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The gravitational billion body problem : Het miljard deeltjes probleem

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The increased availability of accelerator technology in modern supercomputers forces users to redesign their algorithms. These accelerators are specifically designed to offer huge amounts of parallel compute power. In this thesis I show how to harness the power of these parallel processors for astrophysical simulations.

The cover shows an example of such a simulation where we model the merger of two disk galaxies. The two galaxies are rendered differently. The front cover shows the observational representation of one galaxy. The back cover shows the other galaxy, visualized using the hierarchical structure of boxes that forms the basis of the algorithm.

The Gravitational Billion Body Problem

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