Sebastian Woblistin: Geometry of analytic subset of power series spaces.

The object of this talk is the study of the set of implicit solutions Y to an analytic equation f(x, y(x)) = 0. Any such set will be called analytic. The result of Ploski states that given a formal solution \hat{y} to $f(x, \hat{y}(x)) = 0$, then there exists a convergent series Y(x, t), so that $t(x) \mapsto Y(x, t(x))$ parametrizes a section of Y through $\hat{y}(x)$. We will show that if y(x) is a regular point of Y, then there exists a parametrization as above with Zariski-dense image in the component of Y containing y(x). As an application, a Gabrielov-type theorem for sets of power series will be presented.