

Re: resolve to perpendicular components, because they are independent

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Source: <http://sci.tech-archive.net/Archive/sci.physics/2006-01/msg02252.html>

- *From:* "Ken S. Tucker" <dynamics@xxxxxxxxxxxxx>
 - *Date:* 20 Jan 2006 15:47:34 -0800
-

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 perceived 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 $A_{u,v} - A_{v,u}$ ($= \partial A_u / \partial x^v - \partial A_v / \partial x^u$), 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 $n = \text{intrinsic dimensionality} = 2.9$, then how the heck do you expect to squeeze 3 orthogonal into that?
Ken

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- *Follow-Ups:*
 - ◆ **Re: resolve to perpendicular components, because they are independent**
◇ *From:* Timo Nieminen
 - ◆ **Re: resolve to perpendicular components, because they are independent**
◇ *From:* FrediFizzx

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- **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

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