

1033-55-220

Vigleik Angeltveit* (vigleik@math.uchicago.edu), University of Chicago, Department of Mathematics, 5734 E University Ave, Chicago, IL 60637. *Uniqueness of Morava K-theory*. Preliminary report.

Classical obstruction theory seemingly produces uncountably many A-infinity structures on the Morava K-theory spectrum $K(n)$. We show that these A-infinity structures are all equivalent, using a Bousfield-Kan spectral sequence converging to the homotopy groups of the moduli space of A-infinity ring spectra equivalent to $K(n)$. This spectral sequence has infinitely many differentials, and to show that all the relevant classes die we study the connective Morava K-theory spectrum $k(n)$ and use the theory of Postnikov towers and S-algebra k-invariants developed by Dugger and Shipley. (Received September 11, 2007)