

**5TH INTERNATIONAL CONFERENCE “FUNCTION SPACES.
DIFFERENTIAL OPERATORS. PROBLEMS OF MATHEMATICAL
EDUCATION” (NOVEMBER 26–29, 2018, MOSCOW, RUSSIA)**



The 5th International Conference “Function Spaces. Differential operators. Problems of Mathematical Education” was held from November 26th to November 29th, 2018, in Moscow at the Peoples’ Friendship University of Russia (RUDN University). It was dedicated to the 95th anniversary of corresponding member of the Russian Academy of Sciences L.D. Kudryavtsev, academician of the European Academy of Sciences.

The conference was organized by the RUDN University, M.V. Lomonosov Moscow State University, V.A. Steklov Mathematical Institute of the Russian Academy of Sciences, Moscow Institute of Physics and Technology, Russian Technological University (Moscow Institute of Radio-engineering, Electronics and Automation), Scientific and Methodological Council on Mathematical Education at the Ministry of Education and Science of Russia, and supported by the International Society for Analysis, its Applications and Computation. The 2nd announcement about the conference was published in [1].

The following notable professors spoke at the opening ceremony of the conference:

V.M. Filippov, academician of the Russian Academy of Education, the rector of the RUDN University,

N.N. Kudryavtsev, corresponding member of the Russian Academy of Sciences, the rector of the Moscow Institute of Physics and Technology,

A.G. Sergeev, for many years the deputy director of the V.A. Steklov Mathematical Institute,

A.G. Yagola, the deputy chairman of the Scientific and Methodological Council,

A.S. Sigov, academician of the Russian Academy of Sciences, the president of the Russian Technological University.

Welcoming the participants of the forum, the rector of the RUDN University, professor Vladimir Mikhailovich Filippov, noted that Lev Dmitrievich was not only a brilliant scientist and an excellent lecturer, but also an outstanding methodologist in the field of teaching mathematics.

“In the 1960s,” – said Nikolai Nikolaevich Kudryavtsev, the rector of the Moscow Institute of Physics and Technology – “the high level of mathematics teaching in our country was set by the Moscow Institute of Physics and Technology, where Lev Dmitrievich worked for over 60 years, with 36 of them as the Head of the Department of Higher Mathematics. He was elected to this position on the recommendation of academician S.M. Nikolskii”.

“Lev Dmitrievich worked for more than 55 years at the “Steklovka”, where, for decades, together with Sergei Mikhailovich Nikolskii, he led the famous weekly seminars on the theory of differentiable functions of many variables,” – said professor Armen Glebovich Sergeev. “High-school textbooks on mathematical analysis, written by L.D. Kudryavtsev,” – said the president

of the Russian Technological University Alexander Sergeevich Sigov” – are highly valued by students and teachers to this day.” Professor Anatoly Grigorievich Yagola described in detail the active work of L.D. Kudryavtsev at the Scientific and Methodological Council. More than 20 regional offices were organized, and are still operating today.

“The Scientific and Methodological Council under the leadership of L.D. Kudryavtsev worked very actively,” – emphasized V.M. Filippov – “Nowadays, methodology is of particular importance. The basic question is: what and how should be taught at schools and universities in the field of mathematics today and tomorrow, if almost everything can be quickly found on the Internet? Methodologists should say what is necessary to know in mathematics, and what is superfluous, how to teach this Queen of Sciences to physicists and engineers, physiologists and sociologists, and other disciplines on a fundamental basis. It is impossible to allow every teacher to decide in every subject what kind of mathematics is needed. It is necessary to preserve the fundamentality, but also to offer practice-oriented approaches to the presentation of material.”

The first plenary talk (presented in English) on the research of L.D. Kudryavtsev was given by Viktor Ivanovich Burenkov, professor of the S.M. Nikolskii Mathematical Institute at the RUDN University. He spoke in detail about the works of Lev Dmitrievich in the fields of topology, functional analysis, differential equations, and applied mathematics. The talk included discussion about the so-called Kudryavtsev function spaces. V.I. Burenkov highlighted some of L.D. Kudryavtsev’s achievements: Lev Dmitrievich was the author of more than 200 scientific works, was elected a corresponding member of the Academy of Sciences of the USSR in 1984, and was awarded a State Prize of the USSR in 1988 and the Blaise Pascal Medal by the European Academy of Sciences in 2004. His three-volumes Selected Works were published in 2008.

In his plenary talk, Askar Akayevich Akayev – foreign member of the Russian Academy of Sciences, who has been working for many years at the I.R. Prigozhin Institute of Mathematical Research of Complex Systems at the M.V. Lomonosov Moscow State University – presented a talk on the development of a mathematical apparatus for the future digital economy. To many, A.A. Akayev is better known as the President of the Republic of Kyrgyzstan from 1990 to 2005. The talk was co-authored by A.A. Akayev and Viktor Antonovich Sadovnichy – academician of the Russian Academy of Sciences, the rector of the M.V. Lomonosov Moscow State University.

At one of the subsequent plenary sessions Dmitrii Valerievich Treshev – academician of the Russian Academy of Sciences, the director of the V.A. Steklov Mathematical Institute – delivered a talk on one of the important directions of modern mathematical physics devoted to the study of the so-called heavy quantum particles.

More than 200 mathematicians from 20 countries discussed in detail for four days various modern topics in fundamental and applied mathematics, and also in mathematical education. The conference was attended by several academicians and corresponding members of the Russian Academy of Sciences as well as the national academies of sciences of Armenia, Azerbaijan, Belarus, Kazakhstan, Kyrgyzstan, Ukraine, and a number of world-renowned mathematicians from Austria, China, Finland, Indonesia, Italy, Japan, Poland, Sweden, and the USA.

The scientific programme of the conference covered a wide range of topics in fundamental and applied mathematics, and mathematical education. There were 7 sections in the conference, namely:

Section 1. “Theory of functions and function spaces”

Chairs: professor V.I. Burenkov (Russia), professor M.L. Goldman (Russia).

Section 2. “Differential operators and their applications”.

Chairs: corresponding member of the Russian Academy of Education N.Kh. Rozov (Russia), professor A.L. Skubachevsky (Russia).

Section 3. “Nonlinear differential equations of mathematical physics”.

Chairs: professor N.N. Nefedov (Russia), professor A.E. Shishkov (Ukraine).

Section 4. “Inverse and ill-posed problems”.

Chairs: corresponding member of the Russian Academy of Sciences S.I. Kabanikhin (Russia), professor M.V. Klibanov (USA), professor A.G. Yagola (Russia).

Section 5. “Problems of mathematical education”.

Chairs: professor M. Klakla (Poland), professor M. Mkrtchyan (Armenia), professor S.A. Rozanova (Russia), professor E.I. Smirnov (Russia).

Section 6. “History of mathematics and science”.

Chairs: professor S.S. Demidov (Russia), professor V.M. Tikhomirov (Russia).

Section 7. “Information technologies in education”.

Chairs: professor A.I. Kirillov (Russia), professor V.A. Sokolov (Russia).

In the course of the sections, specific proposals emerged on the development of research activities in the field of fundamental and applied mathematics, mathematical education and applications of information technology in the educational process.

The conference has become a good platform for the dialogue between mathematicians, for establishing new contacts, and discussing current problems and modern methods. The participants of the conference noted the good reception from the RUDN University.

Detailed information about the conference, including the list of registered participants and the programme of the conference, can be found at the conference website: ldk95.rudn.ru. A report on the work of the conference was published in the weekly newspaper “Poisk” of the Russian scientific community (no. 49 (1539), 07.12.2018, pages 12-13, in Russian). See also <http://www.poisknews.ru/theme/edu/40398/>

Vice-chairman of the conference
professor V.I. Burenkov

References

- [1] 5th International conference “Function spaces. Differential operators. Problems of mathematical education” (November 26–29, Moscow, Russia), *Eurasian Math. J.* 9 (2018), no. 1, 92 – 94.