On the self-similar blow-up scenario for the Euler equations

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In this talk we will survey some results regarding the possibility of self-similar blow-up for the incompressible Euler equations. We will prove that, under a mild Lp-growth assumption on the self-similar profile, the solution carries a positive amount of energy up to the time of blow-up. As a consequence, we recover and extend several previously known exclusion criteria.

This is joint work with Roman Shvydkoy.