NATE BROWN, Penn State University *Hilbert Modules and the Cuntz Semigroup*

About two years ago Coward, Elliott and Ivanescu defined a new equivalence relation on Hilbert modules that connects these fundamental objects with the Cuntz semigroup. They also showed that in the stable rank one case this new equivalence relation amounts to isomorphism, and asked if this fact holds for general stably finite algebras. In joint work with Alin Ciuperca we've answered this question in the negative, but also shown that for "compact" elements the answer is affirmative. I'll try to explain these results.