

1095-57-172

Uwe Kaiser* (ukaiser@boisestate.edu), Department of Mathematics, Boise State University, 1910 University Drive, Boise, ID 83725. *On Extended Bar-Natan Skein Modules*. Preliminary report.

Let M be an oriented 3-manifold. For R a commutative Frobenius algebra, we define the *extended Bar-Natan module* as the quotient of a free $R[A^{\pm 1}]$ -module with basis given by pairs (F, L) (up to a suitable notion of isotopy) by both Bar-Natan and Kauffman bracket relations. Here L is a framed link embedded in a regular neighborhood of an orientable surface, which is itself embedded in M . We study the module for some simple 3-manifolds and discuss its relation to the usual Bar-Natan and Kauffman bracket modules. (Received September 08, 2013)