

# Postdoc & PhD student positions in Computational Biophysics: Tampere, Finland

Employer: Biological Physics group  
 Tampere University of Technology (TUT)  
 Finland  
 Contact: Prof. Ilpo Vattulainen ([Ilpo.Vattulainen@tut.fi](mailto:Ilpo.Vattulainen@tut.fi))  
 Website: <http://www.tut.fi/biophys/>  
 Location: Tampere, Finland  
 Posted: Oct 14, 2013  
 Expires: Applications are considered until the positions have been filled



## Job Description

Two-three postdoctoral positions in computer simulations of lipids, membrane proteins, and lipoproteins are available. The positions are for a 2-year period starting as soon as possible. Additionally, we are looking forward to applications by talented PhD student candidates in the same fields for a period of 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, and related fields 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 are highly beneficial. We are also looking for candidates with experience of tools and techniques in bioinformatics.

**Working Environment.** The group has ~40 members of which ~15 are postdoctoral scientists, ~15 PhD students, and ~10 MSc and BSc students. The group specializes in molecular simulations using a wide arsenal of techniques ranging from QM to atomistic and coarse-grained simulations. The team also contains a major theory activity directed by Prof. Ralf Metzler (Tampere & Univ Potsdam), and simulation work directed by Prof. Pavel Jüngwirth (Tampere & Prague). The group publishes ~40 peer-reviewed articles per year. Collaborations with experimental teams are very strong. The work environment is relaxed and the successful candidate will have an opportunity to influence the project content.

**Funding for the Positions.** The gross salary will be about 3500-4000 EUR/month for postdocs, and about 2200-2900 EUR/month for PhD students depending on experience.

**Project & Funding.** The projects will be based on funding granted by the European Research Council (ERC) and the Academy of Finland (Centre of Excellence). The project will use QM, atomistic and coarse-grained molecular simulations to investigate phenomena dealing with membrane proteins and lipoproteins in a native-like crowded environment. The research will focus on how lipids modulate protein function, and on diseases related to metabolic syndrome and sub/over-activation of membrane proteins and receptors. The research will be strongly coupled to collaborations with several 1<sup>st</sup> class experimental teams.

**Computing Resources.** The successful candidates will have access to the local computing cluster of more than 2000 cores. Also available will be access to CSC – The IT Centre for Science, Espoo/Finland, which is one of the large supercomputing centers in Europe (with ~15,000 cores). Additional resources include access to PRACE programs in which the group is an active partner, and simulation resources granted by the group's collaborators worldwide. Recently the group has used ~10,000 core-years of computing time per year.

**Contact.** Further information can be obtained from Prof. Ilpo Vattulainen ([Ilpo.Vattulainen@tut.fi](mailto:Ilpo.Vattulainen@tut.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. Preferred deadline is Nov 31, 2013.

### Examples of Recent Papers Published by the Group.

- A. Koivuniemi et al. PLoS Comput Biol **8**, e1002299 (2012)
- D. Lingwood et al. Nature Chem Biol **7**, 260 (2011)
- H. J. Kaiser et al. Proc Natl Acad Sci USA **108**, 16628 (2011)
- K. Pietiläinen et al. PLoS Biol **9**, e1000623 (2011)
- T. Vuorela et al. PLoS Comput Biol **6**, e1000964 (2010)