

1163-13-486

**Eamon Quinlan-Gallego\*** (equinlan@umich.edu). *D-module constructions in nonzero characteristics.*

Given a smooth  $k$ -algebra  $R$ , its ring of differential operators  $D$  is a noncommutative ring that acts on  $R$  and many  $R$ -modules of interest. When  $k$  has characteristic zero the theory of  $D$ -modules and many of its constructions have found numerous applications in singularity theory and commutative algebra. The goal of this talk will be to explain some analogous constructions when  $k$  is a field of positive characteristic and, if time permits, when  $k$  is a DVR of mixed characteristic. (Received September 08, 2020)