COHOMOLOGY OF AMPLE GROUPOIDS

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Abstract. This presentation is based on recent work with Valentin Deaconu. We introduce a new cochain complex for ample groupoids using a flat resolution defining their homology. The main result proves that the cohomology of this complex is isomorphic to the cohomology defined using continuous cocycles by Renault. This cohomology is invariant under Morita equivalence. We also derive an exact sequence for computing the cohomology of skew products of ample groupoids by a $\mathbb{Z}$-valued cocycle. We illustrate the theory with computations of cohomology for AF-groupoids and for certain action groupoids

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