Re: resolve to perpendicular components, because they are independent

Source: http://sci.tech−archive.net/Archive/sci.physics/2006−01/msg02343.html

- *From*: "Ken S. Tucker" <dynamics@xxxxxxxxxxxx>

- *Date*: 21 Jan 2006 11:29:46 −0800

FrediFizzx wrote:
> "Ken S. Tucker" <dynamics@xxxxxxxxxxxx> wrote in message
> news:1137804799.742330.45120@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
> |
> | FrediFizzx wrote:
> | > "Ken S. Tucker" <dynamics@xxxxxxxxxxxx> wrote in message
> | > news:1137800854.404588.75250@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
> | > |
> | > | Timo Nieminen wrote:
> | > | > On Fri, 20 Jan 2006, Ken S. Tucker wrote:
> | > | >
> | > | > > I find nonorthogonal axes easier than orthogonal,
> | > | >
> | > | > Then you must be some kind of bizarre freak of nature!!!
> | > |
> | > | Not really, as in Chess, solving problems in mathematical
> | > | physics consists of keeping your options open, to be
> | > | closed by physical principle, and certainly not by an aprior
> | > | preceived convenience. It's well known "orthogonality" is
> | > | at best an approximation in a g−field, but Reimann and his
> | > | "gang" evolved quite a nice "tensor" analysis notation that
> | > | is easier to use than clunky "ijk" unit vectors.
> | > |
> | > | > indeed a Curl
> | > | > becomes A_u,v − A_v,u (== &A_u/&x^v − &A_v/&x^u), because
> | > | > manipulating equations in tensors is streamlined by notation.
> | > | >
> | > | > Can't you just do that with orthogonal metrics too? (Mixing
> | > covariant and
> | > | > contravariant is just a naughty little trick to hide the metric
> | > tensor!)
> | > |
> | > | If your intrinsic dimensionality differs from an integer, i.e
> | > | let n= intrinsic dimensionality =2.9, then how the heck do
> | > | you expect to squeeze 3 orthogonals into that?
> | >
> | > Hmm... I wonder if that would apply to what Lisa Randall is calling

> | > "Warped Passages"?
> |
> | LOL, ok, how about a link, Randall is super−pop, so
> | I know you're not jokin...
>
> "Discretizing Gravity in Warped Spacetime"
> http://www.arxiv.org/abs/hep−th/0507102
>
> I haven't read this yet but maybe it has something. I was mainly
> referring to something she was saying in her new book (did you get it
> yet? ;−)). I didn't make the connection at the time I was reading it
> until you brought this up (forgot what you call it) again.
> FrediFizzx

Here's an interesting quicky...

http://en.wikipedia.org/wiki/Fractional_calculus

that demo's a departure from our usual "integer" thinking, we
commonly apply to both calculus and so to dimensionality.

Recall that when we integrate a line like "x" by

$ x dx = x^2/2 == area

we go from 1D "x" to 2D "x^2" , but what the link above shows
is that integration (and differentiation) can be a continuous thing,
and so can dimensionality.

Is that where we're going?
Ken

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- ***Follow−Ups***:
  - ♦ ***Re: resolve to perpendicular components, because they are independent***
    - ◊ *From:* FrediFizzx

- ***References***:
  - ♦ ***resolve to perpendicular components, because they are independent***
    - ◊ *From:* kenneth . bull
  - ♦ ***Re: resolve to perpendicular components, because they are independent***
    - ◊ *From:* Ken S. Tucker
  - ♦ ***Re: resolve to perpendicular components, because they are independent***
    - ◊ *From:* mmeron
  - ♦ ***Re: resolve to perpendicular components, because they are independent***
    - ◊ *From:* Ken S. Tucker
  - ♦ ***Re: resolve to perpendicular components, because they are independent***
    - ◊ *From:* Timo Nieminen

- Prev by Date: ***Re: lead x−ray fluorescence***
- Next by Date: ***Re: How I Improve My Theories***
- Previous by thread: ***Re: resolve to perpendicular components, because they are independent***
- Next by thread: ***Re: resolve to perpendicular components, because they are independent***
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  - ***Thread***