Colloquium

Robustness of Design in Dose-Response Studies

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In work carried out with my colleague Pengfei Li, we construct experimental designs for dose-response studies. The designs are robust against possibly misspecified link functions; to this end they minimize the maximum mean squared error of the estimated dose required to attain a response in 100p% of the target population. Here p might be one particular value - p = .5 corresponds to ED50 estimation - or it might range over an interval of values of interest. The maximum of the mean squared error is evaluated over a Kolmogorov neighbourhood of the fitted link. Both the maximum and minimum must be evaluated numerically; the former is carried out by quadratic programming and the latter by simulated annealing.

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Statistics Building
University of Georgia
Athens, GA 30602

Refreshments following the talk at 4:30 P.M. in room 230 (The Cohen Room)