



The University of Helsinki is an international scientific community of 40,000 students and researchers. It is one of the leading multidisciplinary research universities in Europe and ranks among the top 100 international universities in the world.

The Department of Computer Science (<https://www.helsinki.fi/en/computer-science>), which is part of the Faculty of Science, is a leading Computer Science research and teaching unit in Finland. The research themes of the Department cover machine learning and algorithms, computer networks and distributed systems, software systems and bioinformatics.

The Department of Computer Science, Faculty of Sciences, University of Helsinki invites applications for a

Doctoral Student in Algorithmic Bioinformatics

Position description

We are looking for a PhD candidate in the area Algorithmic Bioinformatics. The candidate will join the Graph Algorithms team

(<https://www.helsinki.fi/en/researchgroups/algorithmic-bioinformatics/teams/graph-algorithms>) lead by Associate Professor Alexandru Tomescu, which is part of the wider Algorithmic Bioinformatics group (<https://www.helsinki.fi/en/researchgroups/algorithmic-bioinformatics>) at the University of Helsinki.

Our research is at the intersection of practical bioinformatics, algorithm engineering and theoretical computer science, with a potential to make significant progress in all areas. Current research topics of the team include: string algorithms for pangenome graphs; safe string alignment solutions (i.e. base pairs appearing in *all* optimal and suboptimal alignments) and their correlation with protein function over the tree of life; genome, RNA and viral assembly from genomic sequencing data.

The tentative starting date is **March 1, 2020**. Slightly earlier or later starting dates are possible.

Requirements

The scope of this particular position is open, but we expect it to be related to the current research topics of the group (see above). We require a strong expertise in at least one of (i) algorithmics (ii) algorithm engineering, or (iii) bioinformatics data analysis.

The following constitute an advantage (but are not required):

- Proven experience in implementing efficient code.
- Proven experience in handling and analyzing genomic data.
- Previous research experience and publications.
- Achievements at international programming contests such as IOI or ACM ICPC.

Excellent written and oral communication skills in English are needed.

Applicants should have a MSc in computer science, bioinformatics or a related field.

The work involves research-related activities, including conducting theoretical and applied research, data analysis, writing research articles, participating in and presenting research at academic conferences, and teaching-related activities. You are also requested to do short stays abroad at our collaborators.

Applicants must obtain the doctoral student status in the Doctoral Programme in Computer Science at the University of Helsinki during the standard 6-month probationary period of this employment contract. Details about this process can be provided during a potential interview.

Salary and benefits

The position is full-time and funded for four years. For a doctoral student, the starting salary is in the range 2200–2500 euros/month, depending on previous qualifications and experience (e.g. previous publications). The University of Helsinki offers comprehensive services to its employees, including occupational healthcare and health insurance, sports facilities, and opportunities for professional development. The International Staff Services office (<https://www.helsinki.fi/en/university/working-at-the-university>) assists employees from abroad with their transition to work and live in Finland.

How to apply

Please send the following documents **as a single PDF file**:

- CV with possible publications
- Cover letter describing motivation and research interests
- Contact details of two potential referees who agreed to provide letters of recommendation

as an e-mail to alexandru.tomescu@helsinki.fi with the subject line “Application for PhD position”.

Applications will be given full consideration if received by **December 7, 2020**, with possible interviews scheduled until **December 18, 2020**. Applications received after this date will still be considered, until the position is filled.

Additional information

For more information on the position, you are welcome to contact Alexandru Tomescu (alexandru.tomescu@helsinki.fi).

For more information on the Doctoral Programme in Computer Science (DoCS), please visit <https://www.helsinki.fi/en/research/doctoral-education/doctoral-schools-and-programmes/doctoral-school-in-natural-sciences/doctoral-programme-in-computer-science>.

And here are some good reasons to move to Finland: http://www.stat.fi/tup/satavuotias-suomi/suomi-maailman-karjessa_en.html