



THE UNIVERSITY OF CHICAGO

Department of Statistics

SCIENTIFIC AND STATISTICAL COMPUTING SEMINAR

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Modeling the Function and Evolution of Regulatory Sequences in *Drosophila*

THURSDAY, October 23, 2014 at 4:30 PM
133 Eckhart Hall, 5734 S. University Avenue

ABSTRACT

Thermodynamics-based models that map an enhancer sequence to its expression readout in a given trans context have provided a quantitative framework to test our understanding of the cis-regulatory ‘code’. They hold the potential to provide testable mechanistic hypotheses and to identify holes in our understanding of a gene’s regulation. I will present fundamental new capabilities and applications of one such model, called GEMSTAT, that was previously demonstrated to successfully model segmentation enhancers. I will also touch upon the use of this quantitative model in understanding the evolution of regulatory sequences.

Organizers:

Lek-Heng Lim, Department of Statistics, lekheng@galton.uchicago.edu, Ridgway Scott, Departments of Computer Science and Mathematics, ridg@cs.uchicago.edu, Jonathan Weare, Department of Statistics and The James Franck Institute, weare@uchicago.edu. SSC Seminar URL: http://www.stat.uchicago.edu/seminars/SSC_seminars.shtml.

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