Classical Mechanics

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[1]*ScienceNotebooks GitHub rep*

January 30, 2020

1 Principle of least action

Given the Lagrangian L of variables $q_i, \dot{q}_i$ the principle of least action states

$$\frac{\partial L}{\partial q_i} - \partial_t \frac{\partial L}{\partial \dot{q}} = 0 \tag{1}$$

Equation 1 can be found in [1]

Remark. *Variable which doesn't occur in the Lagrangian is called cyclic and is connected with a conserved quantity (symmetry).*
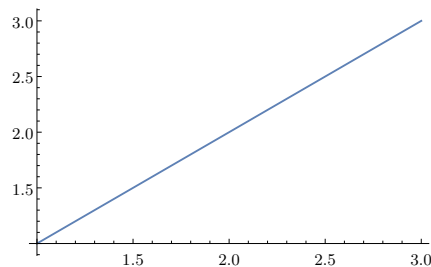
2 Another section

Figure 1: This is a TEX exportable plot, tagged automatically

which means that you can reference it from text (example fig. 1) the same way as equations.

References

[1] V. I. Arnol'd. *Mathematical Methods of Classical Mechanics*. en. 2. ed. Graduate Texts in Mathematics 60. New York, NY: Springer, 1989. ISBN: 978-1-4419-3087-3.