Title: Unlikely intersections without algebraic groups.

Abstract: In the last thirteen years there has been much study of what happens when a fixed algebraic variety in a fixed commutative algebraic group is intersected with the union of all algebraic subgroups of a fixed dimension. For example in the multiplicative group $\mathbf{G}_{\mathrm{m}}^n$ such subgroups are defined by equations

$$x_1^{a_1} \cdots x_n^{a_n} = 1 \qquad (\times)$$

for integers $a_1, \ldots, a_n$.

Recently a version without groups has been studied. One takes a "constant" field k and replaces $(\times)$ by

$$f(x_1, \ldots, x_n) = 0 \qquad (k)$$

for a polynomial f over k. After briefly reviewing the known results about $(\times)$, I will describe some work with Zoé Chatzidakis, Dragos Ghoica, and Guillaume Maurin, begun in Pisa 2011, about (k).