"NONCOMMUTATIVE ALGEBRAIC GEOMETRY WITH MATRIX RINGS."

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Algebraic geometry exploits the close relationship between geometry on one hand and the study of commutative rings on the other hand. For a polynomial equation in multiple variables, you can look for solutions in general commutative rings and think of them as parametrized families of, for example, integer or complex solutions.

This approach runs into difficulties if you want to describe solutions in noncommutative rings, for example matrix rings. The talk will be about ways to partially circumvent these problems, and about some techniques of modern algebraic geometry that still make sense if you work with matrices.