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On multi-term distributive homology. Preliminary report.

Two-term distributive (rack) homology, introduced in 1990, and its enhancement, twisted quandle homology, are very useful tools for constructing link invariants and for studying self-distributive algebraic structures. The third author proposed the theory of multi-term distributive homology in 2010 to study the homology of self-distributive algebraic structures under a general framework.

After a brief discussion about the monoid of all binary operations on a set X and multi-shelves, I will introduce multi-term distributive homology. Finally, I will talk about our present work on the topic. (Received August 30, 2020)