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NAVIER-STOKES EQUATIONS IN UNBOUNDED DOMAINS: SPATIALLY NON-DECAYING SOLUTIONS

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Abstract

The talk is devoted to the 2D and 3D Navier-Stokes equations in unbounded cylindrical domains in the classes of spatially non-decaying solutions (which contain, in particular, all of the Poiseuille flows). For the 2D case, the existence, uniqueness, dissipativity of the weak weighted energy solutions and their further regularity is established. For the 3D case, only the existence of such solutions and their dissipativity is verified. In order to overcome the uniqueness problem, we use here the so-called trajectory attractor approach.

Date: Wednesday, April 11, 2007

Time: 14:30

Place: IMBM Seminar Room, Boğaziçi University