

Resolution of Singularities and the Model Theory of Valued Fields

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I will give a quick introduction to the basic problem of resolution of singularities and show why its local form (local uniformization) is of a valuation theoretical nature. I will give some basic examples of valued fields and explain Hensel's Lemma and its meaning for the model theory of valued fields. I will then explain the connection between Hensel's Lemma, ramification and local uniformization. From there, I will describe some connections between resolution of singularities and the model theory of valued fields, and some open questions about these connections.