

IAP PROJECT StUDyS

Université de Liège – METHODOLOGICAL STATISTICS –



STATISTICS SEMINAR

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Negative dependence and stochastic ordering

We let W be a non-negative, integer-valued random variable. We consider those W which satisfy a certain stochastic ordering inequality which is closely related to several well-known concepts of negative dependence. This class includes sums of negatively related or totally negatively dependent indicators, and also includes ultra-log concave random variables. Within this class of negatively dependent random variables, we may find a straightforward upper bound on the total variation distance between W and a Poisson distribution with the same mean. We also have an upper bound on the Poincaré (inverse spectral gap) constant of W. Finally, such W are smaller (in the convex sense) than a Poisson distribution of the same mean.

Thursday, April 24, 2014 - 15h30 - Room 0/36 (Building B37) Grande Traverse 12, 4000 Liege (Parking P32-33)