A Computational Study of the Dynamics of a Driven Hanging Cable WILLIAM HOLLANDSWORTH, CAVENDISH MCKAY, Marietta College — We take a look at two numerical methods to analyze the dynamics of a driven hanging cable. One includes the tension necessary to keep the length of the cable fixed, while the other employs a Lagrangian scheme which removes the necessity of calculating the forces of constraint. We then use the Lagrangian model to map out the phase space to get an idea of what kind of behavior various frequencies and amplitudes of driving create.

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