

Ketelsen, *Model-theoretic tilting*

The tilting construction (as introduced by Fontaine) provides a way to transfer theorems between the worlds of characteristic zero and positive characteristic. Classically, this was done for perfectoid fields: for each perfectoid field of characteristic zero, we can obtain its tilt – a perfectoid field of positive characteristic. Perfectoid fields are complete non-discretely valued fields of rank 1 that satisfy some perfectness condition. In my talk, I will show how to extend the tilting construction to certain valued fields of higher rank using model-theoretic methods. The model-theoretic tilt we obtain is only defined up to elementary equivalence, so we tilt the theories rather than the fields themselves. We will also discuss an analogue of the Fontaine-Wintenberger theorem as well as C_i -transfer for the new model-theoretic tilt.