## Regular algebras and their associated Manin universal quantum groups

In this talk, we explore Artin-Schelter regular (henceforth, regular) algebras, noncommutative analogues of the polynomial ring. We examine some results pertaining to Manin's universal quantum group of such a regular algebra. In particular, we analyze how a twist by an automorphism of an algebra may yield a 2-cocycle twist of the corresponding Manin universal quantum group. We exhibit this result in the context of the coordinate ring of the Jordan plane. Finally, we discuss a result relating Koszul regular algebras to their 2-cocycle twists using Raedschelders' and Van den Bergh's work on Manin's universal quantum groups associated with Koszul regular algebras. This is joint work with H. Huang, V. C. Nguyen, K. B. Vashaw and X. Wang that was made possible by a SQuaRE at the American Institute of Mathematics.