THE CONSISTENT CRITERIA FOR CHECKING HYPOTHESIS FOR GAUSSIAN HOMOGENEOUS FIELD STATISTICAL STRUCTURE

Tengiz Kiria *, Zurab Zerakidze **
* Georgian Technical University, Tbilisi, Georgia, kiria8@gmail.com
** Gori State University, Gori, Georgia, z.zerakidze@mail.ru

In this paper we discuss Gaussian homogeneous field statistical structures $\{(E,S,\mu_i):i\in I\}\}$ in the Banach space of measures. We define the consistent criteria for checking hypothesis such that the probability of any kind of errors is zero for a given criteria. It is established necessary and sufficient conditions for the existence of such a criterion are established.

Acknowledgement. This work was partially supported by Shota Rustaveli National Science Foundation Grant No FR/308/5-104/12.

References

1. Ibramkhalilov I., Skhorokhod A. Consistent Estimates of parameters of random processes, Kiev 1980.
2. Borovkov A. A. *Matematicheskaya statistika*. (Russian) [Mathematical statistics] *Otsenka parametrov*. Proverka gipotez. [Estimation of parameters. Testing of hypotheses] ``*Nauka", Moscow,* 1984.
3. Zerakidze Z. On consistent estimators for families of probability measures. 5-th Japan-USSR symposium on probability theory. Kioto (1986).
4. Zerakidze, Z. S. Weakly separable and separable families of probability measures. (Russian) *Soobshch. Akad. Nauk Gruzin. SSR* **113(2)** (1984), 273--275.
5. Zerakidze Z. Generalization of Neuman-Person criterion. Collected scientiblic of works (in Georgia) IV p. 63-69. ISSN 1512-2271 The Ministry of Education and Science of Georgia Gori state University, Lampari, Tbilisi 2005.
6. Jech, Thomas. Set theory. The third millennium edition, revised and expanded. Springer Monographs in Mathematics. *Springer-Verlag, Berlin,* 2003.
7. Aleksidze, L.**;** Mumladze, M.**;** Zerakidze, **Z.** The consistent criteria of hypotheses. *Mod. Stoch. Theory Appl.* **1(1)** (2014), 3—11.
8. Zerakidze Z.Mumladze M. Statistical structures and consistent criteria for cheking hypothese. Lambert Academic Publishing 2015.
9. Kharazishvili A. On the existence of consistent estimators for strongly separable family probability measures. The probability theory and mathematical statistic: “Mecniereba”, Tbilisi, Georgia (1998), 100-105.
10. G. Pantsulaia. About property of orthogonal probability measures. Mathematics analiz N8 (350), Tbilisi (1989), 106 -112.
11. Kantorovich L. V., Akilov G. P. *Funktsional□nyĭ analiz* (Russian) [Functional analysis] Second edition, revised. *Izdat. ``Nauka", Moscow,* 1977.