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# WITT VECTORS AND POSITIVITY

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## Abstract

The usual Witt vectors are closely related to  $p$ -adic phenomena. The so-called big Witt vectors combine the usual ones for all primes  $p$  simultaneously. If one compares this to adèle rings, it is natural to ask whether the big Witt vectors exhibit any phenomena related to the infinite prime (real analysis) such as positivity. It turns out that they do. I'll explain how this lets us extend the big Witt functor to semirings, and I'll discuss the Witt vectors of some classical arithmetic semirings, such as the nonnegative real numbers, the natural numbers, and the Boolean semiring.

**Date :** Friday, August 23, 2013

**Time:** 15:00

**Place:** IMBM Seminar Room, Boğaziçi University South Campus