1145-13-2711 **Kevin Tucker*** (`kftucker@uic.edu`), **Karl Schwede**, **Thomas Polstra** and **Linquan Ma**.
The Behavior of the F-signature under Small Birational Modifications.

The F-signature is a local numerical invariant of commutative rings in positive characteristic, defined in terms of the number of splittings of the iterates of the Frobenius endomorphism. It can be viewed as a measure of singularity, as it is one if and only if the ring is regular, and positive only when the ring is strongly F-regular. While the behavior of the F-signature under arbitrary blowups is not well understood, we show that the F-signature increases under a small birational modification. In particular, this shows that the F-signature is subtle enough to detect the improvement in the singularities under such a morphism. (Received September 25, 2018)