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)