



**ON MANY HYPOTHESES OPTIMAL TESTING VIA THE THEORY
OF LARGE DEVIATIONS FOR TWO DIFFERENTLY
DISTRIBUTED OBJECTS**

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Received December 27, 2010

Abstract

In this paper by using theory of large deviation techniques (LDT), the problem of hypotheses testing for two objects having different distributions from four possible distributions is solved. Hypotheses identification for two objects having different distributions from two given probability distributions was examined by Ahlswede and Haroutunian. We noticed Sanov's theorem and its applications in hypotheses testing and show that this method of investigation, solving the problem is easier and gives identical results by procedure that was introduced by Haroutunian and Yessayan.

Keywords and phrases: optimal testing, error probability, two differently distributed, type.

