1038-14-5   **Thomas Nevins*** (`nevins@uiuc.edu`), Department of Mathematics, University of Illinois at Urbana-Champaign, 1409 W. Green Street, MC-382, Urbana, IL 61801. *A Ramified Langlands Duality in Characteristic p.*

The geometric Langlands program proposes a strong form of "harmonic analysis" for the derived categories of certain moduli spaces—roughly, moduli spaces of Higgs bundles on curves (or, more precisely, their quantizations, realized via D-modules). I will explain my recent work proving a geometric-Langlands–type derived equivalence that allows for some "ramification" and "twisting." The proof relies heavily on the Azumaya property of PD differential operators in characteristic $p > 0$, first exploited in this context in work of Bezrukavnikov-Mirkovic-Rumynin, Ogus-Vologodsky, and Bezrukavnikov-Braverman. (Received September 14, 2007)