Research for "Does simulating Newtonian Physics mean we finally understand it?"

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Introduction

This paper serves as the research for my report on "Does simulating Newtonian Physics mean we finally understand it?", containing:

1. An overview on the workings of Newtonian Physics (Albert Einstein. "Zur Elektrodynamik bewegter Körper. (German) [On the electrodynamics of moving bodies]". In: *Annalen der Physik* 322.10 [1905], pp. 891–921. DOI: http://dx.doi.org/10.1002/andp.19053221004);
2. Use-cases of Newtonian Physics;
3. The advantages/benefits of simulating Newtonian Physics;
4. A discussion on whether we could "*master*" Newtonian Physics towards the future.

In each section, it will contain both a reference and a brief summary about why said reference would be useful in answering that sub-topic.

1 Overview on Newtonian Physics

[1.] (Juha Saatsi. "On Explanations from Geometry of Motion". In: *The British Journal for the Philosophy of Science* 69.1 [2015]. DOI: https://dx.doi.org/10.1093/bjps/axw007. accessed: 25/3/25)

This paper explores in-depth on how kinematics and dynamics work in conjunction with one another, the applications and the purpose of the "geometry of motion" within a wider scope.

[2.]aa

References

Einstein, Albert. "Zur Elektrodynamik bewegter Körper. (German) [On the electrodynamics of moving bodies]". In: *Annalen der Physik* 322.10 (1905), pp. 891–921. DOI: http://dx.doi.org/10.1002/andp.19053221004.

Saatsi, Juha. "On Explanations from Geometry of Motion". In: *The British Journal for the Philosophy of Science* 69.1 (2015). DOI: https://dx.doi.org/10.1093/bjps/axw007. accessed: 25/3/25.