

TITLE	Model Theory of Separably Closed Valued Fields
SPEAKER	Martin Hils Westfälische Wilhelms Universität Münster, Germany
TIME	Wednesday, October 31, 2018, 10:00 - 11:30 Wednesday, October 31, 2018, 15:30 - 17:00 Thursday, November 1, 2018, 14:00 - 15:30
VENUE	Lecture Hall 1, Niavaran Bldg.

SUMMARY

This mini-course will cover fundamental results in the model theory of separably closed valued fields. In the first lecture, we will briefly recall some algebraic preliminaries, in particular around p -independence, and the model theory of separably closed fields, including quantifier elimination, stability and, in finite degree of imperfection, elimination of imaginaries. We will then move, in the second lecture, to the theory SCVF of separably closed non-trivially valued fields and present a proof of quantifier elimination (due to Hong) in the language with parametrized lambda-functions. From this, we will deduce that all completions of SCVF are NIP, a result which is due to Delon. The last lecture is devoted to the recent result (due to Kamensky, Rideau and myself) that in finite degree of imperfection, the imaginaries of SCVF are classified by the so-called geometric sorts. We will present a proof in the language where a p -basis is named by constants, which constitutes a topological reduction to the corresponding result (which is due to Haskell-Hrushovski-Macpherson) in the algebraically closed case.