

1052-57-169

**Brian A Munson\*** ([bmunson@wellesley.edu](mailto:bmunson@wellesley.edu)), Department of Mathematics, Wellesley College, 106 Central Street, Wellesley, MA 02481. *Derivatives of the identity functor and generalizations of Milnor's invariants*. Preliminary report.

We synthesize work of Koschorke on link maps and work of Johnson on the derivatives of the identity functor in homotopy theory. The result can be viewed in two ways: as a generalization of Koschorke's generalization of Milnor's invariants of link maps, and as a stable range description, in terms of bordism, of the cross effects of the identity functor in homotopy theory evaluated at spheres. We also show how generalized Milnor invariants fit into the framework of a multivariable manifold calculus of functors, as developed by the author and Volić, which is itself a generalization of the single variable version due to Weiss and Goodwillie. (Received August 26, 2009)