Strong solution of the Navier-Stokes equations in non-cylindrical domains

João Carlos Fernandes Barreira

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Abstract

We will talk about the existence and uniqueness of strong solutions to the Navier-Stokes equations in non-cylindrical domains. It will be necessary to make a modification to the penalty method introduced by Lions, J.L. in 1964, and for this we will define two penalty terms that have an elliptical relationship between them instead of a single term used by Lions, J.L., the decay of the solutions will also be commented. This is a method that can also be used to obtain regular solutions in other nonlinear equations in noncylindrical domains.

References

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