Hilbert’s Nullstellensatz is a fundamental result in commutative algebra which gives a defining property of algebraically closed fields. This property identifies algebraically closed fields as the “points” in classical algebraic geometry.

In this talk, I will discuss joint work with Robert Burklund and Allen Yuan in which we identify certain Lubin-Tate spectra as those that satisfy a chromatic version of Hilbert’s Nullstellensatz. This will allow the definition of a “constructible” spectrum for $E_\infty$ rings. I will then sample some applications of our results to chromatic redshift and orientation theory for $E_\infty$ rings.

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