Big polynomial rings and Stillman’s conjecture

Abstract:
Stillman’s conjecture asserts the existence of a uniform bound on the projective dimension of an ideal in a polynomial ring generated by a fixed number of polynomials of fixed degrees. Ananyan and Hochster gave a proof of Stillman’s conjecture by proving the existence of “small subalgebras”. I’ll describe a simplification of their approach using ultraproducts (and in particular, explain what ultraproducts are and all of the terms mentioned above). This is based on joint work with Daniel Erman and Andrew Snowden.

Wednesday, May 6, 2020
2:30 PM
Zoom (to be announced by email)