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Abstracts of Short Communications and Posters

Section:

12. Probability and Statistics

1991 MS Classification: not given

Lutsenko, Michael M., St. Petersburg University of Railway Transport, Russia

Minimax constant width confidence intervals for discrete random variables

Computer system for minimax decision functions construction was worked out. The traditional problem of decision theory was transformed into statistical game (see Lutsenko, M.). Constant width confidence intervals for estimation of a parameter of binomial or hypergeometrical distributions were constructed. Thanks to these intervals new estimation of sample size for given accuracy and reliability was obtained. The sample size is 20–30 % smaller than the sample size for one-step estimation based on Clopper–Pearson, or Sterne–Crow intervals.

Lutsenko, M. (1990), A game theoretic method for the estimation of a parameter of the Binomial law/Theory Probab. Appl., v. 35, pp. 467–477.