

# On computing $\mathcal{A}^1$ -homology and $\mathcal{A}^1$ -homotopy of algebraic varieties

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## **Abstract**

I will explain why the problem of computing  $\mathcal{A}^1$ -homology and/or  $\mathcal{A}^1$ -homotopy groups of algebraic varieties is hard but interesting, even in the first few non-trivial dimensions. I will illustrate this fact on classifying spaces of algebraic groups and on algebraic spheres and will discuss some related issues and hopes.