Constructive approximation on algebraic sets

Algebraic sets are particularly easy to define because they are given by some polynomial equations. Such sets are the most fascinating in the space of several (complex or real) variables. We are interested in approximation of a given function by a sequence of polynomials on such sets. Some results concerning this topic have important consequences and applications in image reconstruction and comparison or data processing and transfer which is used e.g. in the clinical medicine, smartphones etc. Moreover, approximation and interpolation are especially useful in numerical methods of solving partial differential equations. For that reason, approximation has various applications in these domains of science and technology where some problems can be written in form of differential equation, e.g. in chemistry, physics, geodesy, biology etc. Some number of problems is stated there on algebraic sets. Therefore, we plan to deal with approximation for such sets.