

COVERING RELATIONS AND NON AUTONOMOUS PERTURBATIONS OF ODEs

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Covering relations are a topological tool for detecting periodic orbits, symbolic dynamics and chaotic behavior for autonomous ODEs. We will first introduce the method of the covering relations and then extend it onto systems with a time dependent perturbation. As an example we will apply the method to non-autonomous perturbations of the Rössler equations to show that for small perturbation they possess symbolic dynamics.