

Sachio OHKAWA – 大川幸男

On log Cartier transform of higher level in positive characteristic

In this talk, we construct a splitting module of the Azumaya algebra of log differential operators of higher level in characteristic $p > 0$ under the assumption of an existence of certain mod p^2 lifting. As an application, we construct a Simpson type correspondence in characteristic $p > 0$. This result can be regarded as a generalization of the result of Ogus-Vologodsky and Gros-Le Stum-Quiros to the case of log schemes and that of Schepler to the case of higher level.