

Catastrophe (theory)

Mathematical theory developed by R. Thom in order to formalise the behaviour of systems where the continuous change of value of a parameter is susceptible to locally introduce discontinuities in the evolution of state variables. These ruptures have been rigorously described and classified by means of a number of state variables lower or equal to 2, the most widely known being the fold and the cusp. A. Wilson applied these equations to the study of variation of the optimal dimension of commercial centres, which may for example suddenly change from a neighbourhood shop to a supermarket in function of a very small change in the behaviour of consumers, or in production costs.

See also: Bifurcation

Bibliographie

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