

aa_232 Engl.

<https://www.youtube.com/watch?v=yPVQtvbiS4Y&t=3668s>

What Actually Are Space And Time?

Co jsou vlastně prostor a čas? ... aa_232

History of the Universe

1:16:00 a.m



At this position of the text, i.e. one hour and sixteen minutes from the start of the lecture, it was unnecessary for me to translate the text and + comment. All those interested in physics (young, old, smart, stupid, educated, even enthusiastic laymen) know what is written above from 00:00h to 1:16:00h. So I would only comment on the last paragraph, two pages from the entire 75-minute lecture →

Einstein told us that matter defines the structure (curvature of 3+3 dimensions) of space-time, and space-time told matter what to do. (..that is, how to "gravitately" behave on a macro scale). We know that in the quantum picture (looking into the quantum level) space-time appears lumpy, (granular). And how long have you (not) known this? →

http://www.hypothesis-of-universe.com/docs/aa/aa_231.pdf ; http://www.hypothesis-of-universe.com/docs/c/c_461.jpg ; http://www.hypothesis-of-universe.com/docs/aa/aa_217.pdf

And this reality is might by constructed ...so you don't know...out of these bits of spacetime 3+3D as the universe grows. But what if space and time don't really exist? So you don't know. What if space and time are actually emergent phenomena, something we only experience as macroscopic beings? It may sound strange, but we know that we are locked in space. This means that we do not feel the cosmological expansion that dominates the big – global universe. And similarly, we don't feel the individual feel individual atoms when they collide with our skin. Instead, we have a common term

(common rate of passage of time), the temperature that describes what is happening. Maybe space and time are the same? Well, with this bold idea I came to the net already 18-20 years ago, even 40 years ago, when there was no internet, right...that

Magnitude-universe "V" = solo-state (asymmetrical) splits into two states (symmetrical), i.e. quantity LENGTH "x" and TIME "t"... and these then split into asymmetric state: LENGTH and TIME and MATTER , etc.

(The principle of alternating symmetries with asymmetries; the genesis tree is set, ready → http://www.hypothesis-of-universe.com/docs/aa/aa_037.pdf of development). Or vision: The magnitude "V" = solo-state (asymmetrical) splits into two mirror states, i.e. the magnitude "length as anti-time", "time as anti-length", as a philosophical formalism of "global states" ". And now we can put on the table a mathematical formalism about the transition of linearity to non-linearity, the transition of "quantum foam" at the micro-scale level, as linearity, a fine foam, a smooth continuous environment: http://www.hypothesis-of-universe.com/docs/c/c_461.jpg ; http://www.hypothesis-of-universe.com/docs/c/c_486.jpg ; with a transition to non-linearity, to global curvatures of macroscales, e.g. conic sections. (Gravity as a parabola). http://www.hypothesis-of-universe.com/docs/c/c_037.jpg . This was

important to me - a non-mathematician - understanding "gravity" as the equation of a parabola. **Mathematical transition of QM linearity in OTR non-linearity**. (I still don't know how mathematics does it <http://www.hypothesis-of-universe.com/index.php?nav=d>).

In 1997, Juan Maldacena found a **key relation in the mathematics of string theory and gravity**. Known as the **AdS/CFT correspondence**, Maldacena's **key relation** is AdS/CFT ((*for which he needed two statesmen at two universities*)) and...**and my key relationship**, mathematical, is that it is found in conics (!), **in the transition of an ellipse to a parabola and from a parabola to a hyperbola** . I am not a good mathematician, **definitely not, even so I miss the opinion of those great mathematicians!** to my belief of the key relationship **between linear foam QM** – quantum mechanics in two-quantity notation of interactions \diamond <http://www.hypothesis-of-universe.com/index.php?nav=eb> and **nonlinear OTR parabola**. (Opinion I don't lack spitters, I already know their opinions: **HDV are delusions and phantasmagoria**) : **The opinions of experts, where and why I am wrong, are nowhere to be found. NEVER since 2000** has an expert come forward, **out of vanity**, to explain to me where my reasoning is wrong. (!)

AdS/CFT korespondence je **teoretický princip spojení** mezi kvantovou teorií gravitace definovanou na anti de Sitterově prostoru a konformní teorií pole definovanou na hranici anti de Sitterova prostoru v nekonečnu. Ekvivalence platí přesto, že hranice má dimenzi o jednu nižší než celý prostor. [Wikipedie](#)

It could be **random** (the boundary) and without consequences, but **could also point** to **something deeper**, to **a path to unifying quantum mechanics and gravity**. From a tender youth, physics youth, "lay education", I present the opinion that the "purely smooth", infinite state of space-time is the one before the Bang - **monostate**, and that is the 3+3D grid-raster-yarn...." without scale". After the Bang, there was a change, a symmetrical **duo-state**, the presentation of "this" space-time in two developmental directions: **a)** space-time **unpacks** into the macro-universe and **b)** in the micro-world, space-time dimensions **pack** into packages and into interconnections in interactions. <http://www.hypothesis-of-universe.com/index.php?nav=eb>. There is more about it in thousands of described papers (there are 20,000 of them in 40 years). **If** it's the right way though, something else will appear. **HDV**. **Through this relationship**, **space and time become granular**: **chunks** of fundamental length and fundamental time – **pixels. Planck-scale pixels** that set the universe's smallest resolution. Not of the Universe, but of space-time, i.e. the dimension of two quantities. Graininess is a manifestation! **"wavy-crumpled space-time"**, dimensional curvatures are in a state of "foam" (and it depends on the choice of scale for the "chosen" Observer.). Only cuts through the foam of space-time dimensions will show "granulation" as "dots and spaces", "ones and zeros", "something and nothing", "dead and alive" (cat). This would mean that on the smallest scale, space and time looked **like nothing but grains of sand on a beach**. O.K. And so maybe there is no space between grains of reality - no time between one grain and another. No, no, mistake. Even that **"nothing-something"** and "spaces and non-spaces", and "ones and zeroes", and "point-space-point-space", and plus-minus-plus-minus", **it's all a continuum**. **Even the gap belongs to the continuum**, even the "nothing" is part of Being. So everything belongs to Being, even the Nothing, even the gaps, etc.

Perhaps for these grains, these are concepts that do not make sense - there are only their relationships, how they affect each other. For us, much larger than the scale of these grains, there is a concept of space. And somehow through the relations **of grains we experience** ???

experience. But behind that, while, maybe finally, <space and time simply don't exist, there are only basic pieces and their interrelationships. Wrong, mistake, fleeting vision... This can be unpleasant. Where is "you" in this relational universe? ?? Perhaps it's best to think of it this way: Most of us have come to terms with the fact that we are physically a collection of atoms. And somewhere in this collection we somehow emerge, our consciousness. It emerges after we are born, enter the stage, (+ consciousness) "into the scene of transformation" the complexity of complexity at different levels of scales. We seem to be able to live with this illusion of our being. "The Illusion of Being"? Perhaps all we need to do is the same for the stage on which we play out our existence. And so we have come a long way and we are nearing the end of our journey. Space and time, our focus on our journey, both seemed so natural, seemed so normal. But we saw that they are much more strange, more mysterious than it seems at first glance. Although Newtonian space and time were simple and absolute, they became more complex with Einstein's curvature of spacetime.

In the macro world the curvature is only small, but in the micro world the curvature is huge, even incomprehensible multiplicity, into "itself", here is an example of how the "curvature" begins http://www.hypothesis-of-universe.com/docs/c/c_033.gif and this warping "into itself" continues. http://www.hypothesis-of-universe.com/docs/c/c_029.jpg A quantum the nature of space-time tries to chop up space and time into small pieces. Space-time is not chopped up by "nature" but cuts by the "foam dimension" show us the essence, i.e. the "quantization" of space-time by "warping" the dimensions. But we are a little closer to truly understand its true essence? We are, I believe...; I believe that once you understand HDV, you will be one step closer to the essence. In our other basic theories, there is great hope that the theory of everything. HDV+ will eventually illuminate the cosmic scene. HDV+ And maybe (definitely !) the true nature of space and time will be written into the theory. Maybe the block universe will be revealed as the universe evolves. You are still missing a small piece to understand that...that spacetime is expanding →

http://www.hypothesis-of-universe.com/docs/c/c_032.gif and you have to buy a lot of imagination to understand from the picture , that the "singular point" is not just one, but there are billions of them in the vacuum and they are all around us. Spacetime unfolds from the vacuum, emergently. Therefore, the Hubble equation can be "erased", which led us to a kind of "big-bang". He wasn't. The big-bang is only a "stop-state" of change, an instantaneous change from a "smooth" flat 3+3D space-time, to an "extremely curved" $n+m$ D space-time, a leap reality, "worse" than inflation.

Maybe quantum processes construct the "now" one moment at a time. Or maybe some process we can't yet imagine defines reality. The process of unwrapping the foam of dimensions into a state of near-flat spacetime, through a parabola into Euclidean flatness. But of course nature is not obliged to reveal its secrets. OK Nor am I obliged for 40 years begging physicists to read my HDV, at least read it. No matter how hard scientists work, ha-ha, may never reveal the underlying truth. We have to face the fact that some mysteries may remain mysteries forever - indeed what space and time really are may or may not be forever beyond our grasp. And so we finally return to the twilight of the cosmos. In their home, the last few watched their black hole slowly evaporate. All they wanted was to live one more day, one more moment. But eventually the disintegration of the universe could no longer be stopped. They manipulated space, controlled time, bent it to their will. But they could not defeat them. And then it was dark. (and a white HDV dot in the dark).

JN, 19/01/2023

Podosky says on YouTube 38:05h – It's been going on for 50 years (!) and we still don't know how from this equation of “mathematics” → http://www.hypothesis-of-universe.com/docs/c/c_098.jpg → mine “physics”.