

Re: Instantaneous radius of a rotation

Source: <http://sci.tech-archive.net/Archive/sci.physics/2007-01/msg00627.html>

- *From:* "Edward Green" <spamspamspam3@xxxxxxxxxxxx>
 - *Date:* 6 Jan 2007 19:43:02 -0800
-

Atreides wrote:

Hello,

I am looking for a solution to my problem about the instantaneous radius of a rotation.

Let's say I have an aircraft flying with a certain translational speed (v), it also has a nangular velocity (w). There is an imaginary point (C) around which this aircraft can be considered to be rotating. I am looking for the distance from aircraft center to point C (hence radius of a rotation).

I have so far found ways of doing this in 2D but nothing in 3D. Any ideas appreciated. Thanks !

I guess you want the "extrinsic curvature" of a space curve. That should point you in the right direction.

.