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Steven V Sam* (svs@math.berkeley.edu). *Infinite-dimensional combinatorial commutative algebra.*

A recent trend in commutative algebra has been to prove uniform properties of a family of algebraic objects X_n by studying a suitable limit X_∞ and proving finiteness properties for it. I will illustrate this by surveying two recent results about Segre varieties: (1) the result of Draisma and Kuttler which shows that there exists a universal bound $d(r)$ such that the r th secant variety of any Segre variety is set-theoretically defined by equations of degree at most $d(r)$, and (2) the theory of Δ -modules (introduced by Snowden) which shows that each Tor module of a Segre variety is finitely generated by certain functorial operations, and hence has a finite description (the key point is that both results are independent of the dimensions of the projective space factors and the number of factors). (Received July 13, 2014)