1096-65-2446 **Edriss S. Titi*** (etiti@math.uci.edu), Department of Computer Science & Applied Math, Weizmann Institute of Science, 76100 Rehovot, Israel. *Filtered turbulence models - rough variants of nonlinear Galerkin and post-processing Galerkin methods.*

In late 1990s we introduced, together with Garcia-Archilla and Novo, the *post-processing Galerkin method* (PPG) as an alternative to the nonlinear Galerkin method (NLG), where the latter was based on the theory of approximate inertial manifolds (AIM). The PPG is much cheaper to implement computationally than the NLG method, yet it possess the same rate of convergence (accuracy) as the simplest version of the NLG method; which is more accurate than the standard Galerkin method. Moreover, we will also show that the recently introduced *ad hoc* filtered models of turbulence are nothing other some rough, unjustifiable, variants of the NLG and PPG methods. (Received September 17, 2013)