

# **Evidence for the development of singularities in Euler flow**

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## **Abstract**

This paper is about the problem of determining whether singularities can develop from analytic initial conditions in the Euler flow of three-dimensional hydrodynamics. The evidence is supplied by previous numerical simulations. To provide a guide for interpreting this numerical output, a theory based on renormalization is outlined here. We conclude that it appears that the numerical results can be satisfactorily explained by this theory and that together theory and simulation support the verdict that singularities exist. Thus a more detailed and rigorous development of the application of the renormalization theory to this system is warranted.

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