1146-35-187   **Yongjin Lu*** (`ylu@vsu.edu`). *On the pullback dynamics of 3D Navier-Stokes equations with variable viscosity.*

We study the pullback dynamics of 3D Navier-Stokes equations with variable viscosity and subject to time-dependent external forces. Using a decomposition method, we establish the existence of a finite dimensional pullback attractors in a general setting. We give estimates on the upper bound of the finite fractal dimension of pullback attractors. We also investigate the problem of upper semi-continuity of pullback attractors as the non-autonomous perturbation vanishes. (Received January 21, 2019)