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Terry A Loring*, Department of Mathematics and Statistics, MSC03 2150, 1 University of New Mexico, Albuquerque, NM 87131-0001, and **Tatiana Shulman**. *Lifting Problems and Noncommutative Semialgebraic Sets*.

The talk will focus on C^* -algebra lifting problems involving approximate polynomial relations (soft polynomial relations).

A projective C^* -algebra is the analog of an absolute retract. We demonstrate that various noncommutative semialgebraic sets are absolute retracts. In particular we show a noncommutative absolute retract results from the intersection of the approximate locus of a homogeneous polynomial with the noncommutative unit ball. By unit ball we are referring the C^* -algebra of the universal row contraction. We show projectivity of alternative noncommutative unit balls. (Received February 23, 2010)