Research Associate – Genomic Prediction

The Animal Quantitative Genetics group at Michigan State University is seeking a research associate (postdoctoral) to work on genomic prediction using sequence data. This position is initially for one year renewable annually contingent on performance and availability of funding.

The start date is flexible but preferably before August 2018. Review of applications will start immediately, and the position will remain open until a suitable candidate has been found. Salary is commensurate with experience plus benefits.

The associate will work on phasing and imputation of large datasets up to sequence level; will develop and test efficient methods to use sequence information for genomic selection. The work also includes Genome Wide Association Studies, investigation of the genetic architecture of complex traits and identification of causal variants and their value for prediction purposes. The emphasis of the project is on beef cattle, but there are opportunities to work with dairy, pigs and other species.

We are looking for a motivated scientist in the field of statistical genetics and genomics, biostatistics, animal genetics and large-scale genomic data analysis. The specific duties of this position include:

• Independently plan and conduct new research in the field of genomic prediction.
• Publish research outcomes in peer-reviewed articles in high impact journals.
• Discuss and communicate research ideas with colleagues and research funders.
• Write grants and apply for extramural funding.
• Develop methods and computer programs for genomic prediction.
• Undertake data analysis and other modeling exercises relevant to the project.
• Assist with some undergraduate and graduate teaching, assistance with supervision of graduate students.

Qualifications: **Minimum Requirements**

• Appropriate qualifications and research training relevant to the duties, including completion of a PhD degree in animal genetics or a related area and some academic work experience.
• Extensive experience with statistical analysis of quantitative genetic models, particularly genomic prediction methods.
• Experience in computer programming, particularly R and C++, with the ability to communicate with databases and to handle extremely large data files.
• A strong record of research achievement as demonstrated by journal publications.
• A sound understanding of animal breeding and genomics.

Qualifications: **Desired**

• A comprehensive understanding of how genomic technologies can be used to improve livestock systems.
• Strong communication skills with the ability to communicate complex quantitative genetic principles to a broad audience.

**How to apply:** Application materials must be submitted electronically at http://careers.msu.edu/ci/en-us/job/498878/research-associatefixed-term and include:

• Cover letter explaining your background and career plans
• Most recent CV
• A description of relevant experience

Questions about the position should be directed to Prof. Cedric Gondro (gondroce@msu.edu), Department of Animal Science, Michigan State University.