Modeling the change detection process state of objects in monitoring data.

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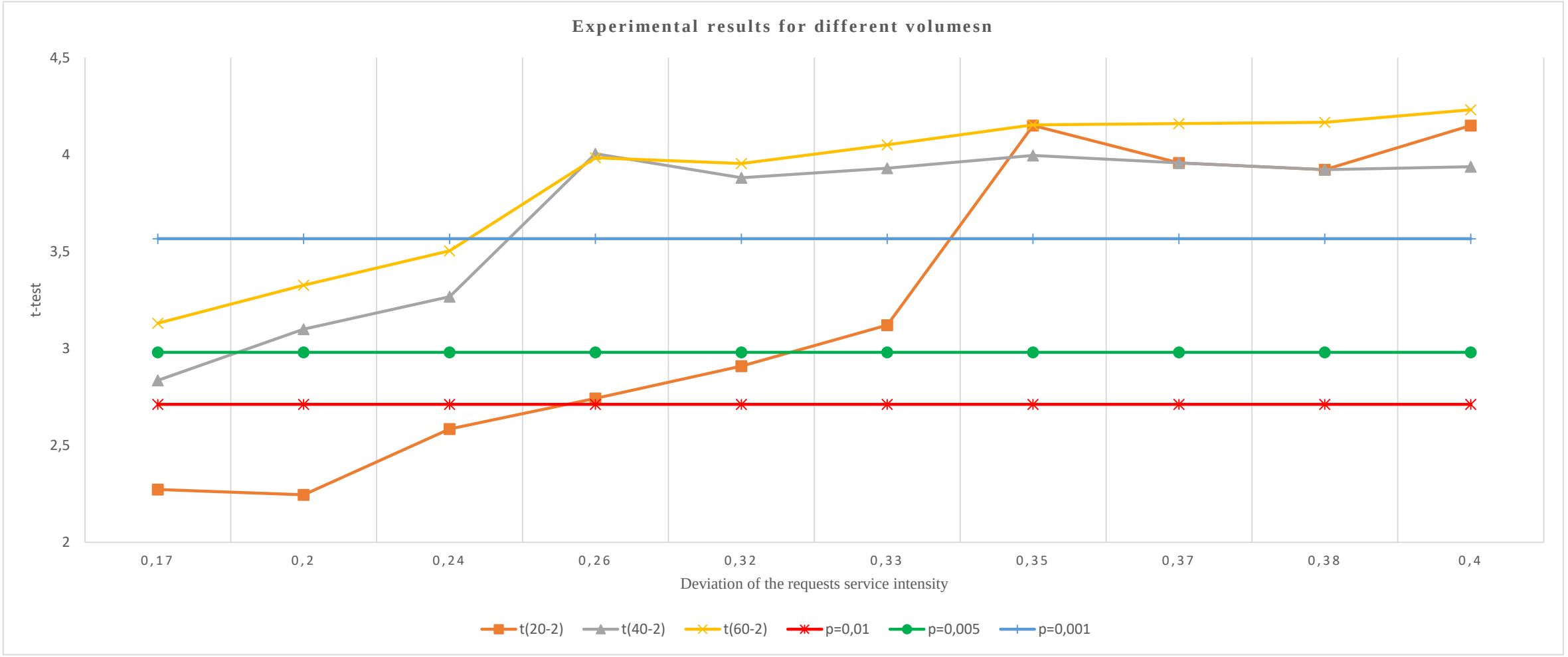
Abstract.

- A model for detecting anomalous data based on the research of sample uniformity is proposed. The method is designed to solve the detecting changes problem in the flow’ state of controlled data using normal and gamma distributions models based on the Spearman nonparametric statistics criterion. The research results about intensity values that influence on requests generating, the intensity of servicing applications, the system load, the volume of samples, the time points of measuring characteristics and significance levels on the change the control object state are presented. The method can be used to control the process of detecting changes in UMV resources states. Currently, the process of anomalies rapid detection in the monitoring data of critical infrastructure objects is a complex, time-consuming and difficult to formalize task. Intrusion detection systems are the most effective counter-measure and the most reliable approach to ensure the protection of automotive networks or traditional computer networks.

Plot of the dependence of the observed values of the Student's t-test at λ=0,7 μ=0,8 for different sample sizes n



Experimental results - $t(n)$ for different sample sizes n