Non-trivial stationary solutions for the 2D Navier-Stokes equations

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In this talk I will discuss a new variant of Nash iteration in which paraproducts are used to pass to the limit in nonlinear terms. These techniques allow us to construct non-trivial stationary solutions to the 2D Navier-Stokes equations in all L^p spaces for p<2. It is an interesting open problem to determine what happens in the case p=2. Based on joint work with Estepan Ashkarian, Atal Bhargava, and Nicholas Gismondi at Purdue.