

## On Secondary Invariants and Arithmetic Rigidity

*mardi 23 avril 2024 11:00 (1 heure)*

A complex local system on a space  $S$  gives rise to “secondary” Chern classes in  $H^{2p-1}(S; \mathbb{C}/\mathbb{Z}(p))$ , refining the usual “primary” Chern classes in  $H^{2p}(S; \mathbb{Z}(p))$ . In fact, Esnault in a survey article describes four methods of defining such classes, of which 3 are proved to be equivalent by means of her “modified splitting principle”. I will explain how to show that the remaining 1 out of 4 definitions, that of Cheeger-Simons, agrees with the others. Then, changing gears, I will describe some arithmetic analogs of the phenomenon of rigidity of secondary Chern classes. This has bearing on another question from Esnault’s article, and leads us to some motivic speculations.

**Orateur:** Prof. CLAUSEN, Dustin (IHES)