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An Imaginary Ax-Kochen/Ershov principle: the equicharacteristic zero case

(joint with Rideau-Kikuchi)

One of the most striking results of the model theory of henselian valued fields is the Ax-Kochen/Ershov principle, which roughly states that the first order theory of a henselian valued field that is unramified is completely determined by the first order theory of its residue field and the first order theory of its value group.

Our leading question is: Can one obtain an Imaginary Ax-Kochen/Ershov principle?

In previous work, I showed that the complexity of the value group requires adding the *stabilizer sorts*. In previous work, Hils and Rideau-Kikuchi showed that the complexity of the residue field reflects by adding the *interpretable sets of the linear sorts*. In this talk we present recent results on weak elimination of imaginaries that combine both strategies for a large class of henselian valued fields of equicharacteristic zero. Examples include, among others, henselian valued fields with bounded galois group and henselian valued fields whose value group has bounded regular rank (with an angular component map).