choice of this or that calibration, neither in classical nor in quantum mechanics - nature is calibration invariant. The transition from one calibration to another is called a calibration transformation. This transformation often requires the presence of new compensating fields, which we call calibration fields, and the quantum of these fields are called calibration bosons. Complementing symmetries into equations is the basic principle of theories (I would add my principle: the principle of alternating symmetries with asymmetries, without which genesis would not exist) built on the transformational symmetries of physical laws - so-called calibration theories. That is, the "established" theory "into the Universe."

Vector bosons - calibration bosons with spin equal to 1, for which the function describing individual projections $(-1, 0, 1)$ forms a vector field - hence the name. Usually, however, this term refers to only the quantum of the three calibration fields of the weak nuclear interaction, described by the SU symmetry group (2). We denote these particles by the symbols W^+ , W^- , Z^0 . They were discovered by Carlo Rubbia and Simon van der Meer in the CERN laboratory in Geneva in 1983, for which they both won the Nobel Prize in Physics a year later.

Quantum vacuum energy

For example, if we observe a magnetic field of induction B in a spatial region characterized by the dimension ℓ , the field energy proportional to $B^2 \ell^3$ will be contained there and the time required to measure the field will be ℓ / c . The uncertainty relation $\Delta E \Delta t \gtrsim \hbar$ then gives $(\Delta B)^2 \ell^4 \gtrsim \hbar c$. If we have a cell with side ℓ and therefore area $\sim \ell^2$, there will be quantum fluctuations of field strength of the order of $\Delta B \approx (\hbar c)^{1/2} / \ell^2$. (1) which Mr. Zoula carefully found out (in the garage) The energy density \sim mass of the field in a typical cell reaches fantastic values which Mr. Zoula accurately measured (in the garage) $\rho = (\Delta B)^2 / c^2 = \hbar / (c \ell^4) \approx 5 \times 10^{96} \text{ kg / m}^3$. (2)

Let's repeat this fairy tale: in the garage, Zoula found a density of $5 \times 10^{96} \text{ kg / m}^3$, but where to get so much mass when the whole universe has 10^{56} kg of mass? Utopian density. If we have this density we call the Planck-Wheeler mass density, and it is considered to be the limit value of the mass concentration of electromagnetic or gravitational radiation in space-time. The characteristic energy \sim mass per cell will then correspond to the Planck mass $M_h = 2.2 \times 10^{-8} \text{ kg}$, ie of the order of 1026 eV. This is several orders of magnitude more than the greatest particle energies recorded so far in cosmic rays, and 17 orders of magnitude more than the rest mass of the heaviest known elementary particles. However, these huge densities are clearly at odds with the very low mean energy density we observe in the current vacuum. (in the garage) However, if we take into account the contribution of gravity to the energy and mass density, then two typical neighboring cells with masses $m_1 \approx m_2 \approx M_h$, whose centers are spaced ℓ apart, will have a binding energy during the gravitational interaction.

$$E_{\text{gr}} = -Gm_1m_2 / r_{12} \approx -c^2/(\hbar c/G)^{1/2}. \quad (3)$$

Mass defect of two adjacent cells

$$\Delta m_{\text{gr}} = E_{\text{gr}} / c^2 \approx -(\hbar c/G)^{1/2} = -M_h \quad (4)$$

it is therefore negative and of the same order as the positive electromagnetic mass of both structures. It can locally compensate for the energy of the respective fluctuations. Such locally compensated fluctuations no longer show gravitational attraction with other more distant cells. After such a total compensation of huge picofluctuations, the vacuum can really look as we see it (in the garage).

Elementary particles, which are apparently far from elemental, are a kind of collective excitation in the sea involving a huge number of space-time elementary cells (?), Which, however, cancel out everywhere else on average, creating the usual vacuum on a macroscopic scale. That is: matter - particles are excitations of elementary cells

This succeeded in eliminating This succeeded in eliminating (by "introducing" another mathematics - "Bulgarian" mathematics) one tricky problem that has plagued physics since the 1950s., when the QED was formulated, by "introducing" other mathematics ("Bulgarian" mathematics). Although this theory predicts

electromagnetic phenomena in fantastic agreement with the experiment, its prediction of vacuum energy density differed from the experimentally determined vacuum energy density by a full 140 orders of magnitude, making it clearly the worst prediction in the history of physics. **And it is done !**



Five-dimensional unitary theories

Between 1921 and 1925, Theodor Kaluza and Oskar Klein introduced a completely new approach to the problem of unifying the gravitational and electromagnetic fields. For a general description of physical reality, they proposed to use a five-dimensional variety (in which the space-time OTR is a certain four-dimensional subspace) string theorists proposed 10 + 1. In HDV, I believe in basic 3 + 3D space-time, while the realization of all material elementary particles requires 9 + 8 dimensions <http://www.hypothesis-of-universe.com/index.php?nav=ea> in the hope that the fifth the dimension could express the electromagnetic field. Kaluza and Klein were apparently inspired by the way Minkowski unified the three-dimensional separate electric and magnetic fields by moving to four-dimensional spacetime.

We observe physical spacetime as four-dimensional. No one has examined the reality of whether the time-quantity also has 3 dimensions... so the "excess" fifth dimension (which has no direct geometric meaning) must be disposed of by placing a suitable condition on the five-dimensional geometry. Kaluza originally introduced a relatively artificial requirement of "cylindricity", according to which there should be a one-dimensional group of isometric transformations in a five-dimensional variety; this creates a Killing vector field, Killingovo vektorové pole, which leads to the fact that a five-dimensional geometric structure can be fully described by the geometry of a four-dimensional hyperplate. Later, Einstein, Bergmann, and Bargmann proposed a different geometric condition: the closedness (compactness) of a five-dimensional variety in the fifth dimension. Or closedness = packing extradimensions into n + m dimensional packages. <http://www.hypothesis-of-universe.com/index.php?nav=ea> abstract idea of "packing" dimensions into n + m balls http://www.hypothesis-of-universe.com/docs/c/c_283.jpg A mathematician will always be able to find the "necessary" mathematics at the request of a physicist, see many examples from 100 years of physical science. The five-dimensional variety would then have a topological structure $M^4 \times S^1$, where M^4 is Minkowski spacetime and S^1 is a circle, ie the variety would have the shape of a thin tube. If the radius of this tube (compactness radius) is small enough (subatomic dimensions), no macroscopic object can move in the fifth dimension and spacetime effectively appears to be four-dimensional.

In theory, the parameterization of metrics and the designation of quantities are chosen without prejudice to generality so as to obtain Einstein's and Maxwell's equations in the usual form. The fifth field variable - the scalar quantity φ - is superfluous in Kaluzov-Klein theory, and Kaluza ruled it out by simply setting it equal to one. Attempts were later made to understand the significance of this scalar field and to give it cosmological significance; Carl Brans and Robert Dicke related this field

to a long-range scalar field in their **so-called scalar-tensor theory of gravity**. This attempt to describe fields with higher extra dimensions is convulsive and possibly non-physical. How "stupider" is the vision-design of "packing" $3 + 1$ ($3 + 3$) dimensions into $n + m$ packets which will then have the properties and character of matter, it will be matter. Then the states of all fields and mathematical processing will remain "in the old mathematics" using $3 + 1$ dimensions and $3 + 3$ dimensions of space-time, respectively. **In theory and in HDV, the parameterization of metrics is chosen without prejudice to generality, as I show it in HDV, while Einstein's and Maxwell's equations remain in the usual form.** A notation technique The standard model of particles and interactions can remain both Feynman and Navratilov http://www.hypothesis-of-universe.com/docs/c/c_088.jpg

For some time, Einstein and Bergman held the hope that the periodicity of the fields with respect to the fifth **compactified coordinate** (along which the field could change with a period equal to the length of the compaction circle) **could** explain quantum phenomena and allow **classical elementary particle models to be created**. Scientist Zoula is talking about one "compactified coordinate"... why **coordinates ??**, why **couldn't** it and shouldn't be instead of the "coordinates" **true real dimension** of that $3 + 3$ space-time ??? even why it couldn't be more than one dimension? why not ??? However, this resemblance to Bohr-Broglie's quantization proved to be superficial and the corresponding hopes did not materialize. Kaluzov-Klein's theory did not lead to the desired results and for a long time it fell into virtually oblivion. In recent decades, however, we have unexpectedly experienced a "renaissance" of the Kaluz-Klein concept in connection with **efforts to geometric formulate quantum gravity**. Of course, from the dimensions of space-time. These are **generalized Kaluzo-Klein theories** that provide **interesting possibilities for models of the universe with a larger number of dimensions**. Mr. Zoul, how would you distinguish between the terms "dimension" and "dimension"? Interesting possibilities of use-use of higher (extra) dimensions has been modeling my HDV for 40 years.

Gate cosmology

In its simplest **version**, this **gate cosmology** (namely in version = theme, idea, version = vision, creation, and speculation), this term in connection with relativistic cosmology refers to the physical image of space-time, in which our four-dimensional M_4 space-time is a similar surface in five-dimensional space-time M_5 . My HDV version points to a physical image of spacetime in which "your" four-dimensional M_4 spacetime is a similar sub-area in $3 + 3d$ dimensional spacetime M_4 .

Mr. Zoul, you **come up with** some Cosmological Gates and then **say** "it-and-it" about them. For example, you say four-dimensional spacetime is superimposed on some five-dimensional spacetime.

How many orders of magnitude has higher scientific value / truthfulness **your fiction compared to my fiction in HDV ?? ??**, where I present a vision of physical space-time $3 + 3D$, which when it starts to curve, first creates a "physical field" and then more and more curve until the time and length dimensions collapse into balls (up to $9 + 8$ extra dimensions), ie into geone-packed formations where these local formations (Planckian sizes) become real physical elements of matter, see SM. The abstract idea is, for example, http://www.hypothesis-of-universe.com/docs/c/c_421.gif ;

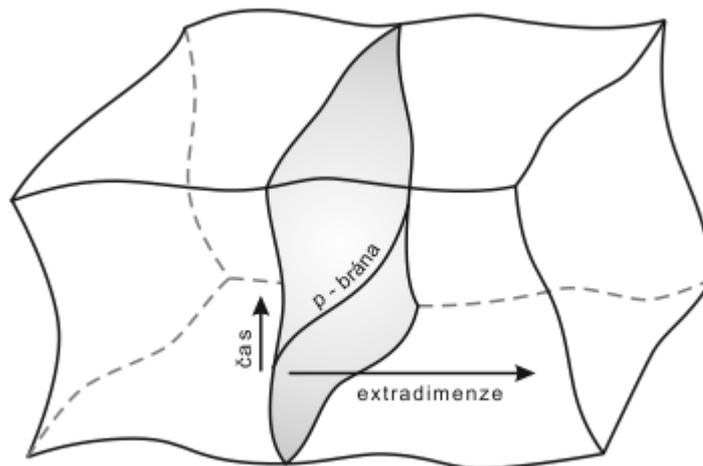
http://www.hypothesis-of-universe.com/docs/c/c_423.gif + many other variant creations that I don't have on hand. Mr. Zoul, by how many giganto-values is your imagination-speculation "true"? Once upon a time, in 2004-2005, scientists such as Hála and Kulhánek forbade her to publish it on the aldebaran forum on the grounds that "private inventions" did not belong to the public presentation of the real physics agreed by the world. You have it today. **Physical matter is limited to our M₄ universe.** Did God say that? or is it your invention? or the invention of another physicist? In dimensional reduction, dimenzionální redukci where we deliberately removed two spatial dimensions, the situation of gates is shown in Figure 2.

1 054 / 5 000

Translation results

Physical matter is limited to our M₄ universe. God said that? Or is it your invention? _ or the invention of another physics? In a dimensional reduction, dimenzionální redukci, where we have taken two spatial dimensions, the situation gate is shown in FIG. 2.

Dimensional Reduction - Standard mathematical or physical procedure approximating a particular model by focusing on certain selected degrees of freedom, while we ignore all other degrees. For example, a difficult representative of a five-dimensional variety can be converted by dimensional reduction in mathematically a graspable department with fewer dimensions. * The fact that the human brain is wrong with a five-dimensional variety (according to you in the universe realistic), I understand, but then, as then you perform "reduction" in mathematics easier "understandable", evidence that five-dimensional reality exists and need to show it through three-dimensional variety? How can a three-dimensional classic variety, for example, $m \cdot a = M \cdot m / x^2$ to show a five-dimmed variety, or seven-dimension when you invent it ??? Logically it's nonsense.



Obr. 2: Schematické znázornění 3-brány v pětirozměrném prostoročasu. S vývojem 3-brány v čase vzniká čtyřrozměrná nadplocha znázorněná šedou barvou.

nonsense.

Giant. 2: Schematic representation of a 3-gate in five-dimensional spacetime. As the 3-gate evolves over time, a four-dimensional surface is created, shown in gray.

In general, we call the p-dimensional (as a generalization of the term "membrane", which we usually refer to the shape of dimension 2) the p-dimensional space-like

subvariety of some D-dimensional ($D > p + 1$) space-time M_d , which is called **the space of worlds**, or **bulk** in English. . (This is a visionary idea, a proposal, a speculation, a fiction, a good one; yours are super-scientific, my space-like local rolled-up packages with extra dimensions are phantasmagoria, according to you and your peers). This is a fairly general definition; to a physically justified case when the dimension of the space of worlds is equal to $D = p + 2$. The coordinates x_a ($a = 1, \dots, p + 2$) in the space of worlds consist of the time coordinate t , Mr. Zoula, can you distinguish by high school description "**Coordinates**"; "**Dimensions**"; and the "**dimension**" ?? of the spatial coordinates x_μ ($\mu = 1, \dots, p$) on the p-gate and from one transverse (so-called extra) coordinate z .

The 3-dimensional space itself is then a 3-gate. **In general** **D-dimensional spacetime**, there can be generally any number of p-gates, and thus any number of time dimensions and length dimensions. It is so ? Mr. Zoulo ?! at least one of which - our universe ? one gate that is the universe ?? - Does the standard model of particle physics include that one gateway includes SM? as a well-established elementary particle theory. Abstraction into which the p-gate fits = HDV... one gate that includes SM? Gravity is not limited to p-gates, but rather mediates interactions between them. Unlike other forces, gravity is never confined to the gate, as gravitons can travel undisturbed between individual gates within a multidimensional bulk. ??

Historically, the first model of the gate world was **the model of Petr Hořava and Edward Witten**,

<https://www.nfneuron.cz/en/person/petr-horava-301> → the model is here →

Editor: what does the term D-gate mean?

Hořava : These are areas in space-time where the strings can end. This is an almost exact mathematical definition. There is a certain type of boundary condition at the end of a string, which is named after the French mathematician Dirichet. Theoretical physicist Polchinski named this place D-brane and took the term. To some extent, it can be said that the D-gate played a key role in the discovery of new symmetries that changed our view of string theory and in 1995 led to the discovery of the M-theory. M-theory does not assume the existence of strings, but two- and five-dimensional membranes. M-theory and string theory, which emerged from the Second Superstring Revolution, currently represent the dominant paradigmatic view of modern physics. It is the only known view that includes quantum mechanics, gravity and other interactions - a mathematical language in which all the paradoxes of quantum mechanics and gravity can be at least attacked, if not directly find definitive answers.

Editor: The universe still hides many mysteries, what exactly interests you?

Hořava: Basic questions in connection with gravity. For example, why do we live in such a large and slowly evolving universe? After all, all the basic concepts of quantum mechanics suggest that the universe should last a slightly short fraction of a second, or it would have to be very curved and small enough to make life impossible. How do black holes work? And other questions.

Editor: Are you approaching the answers to some of these questions?

Hořava: *Until the beginning of the 21st century, theoretical physicists generated a lot of fascinating new ideas, but they could not experimentally verify whether they corresponded to reality. Advances in particle accelerators (such as the LHC at CERN) have required decades of preparation. Astrophysicists also lacked data on whether there were subtle changes in the behavior of the universe, as predicted by the general theory of relativity in correlation with quantum mechanics. We are currently experiencing a fascinating situation, because experimental physics is finally giving us data about the elementary particles of matter as well as the behavior of the universe, and we can confront our theories with the results of experiments. The Higgs boson, the latest piece in the mosaic of a standard model of particle physics, has even been discovered. This has led to a new paradox of our theoretical understanding of the universe.*

Editor: What is the paradox?

Hořava.: *The energy of the Higgs boson is many orders of magnitude less than the energy of quantum gravity. However, according to current theories, they should naturally be about the same size due to quantum effects. But the universe doesn't behave that way, and we have absolutely no idea why. According to experiments at accelerators at CERN, it seems that something basic is still missing in the theory leading to the description of the universe. Now, like many of my colleagues, I am trying to focus on understanding this fundamental paradox of the universe.*

Editor: So is there a whole new theory?

Hořava: *Whether M-theory helps to answer, or whether it will be necessary to create a completely new theory that explains the paradox from a completely different point of view, is one of the fascinating questions for theoretical physicists. So far, we don't even know where to look for the missing ingredients in the universe, in HDV, or if they are already part of our existing theories, and we just don't know how to understand them correctly.*

Editor: How does the opportunity to discover a new theory motivate you?

Hořava: *Theoretical physics is on the threshold of amazing discoveries, and we don't know the day or the hours when some dramatic progress will actually take place. Clarifying paradoxes is therefore very stimulating. Many generations of theoretical physicists have not had the opportunity to solve any similarly fundamental paradox.*

Text: Josef Matyáš

prof. Jiří Chýla, CSc., Said: P. Horava started a new direction in an effort to conflictlessly combine quantum theory with the classical Einstein's theory of gravitation

+ (**)

Unfortunately, again neither Hořava himself explained his theory nor the essence of string theory. I.e. Hořav's first model, soon followed by Arkani-Hamed, Dimopoulos and Dvali, who studied = invented the (4 + d) -dimensional flat space of worlds, in which d dimensions have toroidal geometry. http://www.hypothesis-of-universe.com/docs/c/c_423.gif The work of Randall and Sundrum then made remarkable progress. And in that work, a curved space of worlds formed by a cross section of anti-de Sitter (AdS) spacetime was invented. I repeat what you said, Mr. Zoul: **In general D-dimensional spacetime, there can be generally any number of p-gates.** But this is a ripped, robbed, imperfect description and knowledge of space-

time, in which you do not explore the possibility of multidimensionality of time at all!!

Nima Arkani-Hamed (*1972), Savas Dimopoulos (*1952), Georgi (Gia) Dvali (*1964)

Hořav - Witten's theory - sequestered gates.

In the model of Petr Hořava and Ed Witten, presented in 1996, **each of the gates contains a different set of particles and forces.** The model means fiction. (?) I quote again, what Hořava himself said, to the question "what are gates": *These are areas in space-time where the strings can end. This is an almost exact mathematical definition. Someone's a jerk and a weirdo. !! Mr. Zoulo, Hořava did not say anything like that... that the gate "contains" a set of particles and forces.*... There are enough forces and forces on each gate to contain the entire **standardní model**, even its extended version in the form of grandunification theory (**GUT**) and something extra. Hořava and Witten **assumed**, that is, they invented that the particles and forces of the standard model "live" on one gate, which is according to Hořava's quote !!! in space-time which, according to Hořava's quote, is * an **area !!!** **in a space-time that exists with a certain curvature of longitudinal and temporal dimensions** (and one the state of the curved dimensions "floats" in a different state of the curved dimensions, etc.; every other state "floats" in a different curved state of space-time) while other, as yet unobserved particles predicted by their theory, They **"live"** at other gates. This is a better wording if the word 'live' is in quotation marks...; By abstract scientific thinking we can - we can model that particles as wave packages, ie multiply packed = curved dimensions 3 + 3 really "live" as a "distorted state" in another undistorted environment... or "floats" in a less curved state of space-time...; that is, as if they "lived" separated in space-time 3 + 3D, which is almost smooth... Gravity then moves between the gates with a multidimensional bulk. Why ? Gravity is **nonlinear** and quantum mechanics is **linear**. **The only way** particles trapped at different gates can communicate with each other = collide "side by side" is through a particle that can freely propagate through the bulk. **We call** this phenomenon **who "we" ?? sequestration.**

That's a squeaky solution. Squeaking like wanting to straighten a "dish" into a "straight line" ?? http://www.hypothesis-of-universe.com/docs/i/i_019.doc I offered my solution: Do not look for a violent connection between OTR and QM raped mathematics -sections and then he folded them together again = behind him and he had a straight line... it was a scam on the PRINCIPLE), http://www.hypothesis-of-universe.com/docs/g/g_039.pdf ; I repeat:: Do not look for a violent connection between OTR and QM raped mathematics, but do so by "alternating symmetries with asymmetries" over **time**.

http://www.hypothesis-of-universe.com/docs/h/h_082.jpg

http://www.hypothesis-of-universe.com/docs/aa/aa_004.pdf

http://www.hypothesis-of-universe.com/docs/aa/aa_002.pdf

http://www.hypothesis-of-universe.com/docs/aa/aa_008.pdf
http://www.hypothesis-of-universe.com/docs/aa/aa_013.pdf
http://www.hypothesis-of-universe.com/docs/i/i_141.doc
http://www.hypothesis-of-universe.com/docs/h/h_082.jpg
http://www.hypothesis-of-universe.com/docs/h/h_052.pdf
http://www.hypothesis-of-universe.com/docs/r/r_009.doc
http://www.hypothesis-of-universe.com/docs/r/r_003.doc
http://www.hypothesis-of-universe.com/docs/r/r_002.doc
http://www.hypothesis-of-universe.com/docs/eng/eng_008.jpg
http://www.hypothesis-of-universe.com/docs/eng/eng_002.pdf
http://www.hypothesis-of-universe.com/docs/g/g_073.pdf
http://www.hypothesis-of-universe.com/docs/g/g_062.pdf
http://www.hypothesis-of-universe.com/docs/g/g_039.pdf

Petr Hořava (*1964). Zdroj: Martin Svozílek, Hospodářské noviny.

The idea of sequestration (**the idea is not reality**) is to separate the particles responsible for breaking the symmetry from the particles of the standard model (or its extended GUT version). **How about separating the evil horned devils from those good, ragged devils in Hell.???**

However, even this idea of sequestration leads to a better solution, ie to my "principle of alternating symmetries with asymmetries". Particles sequestered at different gates together. And that "they" said "who"? * The universe said? *, The experiment of rivers? *, Or the poet who invents these scenario-models ?? I can also come up with scenarios (certainly as "valuable" = demonstrably as valuable as you !!) interact only very weakly through particles **that can** propagate through the bulk between the individual gates.

Arkani-Hamedova - Dimopoulos lighted sequestration

For a long time (since the formulation of the standard model in the early 1970s), the different weights of [the different scents of quarks and leptons] **vůní kvarků a leptonů**. [remained a] **mystery**. The standard model **assumes** that the masses of these particles **should be determined mainly by the masses of the virtual clouds of vector bosons **vektorových bosonů**, that surround them**. That is, he assumes a fairy tale : First, a Standard Model particle "appears" from Nothing in the universe, and these go to the boson store, stand in line, and then the H-boson determines the mass of each particle. In other words, I repeated how you put it, Mr. **Zoulo**. As we know, mass gives vector bosons a Higgs mechanism.

Higgs boson and Higgs mechanism; here is a list of how my opinion was formed →

http://www.hypothesis-of-universe.com/docs/aa/aa_022.pdf 2012
http://www.hypothesis-of-universe.com/docs/h/h_106.pdf
http://www.hypothesis-of-universe.com/docs/b/b_191.pdf
http://www.hypothesis-of-universe.com/docs/b/b_193.pdf
http://www.hypothesis-of-universe.com/docs/b/b_082.pdf ;
http://www.hypothesis-of-universe.com/docs/b/b_083.pdf ;
http://www.hypothesis-of-universe.com/docs/b/b_100.pdf ;

http://www.hypothesis-of-universe.com/docs/b/b_101.pdf
http://www.hypothesis-of-universe.com/docs/b/b_116.pdf ;
http://www.hypothesis-of-universe.com/docs/b/b_328.pdf ;
http://www.hypothesis-of-universe.com/docs/g/g_052.pdf 2013
http://www.hypothesis-of-universe.com/docs/g/g_057.pdf 2013
http://www.hypothesis-of-universe.com/docs/g/g_062.pdf 2014
http://www.hypothesis-of-universe.com/docs/g/g_070.pdf 2014
http://www.hypothesis-of-universe.com/docs/g/g_072.pdf 2014
http://www.hypothesis-of-universe.com/docs/j/j_113.pdf ;

However, this means that the strength of the interaction with the Higgs boson must be very different from the odor, which was a great mystery, because the calibration interactions of all three odors of a particle of one type (e.g. quarks u, c, t) are very similar.

Nima Arkani-Hamed and Savas Dimopoulos **tried to solve this problem by assumption**, (The problem is solved by "assumption" ???) I tried to solve this problem with an idea (described in HDV) that each scent interacts with a **bulk** particle coming from a different gate - a gate, each lying behind a differently **distant** gate. "**Bulk particle**" is what? who? In other words, the mass of the particles is determined by the "**different distances**" taken, **but this is a wonderful idea = assumption** (sequestration in bulbs for the mass of the particles). The symmetry disturbance caused by the more distant gates would be less than that of the closer gates, similarly as the value of illumination decreases with distance from the light source. **This idea** was therefore given the name **Light Sequestration**. That is, increasing the distance between the gates increases the symmetry breaking... **amazing idea *, amazing assumption....* and we have painted. I have an example: how will the law of gravity (force between bodies) change when I substitute $F = G.M.m / x^2$ into the formula instead of **x**-line-distance between bodies, line **x** in the arc? ? ? http://www.hypothesis-of-universe.com/docs/c/c_439.jpg Because there is already a strong curvature of space-time in the galaxy for the distant Observer.http://www.hypothesis-of-universe.com/docs/f/f_056.jpg ; http://www.hypothesis-of-universe.com/docs/h/h_024.pdf

Kaluzovy - Klein's fashions

Kaluzov - Klein modes (particles) **are a projection of a multidimensional particle traveling through a bulk into a smaller space**. In other words: the lumps-**bulk** in Zoul's idea are wave-geony-balls built of multidimensional space-time by curvature = collapse of longitudinal and temporal dimensions, then they float in the basic 3 + 3D grid of space-time non-curved or slightly curved.. If, for example, we imagine our three-dimensional space as a flat gate (ie we consider one dimension), then the Kaluzov-Klein particle in the shape of a hollow sphere, for example, would appear as a small circle passing through our gate, its diameter first increasing and then decreasing again, how the particle would leave the gate. Kaluzov - Klein's (K-K) **modes (n + m dimensional curved states of space-time) are therefore a projection of multidimensional particles (n + 1; m + 1 states of space-time, which are mass packages)** into our **four-dimensional** (three spatial dimensions and one temporal) world. (3 + 3D worlds) Every bulk particle ((**package of twisted dimensions-see HDV**)) carrying multidimensional momentum is replaced in our effective four-dimensional

world by the K-K mode, which, however, does not contain information about the components of momentum in the direction of extradimensions. The extradimensional momentum of K-K particles must therefore be revealed to us differently from ordinary four-dimensional momentum. According to the relationship between mass and momentum resulting from the special theory of relativity, extradimensional momentum will appear to us as rest mass. That is, $n + 1$ states; $m + 1$ space-time which are packed bulk extradimensional packages will "project" (swim) into a less extradimensional $n + m$ I understand that well?

K-K **modes** stretched between different gates can only take on **discrete** values of their **mass-energy**. Their four-dimensional images would take on sequences of different weights at our gate. The farther the gates interact, the less weight the K-K modes should measure. That is, the magnitude of the mass of **modes = elementary particles** depends on the "distance" of two gates from each other, gate $n + 1$; $m + 1$ from gate $n + 0$; $m + 0$.. .yes?

Randall - Sundrum (RS) models

RS1 model

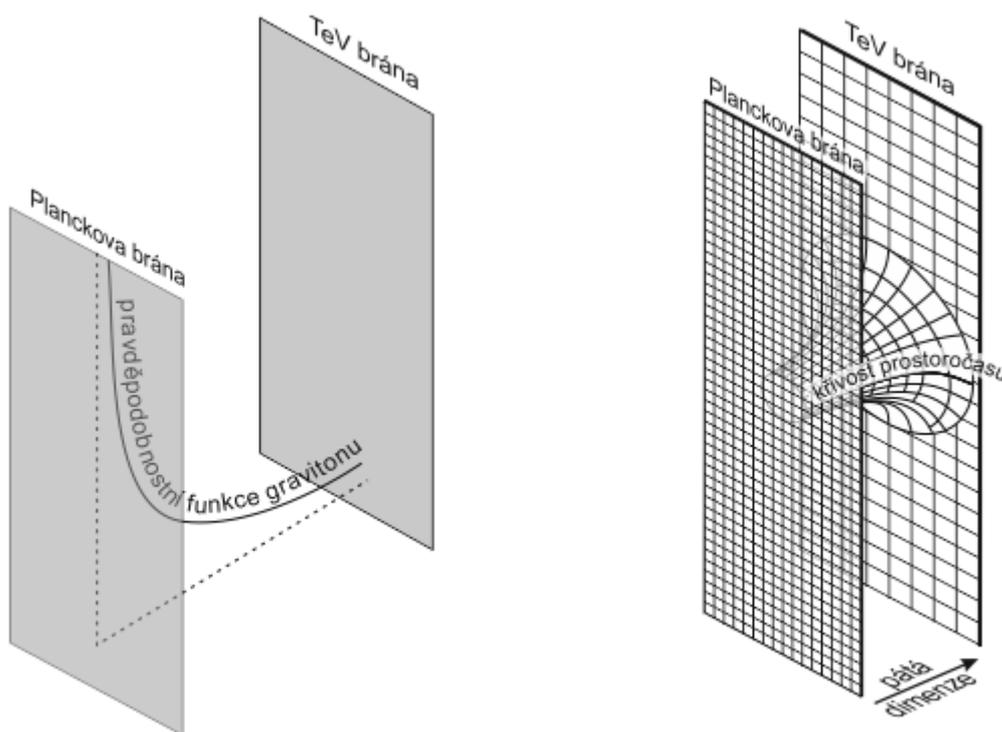
((Still only models and models. I can do that too. When will any theory come, verifiable? Mr. Zoul !))

The general theory of relativity is consistent with the fact that the **energy and momentum** of particles trapped at gates **curve space-time in a five-dimensional bulk**. You have to say that more precisely. So how is it? Does the energy-momentum from $3 + 1$ space-time curve that spacetime in a bulk what is that bulk five-dimensional ?? And in $3 + 1$ space-time does not curve?, Only in a five-dimensional bulk does it curve ?? - And it has a major impact on the lump gravitons. A detailed calculation by Lisa Randall and Raman Sundrum in 1998 **showed** that the solution to Einstein's equations for the case under consideration is the well-known AdS spacetime. **AdS prostoročas**. It has the property that any section, made in a five-dimensional bulk parallel to the gates, again represents a completely flat space. **The curvature changes only in the direction perpendicular to the gates.** (? really?) We call such a space the term **Crooked**,, in contrast to the space **curved**, in which the geometry changes in all spatial directions.. Well... (I didn't distinguish it; maybe I should) http://www.hypothesis-of-universe.com/docs/h/h_018.pdf Spacetime distortion = ie **dimensional distortion** change the overall scale for **coordinates** of place, time, mass and energy in at any point only along the fifth dimension. I can't judge. **Coordinates cannot be confused with dimensions** However, they are also reflected in the probability function of the graviton along the fifth dimension.

Mr. Zoul, how do you explain the number of length dimensions over three? In my HDV, there are higher dimensions above $3 + 3$ inside the mass, that is, in those coiled packages. Spatio-temporal environment, network, yarn, raster, all this is an environment in which higher dimensions "trapped in matter" "float"

Lisa Randall (*1962), Raman Sundrum (*1963) raman@umd.edu

The result is a total scaling of lengths and time in the direction of the fifth (**length or time? dimension**) dimension. **Graviton probabilistic function?** indicates the probability of finding a graviton in a given place in space, and thus the gravitational force. Since every section in AdS spacetime [AdS prostoročas](#) is flat, the probability function of graviton is constant everywhere in the 4 spacetime dimensions, **and changes only in the fifth dimension.** ??? As soon as we leave the gate with a large positive energy, the amplitude of the graviton probability decreases exponentially towards the adjacent gate carrying the lower energy. Thus, near the second gate, the gravitational interaction is very weak. This gateway corresponds to our world, in which the standard model [standardní model](#). "lives".



Obr. 3: Uvnitř bulku se amplituda pravděpodobnosti gravitonu, stejně jako rozměry, hmotnosti a energie, exponenciálně mění podél páté dimenze.

Figure 3: Inside the bulk, the amplitude of the graviton probability, as well as the dimensions, mass and energy, exponentially changes along the fifth dimension.

Solving the calibration hierarchy problem

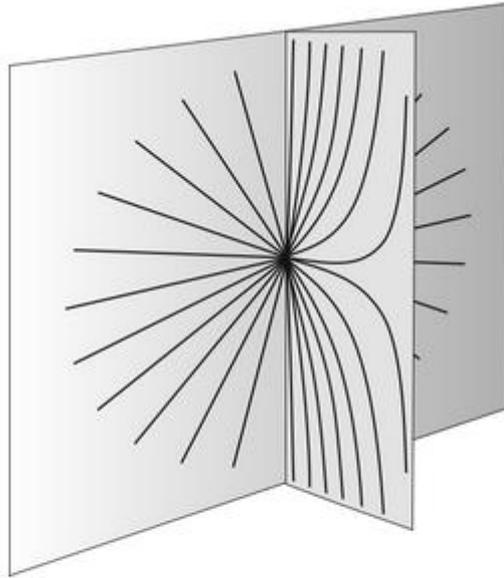
Let's ask the question, how can the force of gravity carry information about where an object is in the fifth dimension? The resolution lies in the fact **that gravitational attraction depends on mass and varies continuously along the fifth dimension.** And

does the mass (hence gravity) not change along the other dimensions? One of the many remarkable properties of distorted AdS spacetime is the exponential decrease in energy and momentum of particles in the direction of the negative energy gate. In the spirit of quantum field theory, this means that distances and time must expand in this direction, * **These parts of the interpretation are new to me, and I have not studied anything about it..., I give up comments** * as Figure 3 on the right suggests. The mass and energy at each point along the fifth dimension are scaled in proportion to the amplitude of the probability function of the graviton. Thus, in the direction of the fifth dimension, mass and energy decrease exponentially.

While on one gate there are particles introduced by unpleasant side effects of quantum field theory, [kvantové teorie pole](#) mentioned in the second part [druhé části](#) of our series, up to Planck's energies, on the other gate they can only be in the order of teraelectronvolts, [teraelektronvoltů](#), ie. 16 orders of magnitude smaller. Therefore, the designations Planck's Gate and TeV's Gate have been used in the literature, see Fig. 3. The mass of a Higgs particle [Higgsovy částice](#) automatically ceases to be a mystery - if we live on a TeV's Gate, then its mass in the tenths of a TeV is not surprising, although 17 orders of magnitude below Planck's mass. . It is noteworthy that in order to solve the problem of the calibration hierarchy, it is in fact sufficient for only Higgs particles to get stuck on the TeV gateway - calibration bosons [kalibrační bosony](#) do not have to be subject to this restriction. (?) The Higgs field is responsible for spontaneous symmetry [spontánní narušení symetrie](#) breaking and this is the origin of the masses of the calibration bosons and indirectly also the quarks and leptons. The mass of the calibration bosons would be zero if the Higgs field did not disturb the calibration symmetry. The energy scale of the weak interaction [slabé interakce](#) in the order of teraelectronvolts will be protected, but at very high energies comparable to, say, GUT, [GUT](#), there may still be further unification of forces. **I haven't studied anything about it... I give up comments**

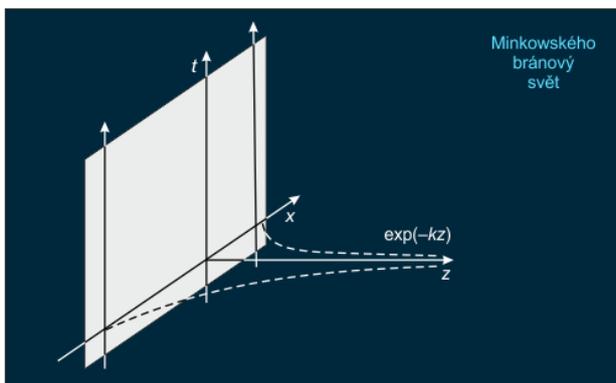
RS2 model - localized gravity

In 1999, Randall and Sundrum realized that spacetime can be distorted in the direction of the fifth dimension by concentrating gravity near each gate, and this concentration can be so pronounced that the energy of the other gates becomes irrelevant. This is, in fact, a consequence of the fact that the gravitational field also affects the gravitons themselves (even the gravitational field itself has mass), which we mentioned earlier. Thus, perpendicular to the source gate, the gravitational field weakens again exponentially, but this is in no way conditioned by the existence of negative energy of the neighboring gate. Its total energy may easily be zero, or the neighboring gate may not even exist at all.



Obr. 4: V pokriveném prostoru se gravitační siločáry podél brány šíří rovnoměrně všemi směry. Ve směru páté dimenze se však siločáry prudce ohýbají a ve vzdálenosti jedné Planckovy délky od brány již pokračují prakticky rovnoběžně s bránou.

Figure 4 : In a curved space, the gravitational lines of force along the gate propagate evenly in all directions. In the direction of the fifth dimension, however, the lines of force bend sharply and at a distance of one Planck length from the gate, they continue practically parallel to the gate. The spatial overlap of the gravitational field outside the gate surface towards the fifth dimension is comparable to the Planck length dimension in this scenario. More precisely, although gravity theoretically reaches infinity, its decrease with distance from the gate is so rapid that it becomes practically negligible at a distance of one Planck length. **Regardless of the finiteness or infinity of the fifth dimension, it effectively appears to measure across only one Planck length.**



Obr. 5: Vnoření Minkowského bránového světa do 5-dimenzionálního AdS v Poincarého souřadnicích

Figure 5: **Nesting** the Minkowski gate world into a 5-dimensional one AdS in Poincaré coordinates. **"Nesting"** is an interesting new vision, a new word that I have been using only recently, for about 5 years. Higher curvatures of dimensions, which are always just states of matter) "float" - they are **nested** in less curved dimensions such as arrays.

Kaluz - Klein's partners

When Randall and Sundrum calculated the probability functions of the K-K partners of graviton, they found that these particles interacted at the gates exactly in accordance with the OTR prediction. The first K-K particle they encountered was a particle with zero rest mass (zero momentum in the direction of the fifth dimension) and spin 2, whose probability function is concentrated at the Planck Gate and decreases exponentially from it. As you probably already know, this intangible K-K mode corresponds to a four-dimensional graviton, which mediates normal gravity in four-dimensional spacetime. However, the other K-K modes differ significantly - for each mass value between zero and Planck's mass, there is a corresponding K-K particle of that mass, and the probability function of each of these particles has a significant maximum at another point along the fifth dimension. As we noted in the previous paragraphs, as we travel away from Planck's Gate, we gradually pass through places associated with exponentially declining energy. Each point in the direction of the fifth dimension can be assigned a certain weight, and this weight is associated with the Planck mass already mentioned by scaling at this point. The K-K particle, whose probability amplitude has a maximum at a certain point, carries such a scaled Planck mass. As we travel along the fifth dimension away from the Planck Gate, we gradually encounter K-K particles with a maximum in the region where we are, and these particles are getting lighter. Heavy K-K particles are reported from those areas of five-dimensional space where the rescaled energy is too small, while light particles, on the other hand, are rarely found where there are large numbers of particles with much higher energies. ← These parts of the interpretation of "about five-dimensional space" (with scaling of spatial lengths x, y, z to five and time t) are unknown to me, I do not understand and do not trust it... I give up comments.

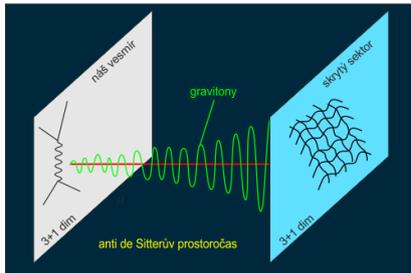
In my HDV I choose the idea of only **3 + 3 physical dimensions**, distorted by high ie "strong" curvature = foam of space-time dimensions, or low slight curvature = gravity and other 3 types of fields; And I perceive those **extra dimensions as mathematical dimensions, and in my hypothesis I "transport" them into matter**, into elementary mass particles, ie into coiled-packed packages of dimensions of two quantities, Length and Time. So, due to my ignorance, I consider the 3 + 3 dimensions space-time as physical and extra dimensions other as mathematical dimensions.

Particle weights of the standard model

The K-K modes are identical to the particles of the standard model, except that their masses reflect their momentum in the fifth dimension, which is determined by their position in the bulk, as discussed in the previous paragraph. Thus, for each particle of the standard model, there should be many K-K partners with the same charge values but different weights. However, each of these partners lives on a different world in the direction of the fifth dimension. (?) (I do not understand)

Let us now return to the assumption made by Hamed and Dimopoulos (and in fact Juan Maldacena before them) and let the different odors of the particles of the standard model interact with the various gates along the fifth dimension. We will assume that there is one gate at each point of maximum of one of the K-K modes.

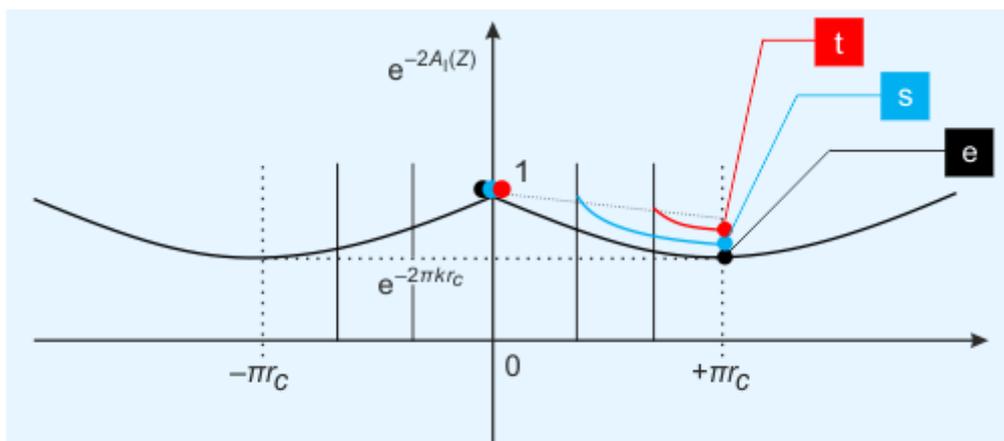
On the average of the Planck length, we have countless gates with exponentially decreasing particle energy.



Obr. 6: Pokles energie K-K partnerů od jedné brány ke druhé

Obr. 6: Pokles energie K-K partnerů od jedné brány ke druhé

At the boundary gates in the bulk, the mass of the particles of the standard model is introduced by the mechanism of the calibration hierarchy up to the Planck energy (see the second part [druhý díl](#)). However, towards the inner gates, the energy of the K-K partners of each Planck particle gradually decreases due to AdS space-time distortion - see Fig. 6. If there are more gates in the bulk, then for each Planck particle middle of the bulk. **This This mass is determined by the distance of the gate, (??)** from which the K-K partner comes, since the weight of each additional gate contributes to the distortion of spacetime inside the lump. As the weight of the gates gradually decreases towards the center of the lump, their contributions to the AdS spacetime distortion also decrease. For example, the K-K-partner of the electron comes from a farther gate than the K-K-partner of the top quark. Therefore, the top quark appears to us to be significantly more massive than the electron - see Fig. 7. (I do not understand these considerations. I think it comes more from the realm of fairy tales than from reality itself)



Obr. 7: Metrická funkce $\exp[-2A_1(Z)]$ pro Randallově-Sundrumův kompaktní model typu I má periodický průběh s periodou sahající od bulku k bulku

Picture. 7: The metric function $\exp[-2A_1(Z)]$ for the Randall-Sundrum compact type I model has a periodic course with a period ranging from bulk to bulk.

The gates can interact with each other more than once, so that one Planck particle can have more K-K partners on the same gate, coming from the interaction of this gate with several differently different Planck gates in the bulk. Although the Higgs

particle - the breaker of electroweak symmetry - has an energy of only 126 GeV, the theory connects it with another particle, which is also affected by a strong interaction - with the Higgs boson of the great GUT union, weighing in the order of 10¹⁵ GeV. So we have two particles interconnected by GUT symmetry, whose masses differ from each other by 13 orders of magnitude. In GUT theory, these two Higgs particles must act together, because the strong interaction should be interchangeable with the high-energy electroweak interaction in order for the two forces to become comparable. If the strong and weak interactions are unified, then each particle sensitive to the weak interaction (including the Higgs) must have a partner sensitive to the strong interaction. This Higgs boson partner interacts with both quarks and leptons, allowing the proton to decay. . (I don't understand these considerations. I think it comes from the realm of fairy tales rather than from reality itself)

Let's try to plot the particle masses of the standard model - based on the model described above, we expect them to be roughly exponential (unlike the original Hamed and Dimopoulos model of illuminated sequestration, which predicted a power drop with a power corresponding to the dimension). The masses of vector bosons are (as we have already explained) determined by the interaction with the Higgs boson (and are related to its mass in some way - note that the masses of Higgs and vector bosons do not differ by more than a few tens of percent, while the masses of other particles jumping for whole orders).

částice hmotnost (keV)

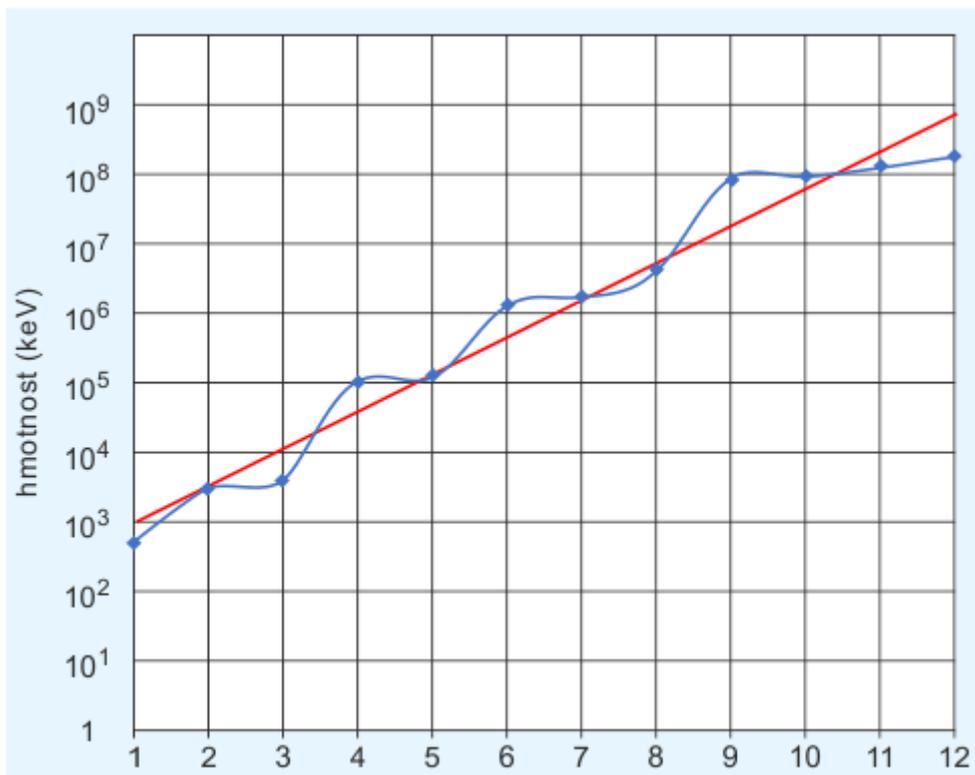
e	511
d	3000
u	4000
μ	105658
s	130000
c	1300000
τ	1777000
b	4300000
W	80000000
Z	91000000
H	126000000
t	173000000

Tab. 1: Particle masses in kiloelectronvolts

Zoul's Table of the Great Pyramid of Barons http://www.hypothesis-of-universe.com/docs/eg/eg_041.pdf ; http://www.hypothesis-of-universe.com/docs/eg/eg_043.pdf These are his original space models http://www.hypothesis-of-universe.com/docs/eg/eg_044.pdf ; http://www.hypothesis-of-universe.com/docs/eg/eg_054.pdf ; http://www.hypothesis-of-universe.com/docs/eg/eg_101.pdf ; http://www.hypothesis-of-universe.com/docs/eg/eg_102.pdf ; http://www.hypothesis-of-universe.com/docs/eg/eg_103.pdf David Zoul never cooperated with me, although I

offered it to him. I would like to know how this physicist succeeded in 17 years in the world with his ILČ theory and how far he has worked with other string experts.

If we plot the masses of the particles of the standard model in a semi-logarithmic graph (see graph 1), they should be roughly interpolated by a line that is an image of the exponential in the semi-logarithmic coordinate system. The result is absolutely stunning - at first glance, the completely random-looking particles of the standard model suddenly make good sense - they oscillate around the exponential function exactly as predicted by the gate model described above. **Whose gate model ??**



Graf 1: Průběh klidové hmotnosti základních částic

Graph 1: The course of the rest mass of the basic particles

We are immediately attracted by the fact that the deviations from the exact exponential have a kind of step character. This suggests that certain small groups of particles in the standard model interact with the same gateway. I have marked these groups in grayscale in Table 1. Individuals within groups differ relatively little in weight, and the differences can be explained by slight differences in the cloud structure of the calibration bosons, which according to the standard model make up the bulk of the mass of each of the considered particles. The particles in each group can therefore be replaced in the first approximation by a single imaginary particle, carrying the mass calculated in the first approximation as the arithmetic average of the masses of all particles in the group and thus interacting with the same gate as the real particles of the group. The result is shown in Graph 2. There can no longer be the slightest doubt about the exponential dependence.

částice	hmotnost (keV)
elektron	511
1. skupina	3500
2. skupina	117829
3. skupina	2459000
4. skupina	117500000
interpolovaný mód	1690097170

Tab. 2: Průměrné klidové hmotnosti (keV) několika různých K-K módů

Graph 2: Exponential character of the rest mass of the fundamental particles

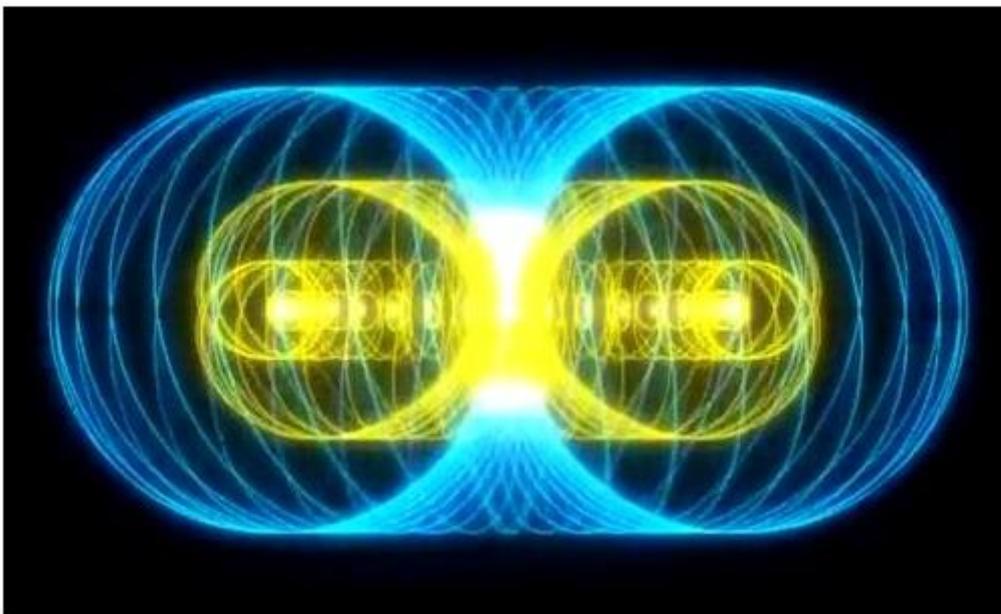
We have found * the shape of the function that potentially predicts the mass of the particles. By interpolation from graph 2, we find that the next gate, and thus the mass of the next group of particles, lies at a distance of perhaps only one to two TeV. The energy of the LHC superaccelerator at the CERN center in Geneva should reach the predicted particles relatively easily and detect the predicted particles over time. And so up, the head of the nation, the world, behind the discovery of another Higgs-boson...

Maldacen's duality is back on the scene

In the fourth part, [čtvrtém dílu](#) we mentioned a remarkable feature of AdS space, [AdS prostoru](#) which is the existence of a dual four-dimensional theory. When is the emergence of a [trial four-dimensional theory planned?](#) Juan Maldacena discovered = invented (no discovery but invention) an explicit example of this duality when he noticed that everything that happens in five-dimensional AdS spacetime [can be described](#) ((HDV can also be described)) in a dual construction that works in four-dimensional spacetime, where there are extremely strong interactions with special properties. A five-dimensional AdS space with gravity but without gates is equivalent to a four-dimensional theory without gravity. But once we put the gates into the five-dimensional theory, the dual four-dimensional theory suddenly becomes enriched by gravity. And as soon as you put a cauldron of water into Hell without hell, Hell will suddenly be enriched by the devils...

We have shown that an object traveling along the fifth dimension would grow or shrink in a four-dimensional world. In the third part, [třetím dílu](#) we saw that a four-dimensional flat and simply continuous universe is a dual five-dimensional curved geometry with a toroidal topological structure. http://www.hypothesis-of-universe.com/docs/c/c_423.gif In this topology, [topologii](#) the individual gates are represented by separate toroidal concentric layers, the small section of which is shown in Fig. 8. The need to stretch, or on the contrary, the shrinkage of dimensions during bulk travel between individual concentric toroidal gates. ((Bulks and toroidal gates, .. these are still just abstract fabrications. Similar abstracts when I present in my HDV, this is despised ... → http://www.hypothesis-of-universe.com/docs/c/c_437.jpg ; http://www.hypothesis-of-universe.com/docs/c/c_426.jpg ; http://www.hypothesis-of-universe.com/docs/c/c_427.gif ; http://www.hypothesis-of-universe.com/docs/c/c_423.gif ; http://www.hypothesis-of-universe.com/docs/c/c_421.gif))

If we realize that each gate must contain the same number of elementary Planck cells (in Fig. 8 with subtracted one dimension, therefore, each concentric surface contains the same number of elementary Planck surfaces), then these cells must appear differently sized at different gates from a five-dimensional point of view. .O.K. However, since the Planck cell is a basic invariant and measure of size in space, each object that would like to move from one gate to another would have to adjust its size to the conditions prevailing at the target gate so that the number of its Planck volumes is maintained, see Fig. 1. fourth part. [čtvrtého dílu](#).



Obr. 8: Prostorčasové čtyřbrány v pětirozměrné duální teorii se efektivně chovají jako série soustředných toroidů uvnitř toroidů. Zdroj: YT/Nueva Teoría del Todo.

Figure 8 : Spatio-temporal gates in five-dimensional dual theory behave effectively as a series of concentric toroids within toroids. Source: YT / Nueva Teoría del Todo.

Hypergroups In the dimensional reduction, which we have simplified our 4D spacetime to a two-dimensional toroidal surface, the whole matter can be imagined relatively easily. But is it possible to imagine the five-dimensional space of worlds described in this work without dimensional reduction? **And that's the problem. To this day, physicists have not dared to read the HDV, and thus think about "unpacking" the dimensions and "packing" the dimensions. If we know that the Universe began "our variant of the genesis" after the Bang with dimensions = boiling vacuum of**

dimensions, that this initial state of "our" Universe began to expand, I say "expand", then this chaotic foam of crooked dimensions could also become "local places" (physics calls them "quantized space, or quantized space-time") and so if physics understands = packages from 3 + 3 spatiotemporal dimensions... why physics could not finally understand and study the possibility of packing dimensions into formations that will have the nature and properties of elementary particles of matter, simply such formations WILL BE MASS. Why do science-physicists only research here about the "dimensional reduction" of the length quantity and do not study whether or not time has dimensions? ... Of course, for the purpose of being the building blocks of that matter.** In the space of worlds without dimensional reduction (**reduction of length dimensions**), the concept of p-dimensional membranes (p-gates) loses its meaning. Opinion is one thing and reality is another. Why does the physicist try for a multi-dimensional "space"? I'm trying 3 + 3d time-space. The higher dimensions are then only incorporated into matter. But the space-time 3 + 3Dimensional is presented **in two states of curvatures**, ie opposite states of extremes such as **a)** totally **flat** straight Euclidean as a raster, network, 3 + 3D yarn and... and **b)** in the extreme in the form of very **crooked**, ie foam, boiling dimensions that can be packaged and then can be called a situation that are **n + m dimensional**. Geometric reality is up to **3+3D**... and higher extra dimensions,, they are only "packed" into states, the name is mathematical reality of dimensions, which we call matter. We use the term hypergroup instead. Well, good. So the n + m states of dimensional space-time will be called "hypergroups". (?!)

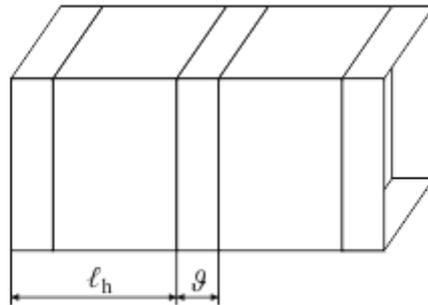
Obr. 9: Hypergrupy

For a while, we still reserve a dimensional reduction for the first introduction, this time only one spatial dimension. **To this day, you did not examine the number of time dimensions** (***) http://www.hypothesis-of-universe.com/docs/c/c_005.jpg Figure 9 shows two-dimensional **analogies** of the **space cells** marked in black. All cells belonging to the so-called. **Our hypergrup**. Cells that are transferred to the vector θ to our hypergrup, for whose size pays

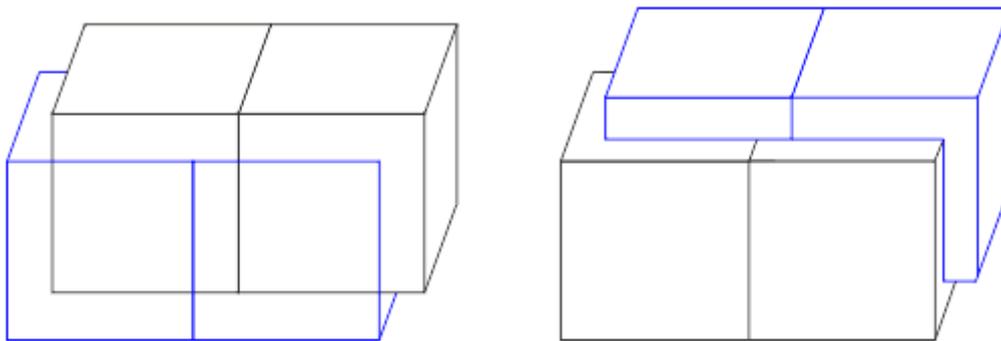
$$\vartheta = k \lambda_h, (5)$$

Where to $\{1, 2, \dots, \lfloor H / \lambda_H - 1 \rfloor\}$, form foreign hypergrup - parallel world. Number θ We call a hypergrupar barrier between two different hypergrups, or in an **Interthyproper barrier**. As the whole situation in 3D-perspective shows Figure 10. If we are considering the translation of hypergrup only after horizontal and vertical, as indicated in the previous interpretation, then we receive a total of 6 adjacent hypergrup in our immediate vicinity. If we are not yet translation of planar diagonals, added to these six nearby hypergrets 8 (see Fig. 11 on the left). If we transface

hypergrup on spatial diagonals, as shown in Figure 11, we get 8 hypergrup in our close proximity.



Obr. 10: Lineární interhypergrupární translace



Obr. 11: Planární (nalevo) a prostorová (napravo) interhypergrupární translace

In total, we have 22 hypergrups that are from our separated by the thinnest possible interhypergrupární barrier. In the space, it can be imagined to run more parallel more programs. The situation can be recalled when we have more monitors at home to one computer. We could then follow each of these monitors largely independent progress of each of the running programs. Just such a program displayed on one of the monitors represents in our analogy hypergrupy α End.

JN, comment from 11.02.2022

English-translator 05.04 - 10.04 2022

=====
()** 03.02.2022

3 + 3d space-time

Contemporary physics demonstrates time imperfect. Time is quantity = phenomenon of existential, is not removable, indestructible, irreplaceable, universvroný. It's the name of that quantity. And only after he appeared on the scene "as a state of being", the quantity is collected into three dimensions and into the common "time-space" ..., while still in this situational position it is not yet a flow of time, nor no ticking ... It's "stop-status". Also, when after the time dimensions (even longitude) starts to wander = shifting "cursor" = material subject, then it can only be talked about the flow-flow of time, so it can talk to the "observer". Note: If we all seem to be the pace of time ("some" observed) is the same in all directions, respectively in three spatial axes x^* , y^* , z^* , then it is strange, but it is similar As with 3D space, which is also "expanding" "" at each point of the universe. So, the cursor moves the same interval on all three length dimensions. Thereafter, there is such a ratio "Expanding the length interval - shift the cursor on three length dimensions" to "time interval Digge - shift

the cursor on all three time dimensions" that this is equal to Thereafter, there is a ratio of "Extension Length Interval - Shift the Cursor on three Length Dimensions" Ku "time interval of ages - the cursor shift on all three time dimensions" that this is equal to "c" = light rate, $c = 1/1$; Respectively $c^3 = 1^3 \text{ m}^3/1^3\text{sec}^3$, Which is the magazine "before the bang". After the bang, the cursor on each dimension of the length x^* , y^* , z^* and each dimension of time t_1 ; t_2 ; t_3 moves after other intervals. ((The building then relieved to observers to peace, different speeds, see http://www.hypothesis-of-universe.com/docs/c_005.jpg)) I know that instantly arises objection to three axis x , y , z . I do not observe the different pace of time and therefore physics always achieves only one "t" = $t_1 = t_2 = t_3$ one equal pace. **But that's not true.** Truth is that $t_1 < t_2 = t_3$, or $t_1 < t_2 < t_3$ ("t" = $t_1 = t_2 = t_3$. This applies only to photon)), wherein physics neglects the difference between different temps of the reasons that The difference is up to the eighth place behind a decimal point. ... For reasons of election of people-physics units, see **$c = 2.99792460 \cdot 10^8$ length intervals / 10^0 time intervals**. The real universe, thus the space-time spreads in intergalactic premises at different levels of time and length, yet the global expansion of the length "homogeneous" and aging is homogeneous in the global ... but locally in locations are the pace of time different: in the galaxy other, in black Holes also (see time dilatation), also in various gravitational fields, also other pace, see the country on the satellites, GPS, ... The universe is such a "fungus" with different temps of time, even in immediate feet-condition Nowadays, even during the history, even in local distances of space and in local gravitational crops of space, even among the galaxies ..., there is another pace of passing time everywhere. etc.
Josef, 03.02.2022

.....
+ (***)

The editor said :

Lack of imagination of theoretical physicists? It sounds up to almost like the anti-antimulant...

Petr Hoor answered :

It is a great community of people. Thousands of those who contribute to the articles archive about theoretical physics are thousands. However, not each of them contributes very original ideas. A large percentage of people is trying to work so that they try to understand the ideas of others, contribute to any one's small improvement. In fact, the leaders of creative people who fundamentally affect the work of others is a handful. Sometimes, however, a person who comes with something unique will change the direction of the industry, gaining influence and followers.

(!)