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Information system services based on machine learning methods and data analysis technologies for applied radiobiological research BIOHLIT (MLIT and LRB JINR)

Thursday 6 July 2023 14:00 (15 minutes)

The talk will cover the current status of work on the development of the BIOHLIT information system (IS), which is being created within a joint project between MLIT and LRB JINR. The system is designed to create a convenient environment for storing, processing and automating the analysis of data from experiments aimed at studying the radiobiological effects of exposure to ionizing radiation at the organismal, tissue and cellular levels. The investigation of behavioral responses of small laboratory animals is based on video data analysis, for which separate IS modules are being developed. The system comprises new web services for automating the analysis of behavioral test data at the Open Field setup and forming a dataset for the Morris Water Maze setup. Algorithmic blocks of the system are based on computer vision methods and the neural network approach.

Summary

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