



FACHBEREICH 10  
MATHEMATIK UND  
INFORMATIK

WiSe24/25

*The seminar aims to understand the model theory of the field of Witt vectors over an infinite perfect field when endowed with the canonical lift of the Frobenius, the Witt-Frobenius. We will first go through the classical relative quantifier elimination for henselian valued fields in equicharacteristic zero, deducing the Ax-Kochen/Ershov theorem for both equicharacteristic zero and unramified mixed characteristic. We will then prove analogous theorems for isometric valued difference fields in equicharacteristic zero, deducing the Ax-Kochen/Ershov theorem for both equicharacteristic zero and unramified mixed characteristic (i.e., the Witt-Frobenius).*

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# MODEL THEORY of the WITT-FROBENIUS

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## Contacts

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**Planning meeting**

09.07.2024, 2pm

*Lichthof, 8th floor Einsteinstr. 62*