Local analysis and topological bifurcations of free surfaces[1]
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— The recently developed method of the local analysis[2] is applied in or-
der to determine generic singularities and topological bifurcations of free surfaces
and interfaces in liquids and gases. In the presented physical examples the surface
geometry is described by a family of smooth maps with the state variables and a set
of control parameters. We determine the order of Taylor expansion about a point
of interest defining the multiplicity of a singular germ, codimension, unfolding of
singularity and bifurcation diagram.

[2]J. Eggers and M. A. Fontelos, Panoramas et Synthèses **38**, 69 (2013).

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