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Liqun Fang and **P. Sundar*** (sundar@math.lsu.edu), Department of Mathematics, Louisiana State University, Baton Rouge, LA 70803, and **Frederi Viens**. *Stochastic Navier-Stokes and related equations with fractional Brownian noise.*

The perturbation of the two-dimensional stochastic Navier-Stokes (and MHD) system by a Hilbert-space-valued fractional Brownian noise is considered in this talk. With noise being additive, the system is split into a deterministic nonlinear PDE, and a linear stochastic PDE. Existence and uniqueness of mild solutions are established under suitable conditions on the noise intensities for all Hurst parameter values. Further properties and extensions will briefly be described. (Received January 08, 2012)