

Abstract Submitted
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A better approach to assess mean flow stability in turbulence

RICH KERSWELL, VILDA MARKEVICIUTE, Univ of Cambridge — There is a long history dating back to the 1950s of examining the stability of the turbulent mean profile in shear flows. Originally this was to explore the existence of a possible selection mechanism for the particular form of the mean flow and, latterly, has been used to help rationalise observed large scale structures seen in the turbulence. The stability ‘analysis usually applied consists simply of studying the spectral properties of the Orr-Sommerfeld equation built around the turbulent mean. We will discuss how to extend this naive approach to the next level of sophistication.

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