Michael Ching* (mching@math.jhu.edu), JHU/Math Dept, 3400 N Charles St, Baltimore, MD 21210. Chain rules for Goodwillie calculus and algebraic K-theory. Preliminary report.

I will talk about recent work (joint with Greg Arone) on chain rules for Goodwillie's calculus of homotopy functors in a general model category setting. This work involves understanding the relationship between calculus of functors in an unstable category and in its stabilization. I will discuss an application of this to the Taylor tower of relative algebraic K-theory of ring spectra. (Work on this application is joint with Andrew Blumberg.) (Received September 19, 2007)