

# The first motivic stable homotopy groups of spheres

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Abstract: In joint work with Markus Spitzweck and Paul Arne Østvar, we study the spectral sequence based on Voevodsky's slice filtration. This filtration on the stable homotopy category of motivic spectra over a field  $F$  measures the amount of Tate suspensions which are necessary to construct a given motivic spectrum. Work of Levine and Voevodsky shows that the slices of the motivic sphere spectrum are determined by the second page of the topological Adams-Novikov spectral sequence. We use this information to compute the first stable motivic homotopy groups of spheres over fields of characteristic zero.