

Jacob Lurie: **Co**homology Theories and Commutative Rings

One of the primary goals of algebraic topology is to obtain information about topological spaces X by studying algebraic invariants of X , such as the cohomology $H^*(X; R)$ with coefficients in a commutative ring R . For many applications, it is useful to consider more exotic invariants given by "extraordinary" cohomology theories (such as K-theory). In this talk, I'll give an informal introduction to extraordinary cohomology theories, emphasizing their algebraic role as generalized commutative rings.