

## C740315 : MAJOR EDUCATIONAL STATISTICS

KEY WORD: TETRADs / OUTLIERS / DETECTION CRITERION

REVADEE ANNANNAB : A DETECTION OF OUTLIERS IN COMPLETELY RANDOMIZED  
EXPERIMENTAL DESIGN USING TETRADs. THESIS ADVISOR : ASSO. PROF.  
DEREK SRISUKHO, Ph.D. 210 pp. ISBN 974-635-985-1

The purposes of this study were to detect the outliers using tetrads technique, to compare the validity of the detection among 5 detection criterions, and also to investigate the distribution of median of tetrads under the distribution of non outlier. The Monte Carlo simulation technique was employed for the study. The simulation were made under the different number of samples as 3, 5 7 and different sample sizes as 11, 12, 13 and the level of outliers were large, moderate and small.

The results of this study were as follows :

1. The detection of 3 degrees of outliers by using tetrad technique with the developed Detection Criterion (DC) were as follow

1.1 Using tetrads with Detection Criterion NO.5 (DC5) could correctly detect more than 95% of the large outliers.

1.2 Using tetrads with Detection Criterion NO.4 (DC4) could correctly detect 90-94.99% of the moderate outliers.

1.3 Using tetrads with Detection Criterion NO.3 (DC3) could correctly detect 85-89.99% of the small outliers.

2. The absolute value of median of tetrads was a unimodal distribution with positive skewness.

ภาควิชา..... วิทยาการศึกษา.....

สาขาวิชา..... สถิติการศึกษา.....

ปีการศึกษา..... 2539.....

ลายมือชื่อนิสิต..... 

ลายมือชื่ออาจารย์ที่ปรึกษา..... 

ลายมือชื่ออาจารย์ที่ปรึกษาร่วม.....