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*Detecting Bifurcations via Transition Matrix*

The Conley index theory has been a valuable topological technique for detecting global bifurcations in dynamical systems [1], [2], [3], [4], [5] and [6]. This index is a standard tool in the analysis of invariant sets in dynamical systems, and its significance owes partly to the fact that it is invariant under local perturbation of a flow (the continuation property).

In this setting, we present a new definition and applications of transition matrix as a Conley-index based algebraic transformation that tracks changes in index information under continuation and thereby identifies global bifurcations that could occur during the continuation [7] and [8].

## References

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