Oscillation analysis of a bifilar pendulum with Mathematica

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Utilizing a Computer Algebra System (CAS), namely Mathematica, the characteristics of a bifilar disk-shaped pendulum have been studied. By applying the Lagrangian methodology, the disk's motion equation is formulated. This is conducive to an ODE, as its numeric solution coincides with intuitive expectation. The period of the oscillations and tension in the strings are calculated and graphed.

Keywords: Bifilar Pendulum, Oscillation Period, ODE, Mathematica

References

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