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Margaret E. M. Thomas* (memthomas@purdue.edu), Department of Mathematics, Purdue University, N. University St., West Lafayette, IN 47907-2067. *Parameterization, o-minimality and counting points.*

The geometric tool of smooth parameterization has important diophantine consequences, and was central to the proof of the Pila–Wilkie Theorem connecting o-minimality and diophantine geometry. It remains an important approach in the ongoing pursuit of refinements to this key theorem. In this talk, I will survey a number of results on different types of smooth parameterization in the o-minimal setting, focussing in particular on questions of definability and effectivity, as well as discuss some applications to point counting results. (Received September 16, 2019)