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## **Methods to compute invariant objects and different indicators in Dynamical Systems**

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### **Abstract:**

In DS a key role is played by invariant objects: fixed points, periodic and quasiperiodic solutions, invariant manifolds, homoclinic and heteroclinic solutions, etc. All of them play a role in the geometry of the phase space. The computation of these objects and its dependence with respect to parameters allows to understand the dynamics of the system. Numeric and symbolic methods, and combinations of them, will be presented and illustrated with several examples. In many cases some dynamics indicators are useful to have a first rough idea of the main features of the dynamics.