Recent results on the regularity of weak solutions to the Navier-Stokes equations in terms of one velocity component

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We study the conditional regularity for the incompressible Navier-Stokes equations in the whole three dimensional space in terms of one component \( u_3 \) of the velocity field \( u = (u_1, u_2, u_3) \). We present a survey of relevant recent results and focus on criteria which are optimal and requiring small derivative degree of \( u_3 \).

References


