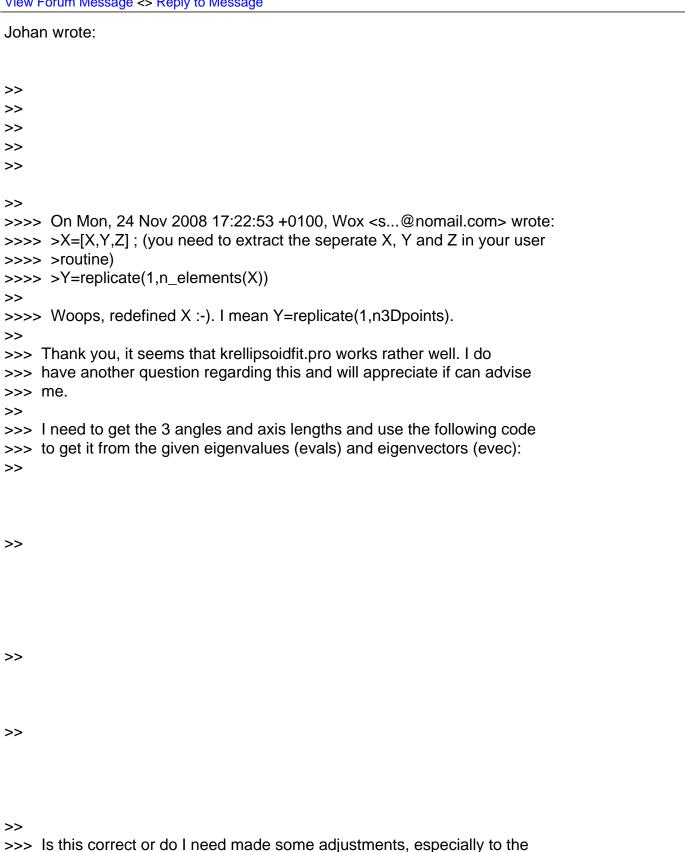Subject: Re: Least squares fit of a model to a skeleton consisting out of 3D points.
Posted by pgrigis on Wed, 03 Dec 2008 14:37:27 GMT
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Johan wrote:

>>
>>
>>
>>
>>

>>
>>>> On Mon, 24 Nov 2008 17:22:53 +0100, Wox <s...@nomail.com> wrote:
>>>> >X=[X,Y,Z] ; (you need to extract the seperate X, Y and Z in your user
>>>> >routine)
>>>> >Y=replicate(1,n_elements(X))
>>
>>>> Woops, redefined X :-). I mean Y=replicate(1,n3Dpoints).
>>
>>> Thank you, it seems that krellipsoidfit.pro works rather well. I do
>>> have another question regarding this and will appreciate if can advise
>>> me.
>>
>>> I need to get the 3 angles and axis lengths and use the following code
>>> to get it from the given eigenvalues (evals) and eigenvectors (evec):
>>

>>

>>

>>

>>
>>> Is this correct or do I need made some adjustments, especially to the

>>> orientation?

>>

>>> Thanks

>>> Johan Marais

>>

>> That does indeed give you 3 angles, but it doesn't fully specify the

>> orientation. Which angles are you looking for?

>>

>> Incidentally, I'm not quite sure why you have that factor of 2 in the

>> definition of semia etc., but I suppose it depends what went into the

>> matrix you're diagonalizing...

>>

>> -Jeremy.- Hide quoted text -

>>

>> - Show quoted text -

>

> I tried different ways of getting the angles but it seems I am still

> at a lost. The angles I am looking for is as follow:

> If you have an orthogonal reference framework and the ellipsoid are

> tilted in it. I am looking for the angles that the 3 axes of the

> ellipsoid make with the xy-plane, the yz-plane and yz-plane of the

The angle between vectors a and b in IDL is given by
arccos(total(a*b) / sqrt(total(a*a)*total(b*b)))

Paolo

> reference framework. I assume that for each of them you need to use

> all 3 relevant eigenvectors for each axes of the ellipsoid, or it

> could be only 2?