1135-16-1274   **Daniel P. Bossaller*** (db684513@ohio.edu) and **Sergio R. Lopez-Permouth**. *Algebras Having Bases Consisting Solely of Strongly Regular Elements.* Preliminary report.

Various recent papers deal with the so-called "invertible algebras", those algebras over arbitrary (not necessarily commutative) unital rings which have bases that consists solely of invertible elements. Somewhat surprisingly, many familiar algebras satisfy this property, including all finite dimensional algebras over fields other than $\mathbb{F}_2$. It is also known precisely which finite-dimensional algebras over $\mathbb{F}_2$ are invertible. We introduce the concept of a locally invertible algebra, A, and we show that this property is equivalent to the property that A has a basis consisting solely of strongly von Neumann regular elements. Among other results, we show that this family of algebras is strictly larger than that of invertible algebras. In particular, we show that it includes all finite dimensional algebras over arbitrary fields, as well as all clean algebras. Most importantly, the new notion opens this type of inquiry to the consideration of non-unital algebras; we will show various examples of non-unital locally invertible algebras and, if time permits, we will will announce current results in our work of determining which Leavitt Path Algebras that have locally invertible bases. (Received September 20, 2017)