Jonathan Totushek* (jtotushe@uwsuper.edu) and Sean Sather-Wagstaff (ssather@clemson.edu). A variation on the complete intersection injective dimension. Preliminary report.

The injective dimension (id) is a classical invariant used, e.g., by Auslander, Buchsbaum, and Serre to characterize regular local rings. Recently, other incarnations of this have been introduced that characterize other classes of rings. For instance, Sather-Wagstaff’s complete intersection injective dimension (CI-id) characterizes formal complete intersections like its progenitor, the complete intersection dimension (CI-dim) of Avramov, Gasharov, and Peeva. Unfortunately, the CI-id is not as amenable to study as other such constructions.

In this talk, we will introduce a new version of the CI-id, which is more natural in some ways. We will describe several of its properties. In particular, we will show how it satisfies several natural properties that we have been unable to verify for Sather-Wagstaff’s original notion. (Received September 13, 2016)