

1057-18-265

**Sergio Estrada\*** ([sestrada@um.es](mailto:sestrada@um.es)), Departamento de Matematica Aplicada, Campus del Espinadro, Espinado, 30100 Murcia, Murcia, Spain. *Model category structures arising from Drinfeld vector bundles*. Preliminary report.

In the talk we present a general construction of monoidal model category structures on the category  $\mathbb{C}(\mathbf{Qco}(X))$  of unbounded chain complexes of quasi-coherent sheaves on a semi-separated scheme  $X$ . The construction is based on making compatible the filtrations of individual modules of sections at open affine subsets of  $X$ . It does not require closure under direct limits as previous methods. As particular instances, we recover recent results on the flat model structure for chain complexes of quasi-coherent sheaves. Our approach also includes the case of (infinite-dimensional) vector bundles, and of restricted flat Mittag-Leffler quasi-coherent sheaves, as introduced by Drinfeld. Finally, we indicate that the unrestricted case does not induce a model category structure as above in general.

The talk is based on a joint work with Pedro A. Guil-Asensio, Mike Prest and Jan Trlifaj. (Received January 25, 2010)