Global mild solutions for a nonautonomous 2D Navier-Stokes equations with impulses at variable times

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Abstract

In this talk we present the existence and uniqueness of global mild solutions for a new model of Navier-Stokes equations on $\mathbb{R}^2$ subjected to impulse effects at variable times. By using the framework of impulsive/nonautonomous dynamical systems we are able to consider impulse effects in the system as well relax conditions on the external forcing term which is, in our case, non-linear and explicitly time-dependent, extending previous results on the specialized literature.

References

[1] E. M. Bonotto, J. G. Mesquita and R. P. Silva, Global mild solutions for a nonautonomous 2D Navier-Stokes equations with impulses at variable times. J. Math. Fluid Mechanics. To appear.

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