

Formal plethories

Tilman Bauer

(Submitted on 28 Jul 2011)

Unstable operations in a generalized cohomology theory E give rise to a functor from the category of algebras over E to itself which is a colimit of representable functors and a comonoid with respect to composition of such functors. In this paper I set up a framework to study the algebra of such functors, which I call formal plethories. I show that the "logarithmic" functors of primitives and indecomposables give linear approximations of formal plethories by bimonoids in the 2-monoidal category of bimodules over a ring.

Comments: 50 pages

Subjects: **Algebraic Topology (math.AT)**; Commutative Algebra (math.AC); Category Theory (math.CT)

MSC classes: 16W99, 18D99, 18D20, 55S25, 14L05, 13A99

Cite as: [arXiv:1107.5745](https://arxiv.org/abs/1107.5745) [math.AT](or [arXiv:1107.5745v1](https://arxiv.org/abs/1107.5745v1) [math.AT] for this version)

Submission history

From: Tilman Bauer [[view email](#)]

[v1] Thu, 28 Jul 2011 15:42:42 GMT (52kb)

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