*Appendix*

**JINR PRIZES FOR 2024**

**For theoretical research papers**

First prize

“Theoretical advances in the structural characterization of complex systems: fractals, hierarchical and multiphase materials”.

Author: E. M. Anitas.

Second prizes

“High energy hadron elastic scattering (*√*s = 3*.*6 GeV up to *√*s = 13 000 GeV)”.

Author: O. Selyugin.

“New physical effects caused by the gravitational field of objects moving at the speed of light”.

Authors: E. Davydov, I. Pirozhenko, V. Tainov, D. Fursaev.

**For experimental research papers**

First prize

“7He structure from the deuteron stripping reaction".

Authors: A. Bezbakh, R. Wolski, M. Golovkov, A. Gorshkov, A. Denikin, S. Krupko.

Second prizes

“Nucleon and cluster transfer in reactions with the 9Be nucleus”.

Authors: A. Azhibekov, D. Aznabayev, T. Zholdybayev, T. Issatayev, S. Lukyanov, V. Maslov, K. Mendibayev, M. Naumenko, Yu. Penionzhkevich, V. Samarin.

“Pressure-induced phase transitions in perovskite-like layered titanates”.

Authors: A. Asadov, S. Kichanov, D. Kozlenko, E. Lukin, A. Mammadov,
R. Mehdiyeva.

**For methodology, research and technology papers**

First prize

“Development of the BM@N spectrometer at the NICA accelerator complex”.

Authors: S. Bazylev, N. Zamyatin, M. Kapishin, E. Kulish, A. Makankin, S. Piyadin, M. Rumyantsev, S. Sedykh, S. Khabarov, V. Yurevich.

Second prizes

“Development of the software complex for the implementation of a unified architecture for distributed data processing and storage at the BM@N/NICA experiment”.

Authors: E. Alexandrov, I. Alexandrov, N. Balashov, K. Gertsenberger, P. Klimai, A. Moshkin, I. Pelevanyuk, I. Filozova, A. Chebotov, G. Shestakova.

“Creation of a full-cycle technological complex for the development, production and testing of Micromegas coordinate detectors”.

Authors: A. Gongadze, I. Gongadze, L. Gongadze, D. Dedovich, N. Kaurtsev, N. Kovyazina, I. Lyashko, I. Minashvili, I. Potrap, T. Rudenko.

Third prizes

“The MONUMENT experiment: ordinary muon capture studies for the 0νββ decay”.

Authors: V. Belov, K. Gusev, I. Zhitnikov, D. Zinatulina, S. Kazartsev,
N. Rumyantseva, E. Shevchik, M. Shirchenko, M. Fomina.

“Creation a hardware and software complex to study the characteristics of the cathode strip chambers of the CMS experiment at the LHC in proton-proton interactions and studying their performance under conditions of high background”.

Authors: N. Voytishin, A. Golunov, N. Gorbunov, A. Kamenev, V. Karzhavin, A. Lanev, V. Matveev, V. Palchik, V. Perelygin, S. Shmatov.

“Numerical methods and problem-oriented program complexes for solving some partial differential equations of physical processes and systems”.

Authors: А. Gusev, О. Chuluunbaatar, G. Chuluunbaatar, J. Buša Jr., S. Vinitsky, T. Zhanlav, B. Batgerel, V. Ulziibayar, L. Hai, P. Wen.

**For applied research and technology papers**

First prize

“Deep learning methods for various problems in agriculture”.

Authors: A. Uzhinskiy, G. Ososkov, A. Nechaevskiy.

Second prizes

“Development of contrast agents for multi-energy computed tomography”.

Authors: V. Rozhkov, R. Sotenskii, G. Shelkov, E. Suslova, D. Shashurin, O. Medvedev.

“Composite and hybrid functional nanomaterials based on track membranes”.

Authors: A. Nechaev, P. Apel, A. Rossouw, I. Vinogradov, O. Kristavtchuk,
E. Andreev, L. Kravets, V. Kukushkin, B. Gorberg, L. Petrik.