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Mathematics > Analysis of PDEs

## On the motion of a rigid body in a two-dimensional irregular ideal flow

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We consider the motion of a rigid body immersed in an ideal flow occupying the plane, with bounded initial vorticity. In that case there exists a unique corresponding solution which is global in time, in the spirit of the famous work by Yudovich for the fluid alone. We prove that if the body's boundary is Gevrey then the body's trajectory is Gevrey. This extends the previous work [Glass-Sueur-Takahashi, 2011] to a case where the flow is irregular.

## Subjects: Analysis of PDEs (math.AP)

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