The University of Chicago
Department of Statistics

Seminar Series

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Applications of Perron-Frobenius Theory to Population Dynamics

MONDAY, April 25, 2011, at 4:00 PM
133 Eckhart Hall, 5734 S. University Avenue
Refreshments following the seminar in Eckhart 110.

ABSTRACT

The fundamental theorem of population demography (or dynamics) in the standard (linear) matrix model is a straightforward application of the theorem of Perron-Frobenius. An inequality between the growth rate and the net reproductive rate of the model may be obtained as an application of a well-known comparison theorem for splittings of matrices. We show how to scale the fertility matrix so that the growth rate has a pre-assigned value. This talk is based on joint work with Chi-Kwong Li, see *J. Math. Bio.* 44 (2002),450–462.

For further information and about building access for persons with disabilities, please contact Laura Rigazzi at 773.702.8333 or send email (lrigazzi@galton.uchicago.edu). If you wish to subscribe to our email list, please visit the following website: https//lists.uchicago.edu/web/info/statseminars.