Balls and Berkovich spaces

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Abstract

Let k be an algebraically closed non-trivially valued field of rank 1. After recalling the definition of Berkovich's analytification of the affine line $\mathbb{A}_k^{1,\mathrm{an}}$, we will consider its relation to the set of closed balls of k, which we denote by $\mathbb{B}_k$. We will provide a characterization of definable subsets of $\mathbb{B}_k$ in a natural first-order language. If time permits, we will discuss the more general case of the analytification of a curve over k. No prior knowledge on Berkovich spaces will be required. This is a joint work with Jérôme Poineau.

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