

Mathematical “closed” knots are only possible in 4D-spacetime.

First, the reader should understand why only a mathematical analysis that allows mathematical knots will be possible for any possible TOE. For every theoretical physicist this simple mathematical fact still is ***NOT*** understood, and to explain myself a little better I'll explain why knots are only possible in 3D-space, i.e. 4D-spacetime. Mathematical knots demand an at least 3D-space! However is only 4D-spacetime possible or can more dimensional spaces also be analyzed correctly by easy i.e. (linear-)mathematical methods!?!

In this respect, already in 1919 [Kaluza-Klein](#) developed a 5D-spacetime analysis to describe the EM-field together with gravitation. And by mathematical means this analysis seems entirely correct. The extra space-coordinate is compactified, i.e. curled-up into a very small circle almost infinitesimal small. And this is the main mathematical problem with the trick of using compactified dimensions. The amount of spacelike dimensions remains greater than 3 when the extra dimensions are not compactified to exactly zero distance, so this spacelike description does not allow knots even after compactification! Reading the following [Kaluza-Klein article](#) explains why this 5D-spacetime analysis does not allow mathematical knots because compactification is of the order of the Planck-length > 0 . And this must imply that simple analyzed “linear” mathematical knots are only possible in 4D-spacetime, i.e. 3D-spatial-space.

Even though compactification of additional space-like-coordinates seems a bright idea, this idea can only work correctly with the extra spacelike coordinates diminishing completely to zero as described by Riemann in Einstein's GR. And this never happens in all analyzed compactification techniques. Because in this case one already has less spatial-coordinates at the start of the mathematical analysis. People should understand the main reason why “mathematical analysis” is easy. Mathematical analysis is “simple” linear-analysis and through duplication of coordinates in the ONLY possible 4D-spacetime analysis curvature of spacetime can be included in Albert Einstein his GR! I'm sad that he himself never experienced this in my eyes BEAUTIFUL mathematical view of QM, which in the end led to the only possible completely analyzable Theories Of Everything!

As a result the only allowed mathematical spacetime analysis to solve scientific problems must use the only possible and also very easy imaginable 4D-spacetime used by Albert Einstein more than a century ago to analyze his simple SR! And indeed in General Relativity a more dimensional mathematical analysis is needed to describe curvature by simple, i.e. “linear mathematical” methods, but this does NOT raise any conflicts with an easy linear “mathematical” analysis, where ONLY a 4D-spacetime coordinates analysis is used! And most physicists do NOT realize this fact, just like Albert Einstein himself did NOT understand this simple mathematical fact of “mathematical (closed)” knots! Curvature of spacetime implies mathematically extendedness in the 2D-plane orthogonal to the direction of motion of any possible analyzed “elementary particle”. And this “simple” because on linear mathematical grounds completely solvable problem at once yields the only possible mathematically analyzable Theories Of Everything.

Our simple analyzable reality has nothing more to analyze than just 26 ($= 5 + 3 \times 7$) harmonic oscillating elementary particles of our 3 different families of fermions oscillating in the 2D-plane orthogonal to the described direction of motion.

If anyone dares to tell me I'm wrong, please come visit me at Vogelvlucht with address:

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