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Vanishing topology and versality of singularities of mappings: 30 years of the Mond conjecture

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Abstract. This paper is a survey on the Mond conjecture, which is an inequality of type $\mu \geq \tau$ for singularities of mappings. We present all the ingredients necessary to understand the statement of the conjecture, as well as a proof in the case of surfaces, based on the construction of a Jacobian module, whose length controls the image Milnor number. We also include some historical notes with the known cases and some other inequalities of the same nature and indicate directions for future work.

Keywords. Image Milnor number, Mond conjecture, singularities of mappings.

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