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Localized Landweber-Novikov operations on generalized cohomology

Cohomological operations on generalized algebraic cohomology theories (e.g. Steenrod, Adams, Landweber-Novikov) have been extensively studied during the past decade (Brosnan, Levine, Merkurjev, Vishik). They turned out to be extremely useful in generating interesting rational cycles in higher codimension (e.g. idempotents or 0-cycles on twisted flag varieties), hence, in computing various geometric invariants of torsors (incompressibility, canonical dimension, torsion, motivic decomposition type, etc.).

In the present talk, we explain how to extend the Landweber-Novikov operations on algebraic cobordism to the setup of equivariant generalized cohomology theories via the localization techniques of Kostant-Kumar. The operations we obtain we call localized operations. These operations can be viewed as operations on global sections of the so called structure sheaves on moment graphs (corresponding to arbitrary Coxeter groups). They satisfy several natural properties, e.g. they commute with characteristic map and restrict to usual Landweber-Novikov operations.