HIRONAKA RECTILINEARIZATION IN GENERAL O-MINIMAL STRUCTURES

I will start with a quick introduction to o-minimal geometry, which can be treated as generalization of semialgebraic and subanalytic ones. The aim of the talk is to present the theorem that, for any positive integer p, any compact definable subset of $\mathbb{R}^n$ of pure dimension k is a finite union of images of the cube $[0,1]^k$ through definable $\mathcal{C}^p$-maps. It's funny that the theorem can be treated as a far-going generalization of the fameous (and considered commonly as difficault) Hironaka rectilinearization theorem, but the core of the proof, following the ideas of Yomdin and Gromov, is easy and elementary. This confirms the general rule that when you pass to a more general structure the problem simplifies. The theorem was applied by Pila and Wilkie to number theory.