121st Session of the Scientific Council of JINR Dubna

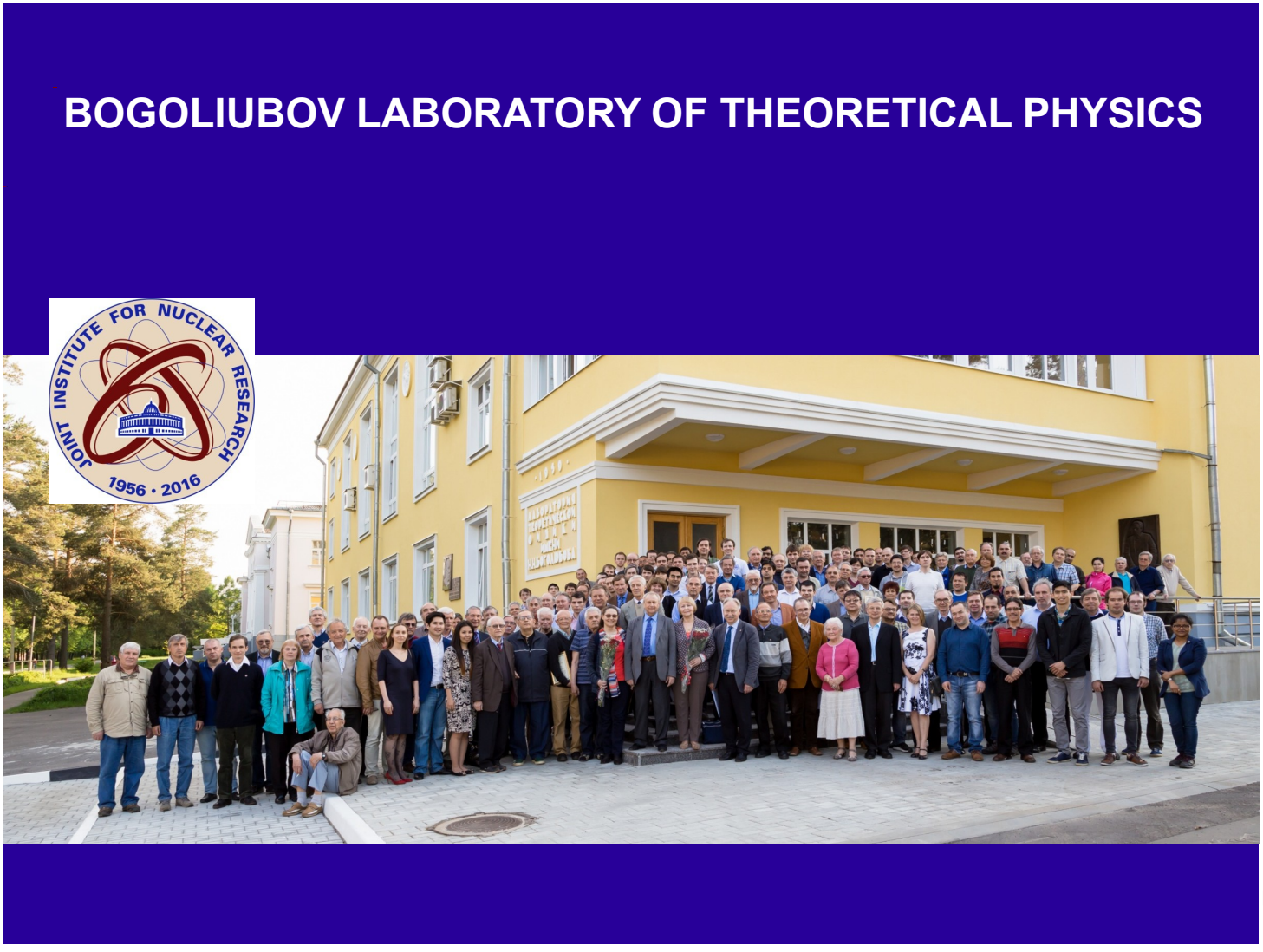
Michal Hnatič

View: BLTP - Status and Perspectives

Dubna
February 23, 2017

Bogoliubov Laboratory of Theoretical Physics

Last year in May, the Bogoliubov Laboratory of Theoretical Physics celebrated its 60th anniversary



Bogoliubov Laboratory of Theoretical Physics

The founders of the laboratory, its first director N.N.Bogoliubov and the first director of the institute D.I.Blokhintsev, laid a strong foundation for the stable development of the laboratory for the future

Laboratory of Theoretical Physics, JINR

May 25, 1956

ПРИКАЗ

ПО ЛИЧНОМУ СОСТАВУ ОБ"ЕДИНЕННОГО ИНСТИТУТА

№ 5

"25" мая 1956 года.

До утверждения новой структуры Института возложить на академика БОГОЛЮБОВА Николая Николаевича /начальника сектора № 3 Теоретической лаборатории/ исполнение обязанностей директора Теоретической лаборатории Об"единенного Института.

ДИРЕКТОР
ОБ"ЕДИНЕННОГО ИНСТИТУТА ЯДЕРНЫХ ИССЛЕДОВАНИЙ
Д.И.БЛОХИНЦЕВ

ПО ЛИЧНОМУ СОСТАВУ ОБ"ЕДИНЕННОГО ИНСТИТУТА

№ 6

"25" мая 1956 г.

ЗАЧИСЛИТЬ: 1. БОГОЛЮБОВА Николая Николаевича временно начальником сектора № 3 Теоретической лаборатории с окладом 6000 руб. в месяц, с 1 июня с.г.

2. ШИРКОВА Дмитрия Васильевича старшим научным сотрудником сектора № 3 Теоретической лаборатории с окладом 1500 руб. в месяц по совместительству, с 1 июня с.г.

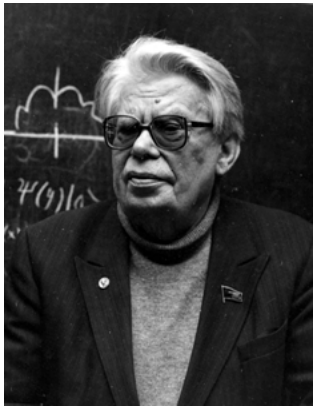
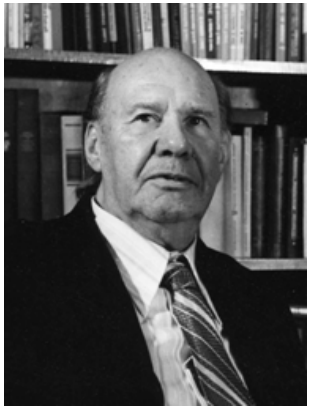
3. МЕДВЕДЕВА Бориса Валентиновича старшим научным сотрудником сектора № 3 Теоретической лаборатории с окладом 1500 руб. в месяц по совместительству, с 1 июня с.г.

4. ПОЛИВАНОВА Михаила Константиновича научным сотрудником сектора № 3 Теоретической лаборатории с окладом 1000 руб. в месяц по совместительству, с 1 июня с.г.

ДИРЕКТОР
Б"ЕДИНЕННОГО ИНСТИТУТА ЯДЕРНЫХ ИССЛЕДОВАНИЙ
Д.И.БЛОХИНЦЕВ

Bogoliubov Laboratory of Theoretical Physics

BLTP employed many outstanding physicists, who developed and created whole new directions in various branches of physics and scientific schools, many of which exist until today. In the time span of 60 years, they, along with their successors, students and **directors** made a substantial contribution to shape the laboratory to its present form


Acting director (1992)




Bogoliubov Laboratory of Theoretical Physics

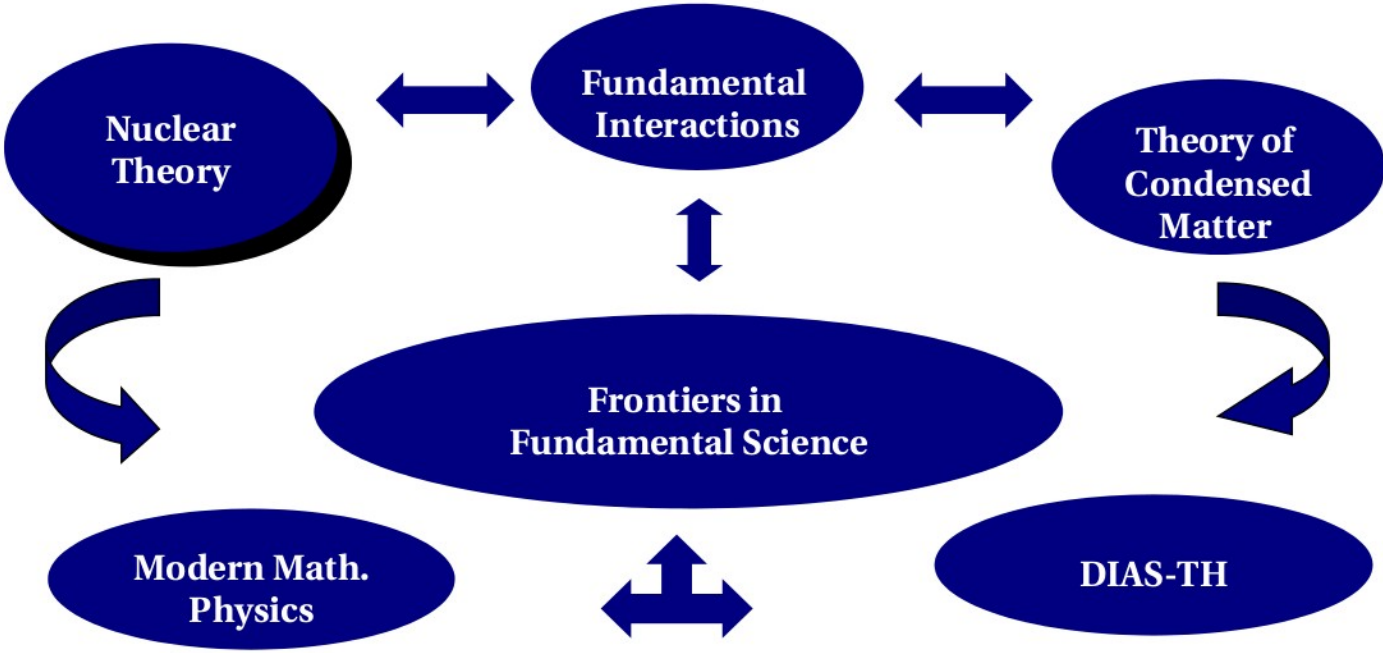
At the present time, BLTP is one of the most known theoretical physics laboratories worldwide

- It preserves and develops the best traditions of the fundamental physical science. It has the productive scientific environment and the capacity to raise the next generation of young scientists internationally and to the highest world-class level
- The internationality does not only mean a broad and rich cooperation with scientists and leading scientific institutions globally. First and foremost, it means that our laboratory employs scientists from numerous world countries, including the countries – members of JINR

Bogoliubov Laboratory of Theoretical Physics

Scientific Policy:
Multidisciplinary research,
theoretical physics on the basis of advanced mathematics,
support of the JINR experimental programme,
strengthening of the efficiency of scientific staff through
the interplay of research and education.

Научная политика ЛТФ:
Междисциплинарные исследования,
Теоретическая физика на основе
современной математики,
поддержка экспериментальных программ ОИЯИ,
укрепление научного потенциала
через взаимодействие
науки и образования.



Bogoliubov Laboratory of Theoretical Physics

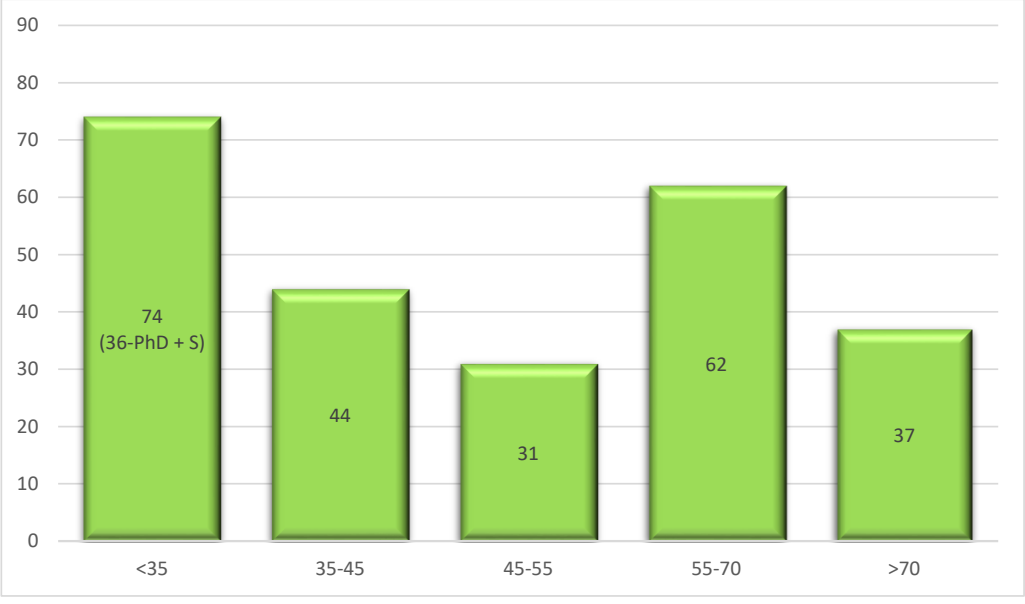
	From Russia	Outside Russia	Total
Doctor of Science	71	13	84
PhD.	64	40	104
PhD. students	12	2	14
Undergraduate students	14	6	20

BLTP PUBLICATIONS (2012-2016)

	2012	2013	2014	2015	2016	Total
Journal publications	382	363	364	356	373	1838
Conference proceedings	97	122	131	142	163	655
Total	479	485	495	498	536	2493

In the recent years, BLTP managed to stabilize:

- Personnel: we are steadily attracting undergraduate and PhD students. We stopped the negative trend from the 90s, which resulted in the low number of scientists in the age of 35 to 55



Bogoliubov Laboratory of Theoretical Physics

- Financially: first and foremost, this means a significant raise of nominal salaries, personal grants and bonuses for young scientists
- Materially: we have initiated and are successfully carrying out the complete reconstruction of the building
- We are establishing intensive international relations, especially with countries - members of JINR, by means of joint scientific programmes, joint grants, scientific schools and vacational trainings

Bogoliubov Laboratory of Theoretical Physics

- Structurally and organizationally: we have restructured the laboratory into 16 sectors and formed 4 departments. These departments include sectors with adjacent research fitting into the scope of already well-defined topics
- We created the system for estimation the scientific achievements of each employed scientist over his previous 3 years of work. This means that apart from yearly achievements, the dynamics of the achievements are also monitored

The main responsibilities and goals of the new director

- To preserve the financial, material, personal, international and organizational stability of BLTP, to continuously eliminate flaws based on the ongoing experience, to increase productivity by improving the system of evaluation of scientific achievements
- To upgrade the collaboration between our theoreticians and experimentalists from other laboratories. The work is already being done in this direction, and there is still a lot to be improved

Bogoliubov Laboratory of Theoretical Physics

- An important example which I would like to mention is the contribution of the theoreticians to the research in the Flerov Laboratory of Nuclear Reactions, specifically to the theoretical justification of the existence of island of stability of super-heavy elements and the theoretical calculations of excitation functions for production of different isotopes of super-heavy nuclides
- Also a positive example is the participation of the theoreticians in one of the main experimental directions – the NICA accelerator complex. An international group of specialists was already formed not only of physicists working in high energy and nuclear physics, but also in fields of hydrodynamics, non-equillibrium statistical physics, and the theory of classical and quantum phase transitions.They are currently outlining a clear plan for the future research closely coupled to NICA.
  For us, it is of the highest priority and deserves our utmost attention

Bogoliubov Laboratory of Theoretical Physics

- Apart from the salaries, stipends and other forms of incentives - to attract young, perspective and talented scientists, we must create favorable social conditions (housing, kindergartens, leisure and sport centers).
- We must minimize administrative and bureaucratic procedures. I am deeply convinced, that they do not result in qualitative or quantitative improvement of scientific results. In fact, it is rather the opposite as our experience has taught us.
- I think, that in the future all necessary efforts must be made to fully utilize and reinforce the current potential and possibilities of BLTP. So that the Bogoliubov Laboratory of Theoretical Physics will become strong and attractive center for talented youth, where the young scientists will find good conditions for life and professional growth, where they will attain great achievements and discoveries of the global magnitude.
  I consider the factual interest of young people in long-term positions at the laboratory, not only from Russia but also from the other countries - members of JINR, as one of the most important indicators of success of the efforts of its new directorate