

In this talk, we consider the initial value problems of the 3D incompressible Euler equations in the rotational framework. We obtain the optimal range of the Strichartz estimate for the linear propagator associated with the Coriolis forces. As an application, we prove that the lifespan of the solution can be taken arbitrarily large provided that the speed of rotation is sufficiently high. This talk is based on the joint work with Prof. Youngwoo Koh and Prof. Sanghyuk Lee in Seoul National University.