



PhD position Thin Film Lubrication Modelling (1,0 fte)

Organization

Since its foundation in 1614, the University of Groningen has enjoyed an international reputation as a dynamic and innovative centre of higher education offering high-quality teaching and research. Balanced study and career paths in a wide variety of disciplines encourage the 27,000 students and researchers to develop their own individual talents. Belonging to the best research universities in Europe and joining forces with prestigious partner universities and networks, the University of Groningen is truly an international place of knowledge.

Job description

The Advanced Production Engineering group at the University of Groningen is seeking to recruit a PhD student for a research team working on thin film lubrication. The position is full-time and available immediately, but must be filled no later than September 2013.

Research environment

The position is part of the project 'Thin film lubrication for nanoscopically rough surfaces,' funded by the University of Groningen. Molecularly thin lubricant (MTL) films are important in high impact applications of nanotechnology such as hard disk drives, where they protect the head-disk interface (HDI) from accidental contact and corrosion. The key objective of this project is to elucidate MTL behaviour by investigating the transition between the hydrodynamic and solid contact regimes in the presence of nanoscale roughness using molecular dynamics (MD) simulations and experiments.

Collaborations with the Computational Materials Science and Engineering group of the National University of Athens, Greece, and the Nanotribology group of the Leibniz Institute for New Materials, Germany, have been established for this project. The PhD student is expected to interact with both groups, as well as use the resources available locally at the University of Groningen.

Qualifications

The successful candidate is an enthusiastic and broad-minded candidate interested in integrating mechanical engineering, materials science and chemistry under the general theme of tribology, is in good command of the English language (oral and written) and possesses excellent communication skills (indicated by the ability to write scientific papers and deliver presentations). Because of the interdisciplinary nature of the project, the successful candidate is expected to demonstrate an active and supportive approach to interdisciplinary research that will help to foster collaborations and interactions with members from the various research groups. Ideally, you have a solid background in performing molecular dynamics simulations, especially for polymeric systems. A background in mechanical or industrial engineering, materials science or chemistry is also possible.

Candidates for the PhD position should have:

- > a MSc in Mechanical or Industrial Engineering or a similar degree in related areas such as Materials Science or Chemistry
- > experience with molecular dynamics simulations will be a clear advantage
- > experience with or an interest in experimental work.



Conditions of employment

The University of Groningen offers a salary of € 2,042 (salary scale 50.0) gross per month in the first year, up to a maximum of € 2,612 (scale 50.3) gross per month in the final year, based on a full-time position. The position requires residence in Groningen and must result in a PhD thesis within the 4-year contract period. A PhD training program is part of the agreement and the successful candidate will be enrolled in the Graduate School of Science. The successful candidate will first be offered a temporary position of one year with the option of renewal for another three years. Prolongation of the contract is contingent on sufficient progress in the first year to indicate that a successful completion of the PhD thesis within the next three years is to be expected.

How to apply

Applications, including a letter of motivation, a curriculum vitae, a list of publications (if any), a list of examination marks, and letters of recommendation of two academic referees, must be submitted before 31 May 2013 by means of the application form (click on "Apply" below on the advertisement on the universities website).

Information

For more information you can contact:

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