1096-60-528 **Davar Khoshnevisan*** (davar@math.utah.edu), Department of Mathematics, University of Utah, Salt Lake City, UT 84112-0090, **Jason Swanson** (jason@swansonsite.com), Department of Mathematics, University of Central Florida, Orlando, FL 32816-1364, **Yimin Xiao** (xiao@stt.msu.edu), Department of Statistics and Probability, Michigan State University, East Lansing, MI 48824-3416, and **Liang Zhang** (lzhang81@stt.msu.edu), Department of Statistics and Probability, Michigan State University, East Lansing, MI 48824-3416. *Some Very Rough Differential Equations.*

We prove that if $f : \mathbf{R} \to \mathbf{R}$ is Lipschitz continuous, then for every $H \in (0\,, 1/4]$ there exists a probability space on which we can construct a fractional Brownian motion X with Hurst parameter H, together with a process Y that: (i) is Hölder-continuous with Hölder exponent γ for any $\gamma \in (0\,, H)$; and (ii) solves the differential equation $\mathrm{d}Y_t = f(Y_t)\,\mathrm{d}X_t$. More significantly, we describe the law of the stochastic process Y in terms of the solution to a non-linear stochastic partial differential equation. (Received September 05, 2013)