PhD Position in Bioinformatics

Job offer from August 8, 2016

The Max Planck Institute for Plant Breeding Research (MPIPZ) in Cologne, Germany invites applications for a PhD position in the field of bioinformatics, genome assembly and plant genomics. The position is available in the Genome Plasticity and Computational Genetics headed by Dr Korbinian Schneeberger.

Background / Objectives

The focus of our group involves the development of methods for the analysis of high-throughput sequencing data (including Illumina, PacBio and Oxford Nanopore data), as well as the application of these methods in plant genetics/genomics. We develop new and creative methods to analyze genomes including reconstruction of the genome sequence (genome assembly) and analysis of differences to other genomes (genome comparison) covering all topics of sequence bioinformatics. We apply these methods to understand the dynamics of genomes and how they change over time - in short term over a few generations as well as over long evolutionary scales - as well as how these genomic differences encode for differences in the phenotypes.

The initial project of the selected candidate will include the analysis and comparison of plants from an inter-species cross between two related plants. We will analyze how the chromosomes of such hybrid plants (each cell carries the genomes of two species) rearrange and mutate over the initial generation after crossing. It is known that the combination of chromosome sets of different species leads to drastic rearrangements. However, it is not clear how and what speed these mutations are introduced happens. The candidate will be involved in design of the sequence experiment, computational data analyses (including development of methods and approaches) of the genomes and interpretation of the results as well as in defining follow-up experiments.

Our requirements

In addition to a MSc in Bioinformatics, IT, Biology or related field, the applicant should have extensive knowledge in the use of Linux/Unix as well as sufficient biological background. The position further requires solid experience in scripting/software development (e.g. Perl, Python, C++), as well as HPC computing (e.g. job scheduling). The proven ability to work in a team at the interface between biology and informatics is essential. Very good organizational and communication skills are desired. In addition, good command of English language, the working language of our group, is required.
Payment / Position

The position is available immediately. Selected candidates will be invited for interview. Salary and working hours are in accordance with the funding guidelines of the Max Planck Society for junior scientists. Working hours are fulltime; salary is 50% of E13 TVöD-Bund. The Max-Planck society is committed to increasing the number of individuals with disabilities in its workforce and therefore encourages applications from such qualified individuals. Furthermore, the Max Planck Society seeks to increase the number of women in those areas where they are underrepresented and therefore explicitly encourages women to apply.

Your application

For questions concerning the PhD project please contact Dr. Korbinian Schneeberger.

Please email an application letter clearly stating why you are applying for the position, including curriculum vitae, list of publications or similar achievements, and at least one academic letter of recommendation until September 30, 2016:

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