1136-55-555 **Tasos Moulinos*** (tmouli2@uic.edu). *Derived Azumaya algebras and twisted K-theory.*

Topological K-theory of dg-categories is a localizing invariant of dg-categories over $\mathbb{C}$ taking values in the ∞-category of KU-modules. In this talk I describe a relative version of this construction; namely for X a quasi-compact, quasi-separated $\mathbb{C}$-scheme I construct a functor valued in $Shv_{Sp}(X(\mathbb{C}))$, the ∞-category of sheaves of spectra on $X(\mathbb{C})$. For inputs of the form $\mathrm{Perf}(X, A)$ where A is an Azumaya algebra over X, I characterize the values of this functor in terms of the twisted topological K-theory of $X(\mathbb{C})$. From this I deduce a certain decomposition for X, a finite CW-complex equipped with a bundle of projective spaces $\pi : P \to X$, of $KU(P)$ in terms of the twisted topological K-theory of X ; this is a topological analogue of a result of Quillen's on the algebraic K-theory of Severi-Brauer schemes. (Received January 22, 2018)