1158-16-38 **Jason Gaddis** and **Xingting Wang***, Department of Mathematics, Howard University, Washington, DC. *Zariski cancellation for Poisson algebras.*

We study the Zariski cancellation problem for Poisson algebras asking whether $A[x]$ is isomorphic to $B[y]$ implies A is isomorphic to B when A and B are Poisson algebras. We resolve this affirmatively in the cases when A and B are both connected graded Poisson algebras finitely generated in degree 1 without degree one Poisson central elements and when A is a Poisson integral domain of Krull dimension two with nontrivial Poisson bracket. We further introduce the Poisson analogues of Makar-Limanov invariant and discriminant to deal with the Zariski cancellation problem for some families of Poisson algebras. This is joint work with Jason Gaddis. (Received February 12, 2020)