



Compatibility paths of an infinitely degenerate mechanism

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The kinematic determinacy of a bar-and-joint mechanism is dependent on the topology and the metric properties of the structure. Special arrangements can result in singularities, such as bifurcation points on the compatibility paths. The analysis of a special four-bar linkage yields an infinitely degenerate bifurcation point. Modifications in plane and in space are investigated in order to produce the most general perturbations of the system. The compatibility path can be perturbed to have a shape of arbitrary finite order or to result in compatible states in an arbitrary finite number.

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