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Tobias Kaiser, Jean-Philippe Rolin and Patrick Speissegger*

(speisseg@math.mcmaster.ca), Department of Mathematics & Statistics, 1280 Main Street West, Hamilton, Ontario L8S 4K1, Canada. *Super-exact quasi-analytic classes and o-minimality.*

Quasi-analytic classes of functions with super-exact asymptotic expansions arise in Ilyashenko's solution of Dulac's problem. We hope to prove that some of these classes generate o-minimal structures. These structures would be exponentially, but not polynomially, bounded. I will describe Ilyashenko's construction and outline our plan for proving o-minimality. (Received September 15, 2010)