Post Doctoral Position in Statistical and Quantitative Genetics

Walia Lab at the University of Nebraska and the Morota Lab at Virginia Polytechnic Institute and State University jointly seek a postdoctoral scholar to fill a position in statistical and quantitative genetics for plants. The purpose of this position is to support research on statistical and computational methods used in the development and implementation of quantitative genetic methodologies for use in plants (wheat and rice). The position will be based at the University of Nebraska-Lincoln and the successful candidate will collaborate closely with the Morota lab including occasional travel to Virginia Polytechnic Institute and State University.

Responsibilities will be oriented toward connecting image-derived high-throughput phenotyping data with high-dimensional genomic and transcriptomic data. The projects include, but are not limited to, the following. 1) Development of longitudinal statistical models for whole-genome prediction, 2) Development of longitudinal genome-wide association studies, 3) Quantitative genetic analysis of multi-trait using factor analysis and structural equation models, and 4) Quantitative genetic modeling of transcriptome-wide association analysis. In addition to the above-described duties, the individual will be expected to work under the supervision of the supervisor to accomplish the research goals, prepare manuscripts for publication, and prepare competitive grant proposals. The individual will be jointly mentored by Drs. Walia and Morota.

Qualifications: Ph.D. in quantitative genetics, statistical genetics, plant or animal breeding, bioinformatics, or other related fields.

Experience in genome-wide association analysis / genomic prediction with the ability to integrate high-density genotype or sequence data sets and multi-trait analysis is preferred. In addition, programming skills in R or C++ and familiarity with ASReml, BLUPF90, or WOMBAT are desired.

Interested candidates should apply by email to Dr. Harkamal Walia (hwalia2 at unl dot edu; http://cropstressgenomics.org; http://wrchr.org). The email should include the following: (1) cover letter explaining candidate’s research interests and how they fit with this position, (2) CV, (3) publications, and (4) contact information including phone numbers for 3 references.

Related papers

Momen M, Campbell MT, Walia H, and Morota G. Utilizing trait networks and structural equation models as tools to interpret multi-trait genome-wide


