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**M Elhamdadi, M Saito and Emanuele Zappala\*** (zae@mail.usf.edu). *Heap cohomology and ternary self-distributive cohomology.*

Heaps are para-associative ternary operations bijectively exemplified by groups endowed with the operation  $(x, y, z) \mapsto xy^{-1}z$ . They are also ternary self-distributive, and therefore have a diagrammatic interpretation by framed links. Motivated by these properties, I will introduce heap cohomology and ternary self-distributive cohomology with abelian heap coefficients, with the purpose of defining framed link cocycle invariants. I will also explain the relation intercurring between heap cohomology, and ternary self-distributive and group cohomologies. I will briefly discuss, lastly, heap objects in symmetric monoidal categories. (Received September 03, 2019)