

UIC Model Theory Seminar, April 6, 2004

The limit theory of generic curves

Ozlem Beyarslan, UIC

This will be the first of two talks on the paper *La limite des théories de courbes génériques*, Journal of Symbolic Logic **67** no. 1 (2002) 24–34, by O. Chapuis, E. Hrushovski, P. Koiran and B. Poizat. Let K be an algebraically closed field of infinite transcendence degree and let a_{ij} be algebraically independent elements of K , with i, j ranging over the non-negative integers. Consider the language of fields together with an extra binary predicate symbol C . For an integer d , the theory T_d of degree d generic curves is the set of sentences in this language that become true when $C(x, y)$ is interpreted in K by the curve

$$\sum_{i+j \leq d} a_{ij} x^i y^j = 0.$$

It will be shown that T_d converges to a limit theory as $d \rightarrow \infty$.