

Topology Seminar

Ben Antieau

of Northwestern University will be speaking on

Integral models for spaces

on September 18 at 4:30 in
MIT Room 2-131

Generalizing and building on the work of Kriz, Ekedahl, Goerss, Lurie, Mandell, Mathew, Mondal, Quillen, Sullivan, Toën and Yuan, I will describe an integral cochain model for nilpotent spaces of finite type. A binomial ring is a lambda-ring in which all Adams operations act as the identity. A derived binomial ring is a derived Λ -ring equipped with simultaneous trivializations of the commuting Adams operations. For example, if X is a space, then ZX , the integral cochains on X , is naturally a derived binomial ring. The induced contravariant functor from spaces to derived binomial rings is fully faithful when restricted to nilpotent spaces of finite type. This is related, closely, to recent work of Horel and of Kubrak—Shuklin—Zakharov.

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