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Krzysztof K. Putyra and **Alexander N. Shumakovitch*** (shurik@gwu.edu), 801 22nd St. NW, Phillips Hall, Suite 739, Department of Mathematics, The George Washington University, Washington, DC 20052. *On computations of Khovanov homology over the group ring $\mathbb{Z}\mathbb{Z}_2$* . Preliminary report.

Unified Khovanov homology combines even and odd Khovanov homology theories into a single algebraic object that carries the structure of a module over the group ring $\mathbb{Z}\mathbb{Z}_2$. The goal of this talk is to show how to find these modules and to compare unified Khovanov homology for different knots and links. We start with a convenient pullback presentation of these modules to show that they are always separated. Consequently, there exist an explicit algorithmic procedure for representing them as a direct product of indecomposables. The algorithm relies on the classification of indecomposable $\mathbb{Z}\mathbb{Z}_2$ -modules due to Lawrence S. Levy. Finally, we present numeric evidence that the unified Khovanov homology is a stronger knot invariant than the even and odd Khovanov homology combined. (Received February 06, 2018)