

# Internships in GPU-based molecular dynamics simulations

## August 2021

The *Glass and Time* center at Roskilde University invites students at the graduate or undergraduate levels to apply for summer internships. The four-week internships begin Monday 2<sup>th</sup> of August and end Friday 27<sup>th</sup> of August.

After an introduction to GPU-based molecular dynamics, you will perform a numerical molecular-dynamics study of a well-defined, fundamental scientific question in liquid-state theory or beyond. *Glass and Time* has exclusive access to a GPU-cluster with more than 400 TFLOP peak performance. Each student helps formulate the scientific problem to be simulated and is assigned a personal supervisor.

Accommodation is provided free of charge in a nearby student dormitory. Travel costs and documented living expenses are covered up to a maximum of 10,000 DKK.

After the internship you will have gained skills in

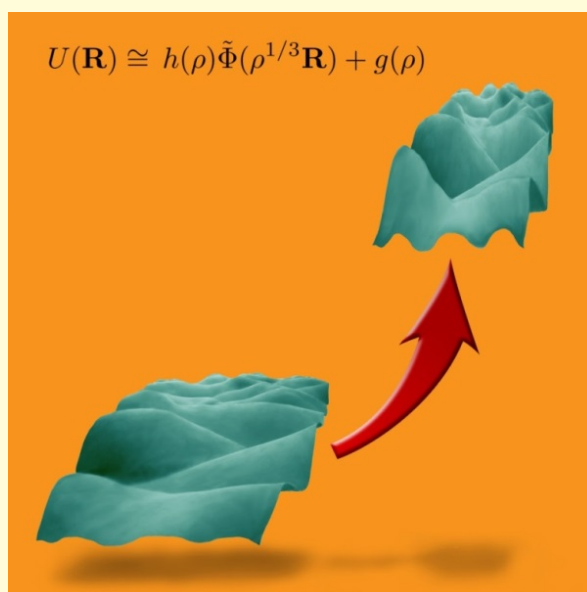
1. Setting up a molecular-dynamics simulation
2. Analyzing simulation data
3. Performing simulations on high-performance GPU-based supercomputers

Interested applicants are invited to submit an application before May 31, consisting of:

1. A single page explaining your background and scholarly interests
2. A brief CV
3. Exam documentation of your highest academic degree

Applications are sent to Prof. Jesper Schmidt Hansen, [jschmidt@ruc.dk](mailto:jschmidt@ruc.dk), who can also be contacted for more information.

The internships are financed by the VILLUM-funded *Matter* project directed by Prof. Jeppe Dyre.



It was recently discovered that many liquids' and solids' potential-energy hypersurfaces undergo a simple affine deformation when density is changed. *Matter* explores this fact's many consequences for material properties.