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International Conference  
on  
**Particle Physics and Cosmology**

October 02-07, 2023

Yerevan, Armenia



Photo: Natalya Eremina

This is a Conference on Particle Physics and Cosmology dedicated to memory of Valery Rubakov who passed away in October 2022. The idea is to get together people from over the world to discuss the domains of physics he worked in and made breakthrough contributions.

The conference is aimed to bring together world leading experts and young researchers in the field of theoretical particle physics and related topics.

The conference will consist of plenary talks (by invitation only) and selected parallel sessions presentations.

**Main Topics**

- Physics beyond the Standard Model
- Cosmology and astroparticle physics
- Gravity and its modifications
- Neutrino physics
- Quantum chromodynamics, strong interactions
- Aspects of mathematical physics
- Selected experimental results

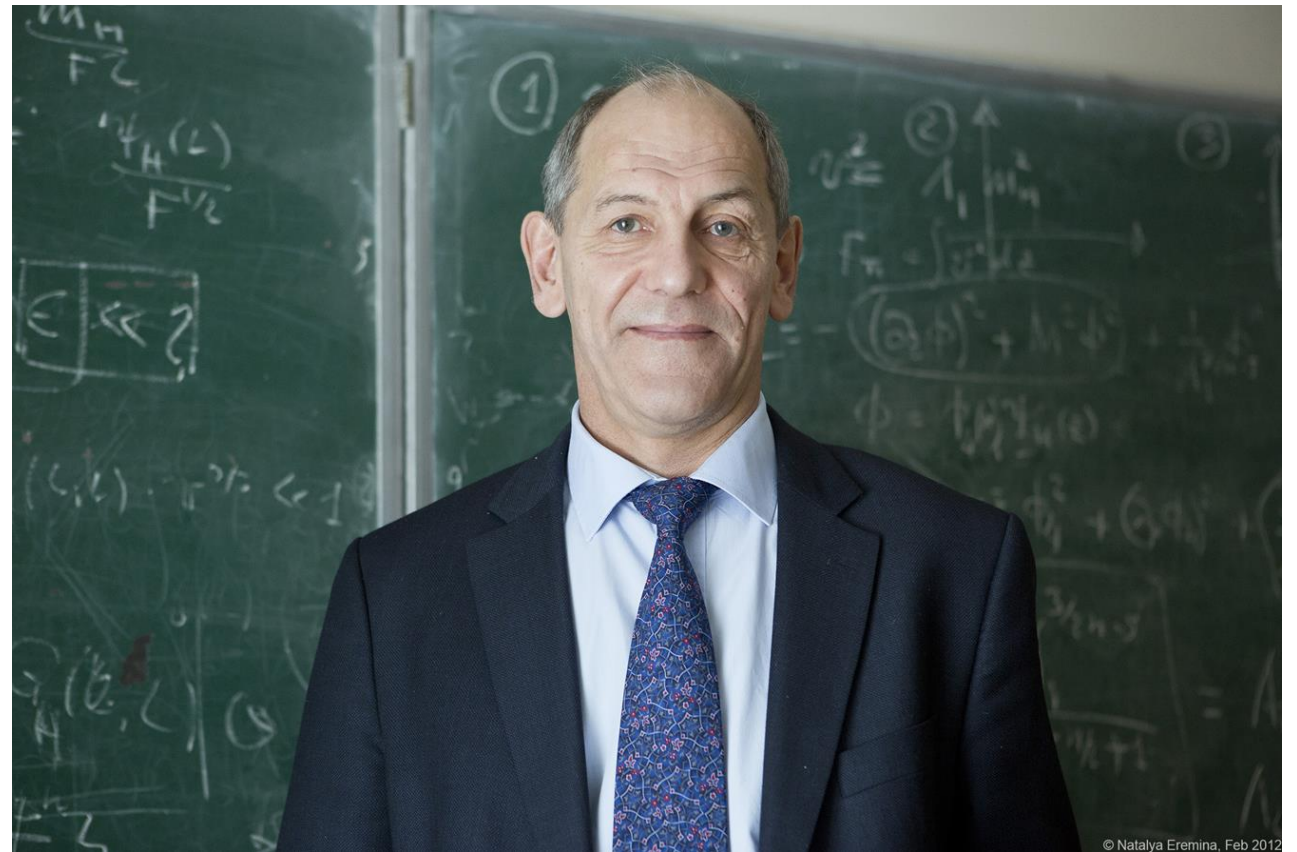
**Organizers**

Alikhanian National Laboratory  
(Yerevan Physics Institute), Armenia



**International Advisory Committee**

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# TO MEMORY OF CLOSE COLLEAGUE AND FRIEND VALERY A. RUBAKOV

“ Brilliant Theorist, Teacher and Organizer of scientific research and education”

(Victor A. Matveev, Sci.leader of JINR)

( 35 years together in the Institute for Nuclear Research of RAS and in Russian Academy of Sciences)

Some Important Vallery Rubakov dates:

1955 – 19.10 2022;

1978 - Graduated from the Physics Faculty of Moscow State Un.;

1978 – Postgraduate studies and then Theory Division in INR of RAS under supervision of Prof. Aleco Tavkhelidze;

1986 - A. Tavkhelidze moves to the position of President of Academy of Science of Gorgia in Tbilisi, getting the position of the Scientific head of INR of RAS ;

1987 – V. Matveev elected by the director of INR of RAS; forming a new directorate;

Valery A. Rubakov (senior researcher of Theory Division) were suggested and accepted the proposal to be the research deputy director of INR RAS. He was allowed to preserve his affiliation and work in the Theory division.

This position has to be approved by the Bureau of the Nuclear Physics Division of RAS. (Interesting story)!

It was my first experience to work with young research deputy (1987-1994). My first lessons of giving them an administrative responsibilities.

But it is a great story!

His first significant scientific works ( latter understood as the outstanding ones!) were done before accepting this position:

1980 :“The World on the Brane” (in coll. With Mikhail Shaposhnikov);

1981: “The Monopole decay of the proton”;

1985: “The Non-conservation of the Fermionic charges in the ElectroWeak Interactions”.

Valery Rubakov had brought a valuable (if not to say the principal one ) contribution into organization of the now world known and rather successful series of the International Seminars “QUARKS” (together with A.N. Tavkhelidze and V.A. Matveev) on the Physics of “Elementary Particles, Quantum Field Theories and Cosmology”.

Having the right to work as a staff member of the Theory Division he became practically the one of the leader of this laboratory. He was reading lectures at the Chair of the Quantum Statistics and Quantum Field Theory (N.N Bogolyubov and A.N. Tavkhelidze at the Moscow State University. Then on the Chair of QFT and Cosmology ( becoming its Chair from 2020 after A.N. Tavkhelidze) and partially on the Chair of the MPhTU (M.A. Markov->V.A. Matveev->M.V. Libanov).

He has educated its own outstanding scientific school of theorists and wide educated physicists now very well known in the world physics community as the RUBAKOV SCHOOL.

Without having any experience of the administrative work and scientific management Valery rather soon became one of the most effective member of the directorate. He definitely had a talent of the research leader. First of all he revealed high quality of responsibility, first of all of his personal responsibility, creativity and ability to find talented young people and concentrate them on the chosen ambitious task.

There was a complete trust between us. I used to consider him as the best candidate for the next director of the Institute when my (as I hoped) ten years term will come to the end.

But after seven years (at  $1987 + 7 = 1994$ ) Valery once came to me and has stated: “One year, no, one month more and I will stop to be a theorist! So, please, let me free!” I had not a choice but had agreed.

But what is important; even stepping down from the Directorate Valery preserved his responsibility for the fate of the Institute and development its major scientific directions. He still was one of the scientific leaders of the Institute!

As the scientific research Deputy Director and after stepping down from this position Valery Rubakov made a great contribution to the development of the scientific program and work of the Baksan Neutrino Observatory, the Baikal Neutrino Station with the Deep Underwater Neutrino Telescope and of the other scientific laboratories of the INR of RAS, in organization of the thematic scientific Schools and seminars, as well as in organization and realization of the collaboration programs at the joint research installations.

For many years Valery Rubakov acted as the leader and manager of the fundamental research programs on the Elementary Particles Physics and Astrophysics and on the fundamental Nuclear Physics in the framework of the Presidium of the Russian Academy of Sciences program.

Valery Rubakov brought the big and valuable contribution into the work of the presidium of Russian Academy of Sciences and its Physics Division, being the Head of the Section of Nuclear Physics. Once he was nominated for an election by the academician-secretary of the Physics Division of RAS but decided to withdraw his candidacy.

Valery Rubakov have plaid very important role in the work of the magazine “USPEKHY” («Успехи Физических Наук») being from 1999 his Deputy Chief Redactor and from 2004 his Chief Redactor. He was a member of the magazine “Theoretical and Mathematical Physics” redcollegia and the International of Modern Physics.

Valery Rubakov led very active scientific, organizational and social (общественную) life.

He was:

- \*Member of the JINR Scientific Council;
- \*Member of the Council of Science and Education of the President of the Russian Federation;
- \*Member of the Expert Committee of the gold medals and prizes of the names of great academicians of RAS;
- \*Member of the Committee of RAS of Combat Pseudoscience;
- \*Member of the First July Club of RAS,  
and others.



It is very difficult to describe in a few words  
who was academician  
Valery Anatolievich Rubakov for all of us,  
for our Russian Academy of Sciences for our  
international community.

If shortly:

He was the Mind and Conscience of our Science.

**THANK YOU!**

Victor A. Matveev ( Scientific head of the JINR, Dubna.)