Nicholas O Cox-Steib* (noc3md@mail.missouri.edu). m-adic Perturbations and F-Invariants.

Suppose \((R, \mathfrak{m}_R)\) is a Noetherian local ring that is complete with respect to the \(\mathfrak{m}_R\)-adic topology. Given an ideal, \(I \subset R\), we investigate quotients of the form

\[
\frac{R}{(g_1, \ldots, g_c)}
\]

where \(g_1, \ldots, g_c \in R\) are \(\mathfrak{m}_R\)-adically close to a minimal generating set for \(I\).

We discuss new techniques for studying these quotients when \(R\) has equal characteristic and \(I \subset R\) satisfies certain technical conditions. Applying these methods to F-finite local rings yields interesting new results about F-invariants. (Received September 12, 2020)