1145-05-1520 **Anton Bernshteyn*** (abernsht@math.cmu.edu), **Michelle Delcourt** and **Anush Tserunyan**.
Independent sets in algebraic hypergraphs.

An active avenue of research in modern combinatorics is extending classical extremal results to the so-called sparse random setting. The basic hope is that certain properties that a given "dense" structure is known to enjoy should be inherited by a randomly chosen "sparse" substructure. One of the powerful general approaches for proving such results is the hypergraph containers method, developed independently by Balogh, Morris, and Samotij and Saxton and Thomason. Another major line of study is establishing combinatorial results for algebraic or, more generally, definable structures. In this talk, we combine the two directions and address the following problem: Given a "dense" algebraically defined hypergraph, when can we show that the subhypergraph induced by a generic low-dimensional algebraic set of vertices is also fairly "dense"? (Received September 22, 2018)