Sarah Frei* (sf31@rice.edu). Derived equivalence and rational points.

It is natural to ask which properties of a smooth projective variety are recovered by its derived category. In this talk, I will consider the question: is the existence of a rational point preserved under derived equivalence? In recent joint work with Nicolas Addington, Ben Antieau, and Katrina Honigs, we show that over Q, the answer is no. We give two counterexamples: an abelian variety and a torsor over it, and a pair of hyperkaehler fourfolds. (Received September 15, 2019)