

1046-13-99

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(aiovchin@math.uic.edu), University of Illinois at Chicago, Department of Mathematics, Statistics, and Computer Science, Chicago, IL , and **Agnes Szanto**. *Estimates for orders of derivatives in differential Nullstellensatz.*

We discuss the first known upper bound for orders of derivatives in the effective version of the differential Nullstellensatz. If one differentially prolongs a system of partial algebraic differential equations up to this bound, one can test if the original differential system is consistent applying only algebraic elimination to the prolonged system. In this formulation, the problem was originally posed by Seidenberg in 1956 but no complete solution was given. Our solution is via analysing differential elimination algorithms. (Received August 26, 2008)