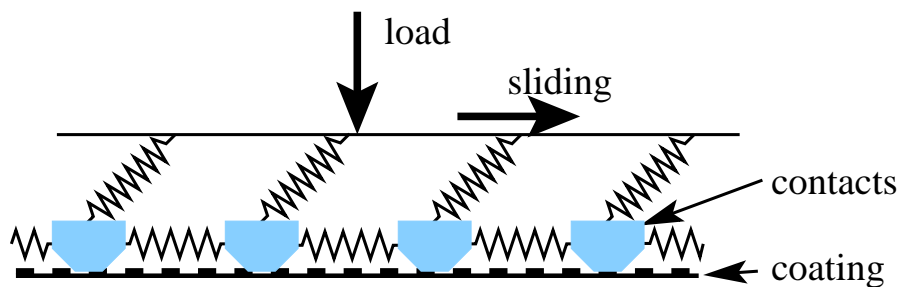


Multi-contact superlubricity

This project is concerned with structural superlubricity. This is a dramatic effect by which friction is reduced enormously due to structural incompatibility between two surfaces at the atomic level. Macroscopic surfaces in contact in the real-world, however, do not have one large flat contact, but consist of many small contacts.

The goal of the project is to investigate how superlubricity behaves in situations where there are multiple contacts. As part of this project, we will modify an existing model for multi-contact friction to take into account superlubric contacts. You will write and perform simulations of this model, and investigate its behaviour. If necessary, you will run simulations on high-performance computing facilities.



Recommended background

This project will entail a lot of programming, and it helps if you have good understanding of mechanics.

Supervisor

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Research environment: <http://syonax.net/science/research.html>.

Work load

This project is intended for a combined specialization project thesis and master thesis, i.e. 45 or 60 ECTS in total.