1163-14-823 **Matthew Ballard**, **Alexander Duncan**, **Alicia Lamarche** and **Patrick McFaddin*** (pmcfaddin@fordham.edu). *Derived categories and rationality of twisted forms of toric varieties.*

Toric varieties defined over the complex numbers provide a rich testing ground for computing algebro-geometric invariants (e.g., the coherent derived category associated to a variety), as many computations of interest may be phrased in terms of combinatorial data such as fans, cones, polytopes. Over general fields, we consider twisted forms of such objects called "arithmetic toric varieties", whose analysis is naturally Galois-theoretic. In this talk, we will present results on the structure of derived categories of arithmetic toric varieties via exceptional collections and how this data reflects rationality of these varieties. (Received September 13, 2020)