

1132-16-270

**Andrei H Caldararu\***, 480 Lincoln Dr, Madison, WI 53705. *Problems surrounding the PBW and HKR isomorphisms in positive characteristic.* Preliminary report.

I will discuss some problems surrounding failures of the Poincare-Birkhoff-Witt isomorphism (and, similarly, of the Hochschild-Kostant-Rosenberg isomorphism for schemes) in positive characteristic. I will review known results, and discuss what is known for spaces of invariants. In closing I will present ideas from homotopy theory that may suggest a general solution to these problems. (Received July 24, 2017)