μ-Constant families of Newton non-degenerate singularities admit simultaneous embedded desingularization

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We will begin this talk with a brief summary of different notions of equisingularity in families of isolated hypersurface singularities, concentrating on various notions of simultaneous desingularization. We will then report on joint work with Max Leyton and Hussein Mourtada. The starting point of this work is a 1980 paper by Yujiro Kawamata in which the author claims to relate the existence of simultaneous embedded resolution in a family to the property of the family being μ-constant. Inspired by this paper, we formulated two conjectures relating the notions of μ-constant, μ-constant and simultaneous embedded resolution. We will discuss our proof of the first of the two conjectures and illustrate it with the example of Briançon-Speder.