

**Supervisor's report  
for final qualifying work  
by Krushinevskii Evgenii Alexandrovich  
«Data science and machine learning applied to accelerator physics problems»  
Direction 09.06.01 «Informatics and Computer Engineering»  
The main educational program MK.3021.2017 «System analysis, informatics and  
management»**

Accelerator systems and complexes are widely used in modern science for a fundamental and applied research. Research in particle physics is an expensive, resource-intensive and high-tech process that is impossible without an advanced IT infrastructure and is highly dependent on machine learning and data science methods.

In the work presented for the defense, the main stages of data collection and analysis are considered, various detector systems are described, a range of elementary particle physics problems, which can be effectively solved by machine learning methods, is determined. Reasoned conclusions that based on the computational experiments results are made.

During his postgraduate studies, Krushinevskii E.A. showed himself as an independent and competent researcher, capable of solving the assigned tasks. The results obtained by him were presented at two international scientific conferences and published in five articles, among which there are articles peer-reviewed in the SCOPUS. Research by E.A. Krushinevskii were twice supported by the Russian Federation Government Scholarship.

I think that the final qualifying work of E.A. Krushinevskii "Data science and machine learning applied to accelerator physics problems" is an independent and completed qualification work on a topical subject that meets the requirements established at St. Petersburg State University and deserves an "excellent" mark.

Scientific adviser,  
Doctor of Physics  
and Mathematics,  
Professor



S.N.Andrianov