

Re: GR1916 question about $g=1$?

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- *From:* Koobee Wublee <koobee.wublee@xxxxxxxxxx>
 - *Date:* Tue, 27 Nov 2007 00:16:09 -0800 (PST)
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On Nov 26, 9:49 pm, JanPB <film...@xxxxxxxxxx> wrote:

On Nov 26, 12:04 am, Koobee Wublee <koobee.wub...@xxxxxxxxxx> wrote:

On Nov 25, 10:09 pm, JanPB <film...@xxxxxxxxxx> wrote:

On Nov 25, 9:16 pm, Koobee Wublee wrote:

Clearly, ds^2 is a scalar mathematically with rank-0. It is impossible to fudge it into a rank-2 tensor or even a matrix. Professor Roberts is very correct on this one. <shrug>

If ds^2 were a scalar then it would have a value at each point. So tell us what is the value of ds^2 at $(x,y,z,t) = (0,0,0,0)$ in the Minkowski space? Remember, you've just said that it was a number – what is it?

A scalar just means it is a number but no particular number. You are confused with constants. <shrug>

But it must be a definite number – according to you – because ds^2 is given (the geometry has been specified). So in particular on the Minkowski space what is ds^2 equal to at the origin?

Re: GR1916 question about $g=1$?

Thanks for using my symbols to describe coordinate (not to be confused with displacement).

Dream on :-)

No, it is no dream. It is reality. <shrug>

Have you taken calculus? After all, the mathematics involved is at least 200 years old.

Infinitesimals are not well-defined mathematical objects (except in certain esoteric mathematical contexts that so far have not been seen in physics) and have status similar to that of the delta function before Laurent Schwartz. Is this news to you?

Laurent Schwarz is news for you, yes. However, infinitesimals are the essentials to understand the laws of physics. <shrug>

His name is spelled "Schwartz" not "Schwarz" (that's a different fellow). I never said infinitesimals were not essential, I only said that proper definition of infinitesimals on manifolds is done by limiting procedure of certain kind (Cauchy was the first to define limits correctly) which results in tangent vectors, covectors, and tensors or other ranks.

In mathematics/physics the actual tool used whenever one talks about infinitesimals employs various types of limiting processes (which are well-defined).

Re: GR1916 question about $g=1$?

Yes, such as the mathematical methods of calculus.

It is
the notion of limit which is encapsulated in the concept of
"tangent
vector" and "1-form" (aka. "tangent covector").

Yes, tangent vectors arise if you allow the mathematics to guide you
there. However, tangent covectors are nonsense or known in another
mathematical terms. They depend on very creative interpretations.
<shrug>

Covectors are not any "nonsense", they are gradients, just like
vectors are velocities.

It is so by definition. It has nothing to do
with the curvature in
space or spacetime --- not the least with
gamma whatever that is.

It is not so. Coordinates are not choice of ruler.

Coordinates are effectively a choice of ruler. They depend on the
observers. Hey, you don't dictate what coordinate has to be
utilized. The observer does. <shrug>

Choosing a ruler does not determine a coordinate system.

If you are passing coded messages to
Professor Roberts, I'd appreciate
if you do so through your private mail.
Thanks in advance.

Just refrain from posting if you don't know what to say.

Re: GR1916 question about $g=1$?

You have been typing gibberish, and I was just too polite to tell you so. Don't you have any decency?

Anyone can check who is "typing gibberish".

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Jan Bielawski– Hide quoted text –

– Show quoted text –