

# On nonautonomous bifurcation theory

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## **Abstract**

We consider concepts and results concerning the breakdown and transfer of stability in one-parameter families of two-dimensional nonautonomous differential systems. Emphasis is placed on the "two-step" bifurcation pattern of L. Arnold. We show how invariant manifold theory, the averaging method, the Melnikov method, and the Conley index can be used to discuss bifurcation in the context of non-autonomous systems.