1035-37-1214   **Slobodan N. Simić*** (`simic@math.sjsu.edu`), Department of Mathematics, San Jose State University, San Jose, CA 95192-0103. *Hölder forms and integrability of invariant distributions.*

I will present an inequality for Hölder continuous differential forms on compact manifolds in which the integral of the form over the boundary of a sufficiently small, smoothly immersed disk is bounded by a certain multiplicative convex combination of the volume of the disk and the area of its boundary. This inequality has natural applications in dynamical systems, where Hölder forms are ubiquitous. I will state several such applications to integrability of certain invariant distributions of Anosov flows and partially hyperbolic diffeomorphisms. (Received September 19, 2007)