The Nash problem on families of arcs

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Hironaka's theorem on resolution of singularities allows to study the geometry of a singular variety (over a field of characteristic zero) by looking at a smooth birational model. A more intrinsic approach to study singularities was proposed by Nash. The idea is to look at the space of arcs passing through the singular points. This space decomposes into finitely many irreducible families, and carries some of the information encoded in a resolution. The Nash problem gives a precise formulation of how such families of arcs should relate to resolutions of singularities. In this talk I will give an overview of the history and solution of the problem.