

Abstract Submitted  
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**Evolving geometry of a vortex triangle** VIKAS KRISHNAMURTHY,  
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We explore a new description of three-vortex motion in terms of the angles,  $A, B, C$ ,  
in the triangle of vortices, the radius,  $R$ , of the circumcircle to this triangle, and  
the position of the circumcenter. We show that the equations of motion for the  
radius and angles may be expressed in terms of these variables alone, i.e., the evolu-  
tion of  $R, A, B, C$  leads to an autonomous four-dimensional dynamical system. The  
evolution of the circumcenter, however, depends on the absolute vortex positions.  
Thus, the motion of three vortices may be regarded as a sum of two components:  
the motion of the circumcenter (giving the absolute position of the circumcircle)  
and, superimposed on this, the intrinsic dynamics of the size of the circumcircle and  
shape of the vortex triangle. Several results from the theory of three-vortex motion  
follow in this new representation and a number of new issues may be investigated.

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