Subject: Re: Averaging quaternions
Posted by Arnold Neumaier on Sun, 21 Mar 2004 08:47:50 GMT
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jelansberry wrote:
> I've finally realized that all I contributed was questions and complaints
> and no alternative solutions.
>
> If I were doing this, I would probably convert the quaternions to Euler (or
> Bryant) angles first (convert the quaternion to a direction cosine matrix,
> then extract the Euler angles). Then, I would compute the average of the
> Euler angles, and then convert the resulting average Euler angles back to a
> quaternion (convert the Euler angles to a direction cosine matrix, then
> extract the quaternion).

This has exactly the same problems as averaging over quaternions, since angles are only unique up to a multiple of pi or 2pi; so the average depends on whether you represent an angle by a number close to pi or close to -pi ...

Arnold Neumaier