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Cecilia F. Mondaini* (cfmondaini@gmail.com). *On the convergence of statistical solutions of evolution equations.*

The concept of statistical solutions of evolution equations in fluid dynamics has emerged with the aim of proving rigorous results concerning the conventional theory of turbulence. For well-posed systems, a statistical solution corresponding to a given initial probability measure is trivially given by the transport of the initial measure by the semigroup. In this talk, I will present an abstract framework that allows one to prove the existence of such statistical solutions for evolution equations which are not known to be well-posed, by considering regularized approximate models. The aim is to show that the statistical solutions of the approximate models converge to a statistical solution of the original system. An application of this framework to the inviscid limit of the 2D incompressible Navier-Stokes equations will be discussed. This is a joint work with A. Bronzi and R. Rosa. (Received March 21, 2017)