Meeting: 1003, Atlanta, Georgia, SS 32A, AMS Special Session on Arithmetic Algebraic Geometry, I

1003-11-1270 **Kiryl I Tsishchanka*** (`kit@knox.edu`), Kiryl Tsishchanka, Knox College Box 53, 2 East South Street, Galesburg, IL 61401. *On approximation of real numbers by algebraic numbers of bounded degree.*

It has been conjectured that for any integer $n \geq 1$ and any real number ξ which is not an algebraic number of degree $\leq n$, there exist infinitely many algebraic numbers α of degree $\leq n$ such that $|\xi - \alpha| \leq c(n, \xi)H(\alpha)^{-n-1}$, where $H(\alpha)$ is the height of α. This is known to be true only for $n = 1$ (Dirichlet, 1842) and $n = 2$ (Davenport-Schmidt, 1967). The talk will discuss major results, applied methods and other unsolved problems. (Received October 04, 2004)