

1096-14-2167 **Lorenzo Fantini*** (lorenzo.fantini@wis.kuleuven.be). *Normalized Berkovich spaces and surface singularities*. Preliminary report.

In this talk I will discuss an application of Berkovich spaces to the study of surface singularities over an arbitrary field. Berkovich theory is a branch of non-archimedean geometry developed by Vladimir Berkovich in the late '80s; the points of Berkovich spaces can be interpreted as real semivaluations. I will give a new proof of the existence of resolutions of singularities of surfaces. To do so, I will introduce the normalized space of an algebraic variety, which is a generalization of Favre and Jonsson's Valuative Tree, and study its geometry and analytic structure. I will also deduce a characterization of the divisorial valuations whose center on every log resolution of a given normal surface is a divisor. (Received September 17, 2013)