1131-46-335 **Pavlos Motakis***, Department of Mathematics, Texas A&M University, College Station, TX 77843-3368, and **Daniele Puglisi** and **Andreas Tolias**. *Spaces of compact diagonal operators as Calkin algebras of Banach spaces.*

The Calkin algebra of a Banach space Z is the unital Banach algebra $\mathcal{C}al(Z)$ defined as the quotient $\mathcal{L}(Z)/\mathcal{K}(Z)$ of the algebra of all bounded linear operators on Z over the ideal of all compact ones. We investigate the question of what types of unital algebras can occur as Calkin algebras. Given a Banach space X with a Schauder basis we denote by $\mathcal{K}_{\text{diag}}(X)$ the space of all compact and diagonal operators on X. We prove that there exists a Banach space $\mathfrak{X}_X$ so that the Calkin algebra of $\mathfrak{X}_X$ is isomorphic, as a Banach algebra, to $\mathcal{K}_{\text{diag}}(X) \oplus \mathbb{R}I$. This yields Banach spaces with interesting Calkin algebras, e.g., James' quasi reflexive Banach space and even a hereditarily indecomposable Banach algebra constructed by S. A. Argyros, I. Deliyanni, and A. Tolias. The space $\mathfrak{X}_X$ is of the form $(\sum \oplus X_k)$ where each X_k is a version of the Argyros-Haydon space and the outside norm is a modified Argyros-Haydon sum incorporating the norm of the space X. (Received July 18, 2017)