1163-76-567   **Animikh Biswas** and **Jing Tian***, 7800 york road, Towson, MD , and **Suleyman Ulusoy**.
Error Estimates for Deep Learning Methods in Fluid Dynamics.

In this study, we provide error estimates and stability analysis of deep learning techniques for certain partial differential equations including the incompressible Navier-Stokes equations. In particular, we obtain explicit error estimates (in suitable norms) for the solution computed by optimizing a loss function in a Deep Neural Network approximation of the solution, with a fixed complexity. (Received September 09, 2020)