Project 1: Vector and Matrix Operations in c++, Fys 4150

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Introduction

Differential equations are fundamental in physics. The standard approach in most branches of physics is to describe a physical system in terms of it's symmetries and degrees of freedom through the formalism of Lagrange or Hamilton, i.e. by setting up equations of motion. It is thus a very important tool to be able to solve these differential equations as precisely and effectively as possible. In this project we explore algorithms for calculating second order differential equations using vector and matrix operations with the aim to better understand the computational demands of differential equation solutions and how to reduce these demands.

Theory and Algorithms

Results

Conclusion

References

[1] Name of Author/s *Name of work* Prublisher year

`Web link`