

1023-Z1-1783 **Marcus Pendergrass*** (mpendergrass@hsc.edu), Dept. of Mathematics and Computer Science,
Hampden-Sydney College, Hampden-Sydney, VA 23943. *When Is The Derivative Of A
Composition The Composition Of The Derivatives?* Preliminary report.

The *naive chain rule* asserts that the derivative of a composition is the composition of the derivatives. Though false, it enjoys an enduring popularity, especially among first-year calculus students. In this talk we will survey some interesting mathematics that arises when we look for cases in which the naive chain rule is true. (Received September 26, 2006)