

Postdoc & PhD student positions in Computational Biophysics (Helsinki, Finland)

Employer: Biological Physics group, University of Helsinki, Finland
Contact: Prof. Ilpo Vattulainen (Ilpo.Vattulainen@helsinki.fi)
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Expires: Applications are considered until the positions have been filled

Job Description

Two positions in computational biophysics / biological physics. The positions are either for a postdoctoral scientist (1+1 years, or longer depending on negotiations) or a PhD student (4 years).

Eligibility. Outstanding candidates with experience in computer simulations, and who have obtained PhD (postdoc positions) or MSc (PhD student positions) degrees in fields of biological (soft matter) physics, biophysics, (bio)physical chemistry, computational sciences, machine learning, and related fields including stat mech in stat physics are invited to apply. Experience with molecular dynamics simulations (with GROMACS, NAMD, etc.) and other simulation techniques (DFT, QM/MM, DPD, SRD, LB, etc.) on atomistic and coarse-grained levels is highly beneficial.

Working Environment. The postdocs and PhD students will be part of the Biological Physics group lead by Prof. Ilpo Vattulainen. The group has ~30 members of which ~10 are postdoctoral scientists. It is a member of a Center of Excellence granted by the Academy of Finland and it hosts an ERC Advanced Grant. The group specializes in multi-scale simulations using a wide arsenal of techniques ranging from QM to atomistic and coarse-grained simulations. The publication record of the group is quite considerable with ~50 peer-reviewed articles per year. Collaborations with experimental and theoretical teams are strong. The work environment is relaxed and the successful candidate will have an opportunity to influence the project content. The group has recently moved from Tampere to Univ Helsinki.

Funding for the Positions. The gross salary will be about 3400-4000 EUR/month for postdocs, and about 2200-3000 EUR/month for PhD students depending on experience.

Project. The projects will focus on membrane-associated proteins with an objective to understand how their dynamics, conformation and activation can be modulated. The proteins in question are involved in signaling of processes play a role in certain abundant diseases. The research will be strongly coupled to collaborations with several 1st class experimental teams.

Computing Resources. The successful candidates will have access to local computing clusters with 1000-2000 cores. Also available will be access to CSC – The IT Centre for Science, Espoo/Finland (with ~40,000 cores). Additional resources include a possibility to apply for PRACE programs where the group is an active partner, and other simulation resources available through the group's collaborators.

Contact. Further information can be obtained from Prof. Ilpo Vattulainen (Ilpo.Vattulainen@helsinki.fi).

Application Procedure. Applications must be sent in the PDF format, and must include CV, list of publications, description of research interests, and names of 3 people willing to provide a letter of recommendation. Application including all this material should be sent to Prof. Vattulainen *as a single PDF file*. Recommendation letters are not crucial at this stage but may of course be sent separately.

Deadline. Applications are considered until the positions have been filled. Applicants who are short-listed for the positions are contacted personally.

Examples of Recent Papers Published by the Group. K. Kaszuba et al., PNAS 112, 4334 (2015) – V. Sharma et al., PNAS 112, 11571 (2015) – V. Sharma et al., PNAS 112, 20140 (2015) – D. Lingwood et al. Nature Chem Biol 7, 260 (2011) – H. J. Kaiser et al. Proc Natl Acad Sci USA 108, 16628 (2011)

