

Algebra, Combinatorics and Number Theory Seminar

Date. Wednesday, March 19, 2025 - 2.30pm ¹ ²

Place. Room FC1 007

Speaker. Haleh Hamdi - CEMAT, UL

Title. c -Injectivity over Krull domains

Abstract.

The main objective of multiplicative ideal theory is to investigate the multiplicative structure of integral domains by means of ideals or certain systems of ideals of that domain. An essential tool in multiplicative ideal theory is the concept of “star operation” which was introduced by Krull in 1936 and then was used by Gilmer in his book in 1972. In this talk, we first introduce some concepts related to multiplicative ideal theory. The emphasis will be given to the “ w -operation”, one of the most important star operations. The w -envelope of a torsion-free D -module M is defined as a certain submodule of the injective hull of M and will be of importance for us. Thanks to the existence of a generalizations of Dedekind domains with respect to the w -operation, we will then focus on the concept of c -injectivity (=injectivity with respect to essentially closed submodules) over Krull domains as an application of the w -operation on modules.

There will be a coffee break after the talk.

¹<https://videoconf-colibri.zoom.us/j/92016428220?pwd=HMQ35oRuw0huT72MdFfyPSwJSbzb9y.1>

²Password: 582837