Faculty of Cybernetics

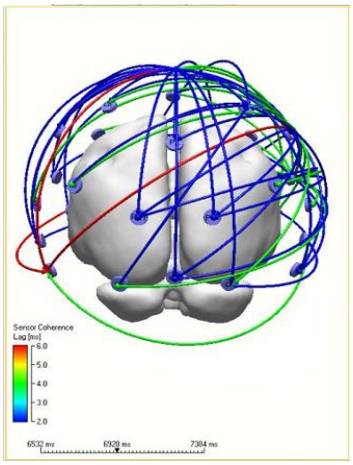
http://cyb.univ.kiev.ua

Department of Applied Statistics

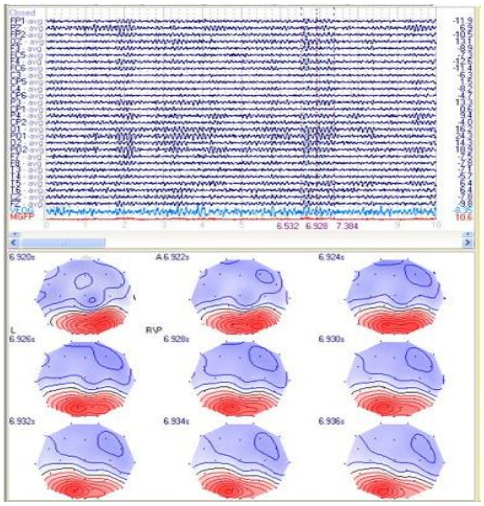
http://applstat.univ.kiev.ua

(System analysis specialization)

APPLICATION OF MULTIDIMENSIONAL STATISTICAL ANALYSIS METHODS IN MEDICINE

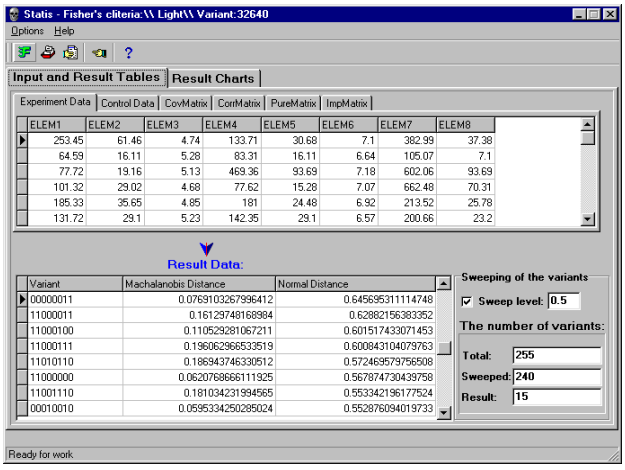


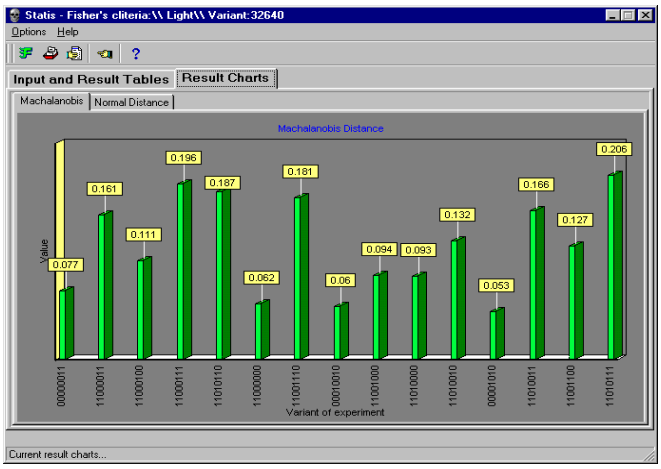
In 2009 Department of Applied statistics in collaboration with Institute of Cybernetics received the grant from Ministry of Education and Science of Ukraine for scientific research “Optimization of diseases diagnostics process by methods of multidimensional statistic analysis”.



The idea of constructing the normalized distance between the test and control samples was developed in this research. This distance was used for brain bioelectrical activity analysis and diagnostics of its pathologies at the Institute of Neurosurgery named after academician A.P. Romodanov of AMS of Ukraine.

Applied algorithms and programs that are based on this idea were developed. They allowed to solve an important practical problem – optimization of diseases diagnostics process, control the pharmacological influence process, construct “dose-response” regression models.





Scientific researchers and masters of Department of Applied statistics were cooperating with University of Technology in Compiegne, France during the research. The results of the research were presented on the 10-th international workshop devoted to actual problems of applied stochastic models and data analysis.