

Title: Witt vectors of associative rings.

Abstract : In this talk we will recall the classical construction of Witt vectors in the commutative set up and discuss the proof of the Hesselholt's conjecture on vanishing of the $H^1(G(L/K), W(\mathcal{O}_L))$ where L/K is a finite Galois extension of local fields. In the non-commutative set-up we have two constructions of Witt vectors: one of them is by Hesselholt of the functor $W : \text{Associative rings} \rightarrow \text{Abelian groups}$ and another by Cuntz and Deninger of the functor $E : \text{Associative rings} \rightarrow \text{Associative rings}$. Both constructions $W(A)$ and $E(A)$ are isomorphic to the classical ring of Witt vectors when A is a commutative ring. In this talk we will see whether these constructions are related in some way when A is non-commutative.