1018-53-128   **John D Moore*** (`moore@math.ucsb.edu`), Department of Mathematics, University of California, Santa Barbara, CA 93106. *Generic Properties of Closed Minimal Surfaces in Compact Riemannian Manifolds.* Preliminary report.

Among the most important nonlinear PDE's are the equations for parametrized minimal surfaces and harmonic maps. The speaker is interested in developing a partial Morse theory for such objects. A first step is the bumpy metric theorem he has established which states that for generic metrics, conformal harmonic maps from a Riemann surface of genus to a compact manifold are free of branch points and lie on nondegenerate critical submanifolds whose dimension equals the dimension of the space of automorphisms of the Riemann surface. Some applications of this theorem will be presented. (Received March 02, 2006)