



## 2020 Annual Activity Report

### Leonhard Euler International Charitable Foundation for Mathematics

Projects implemented by the Fund in 2020:

#### 2020

- Fourteenth Euler Olympiad for Teachers of Mathematics in St. Petersburg and Leningrad Region
- Rokhlin Stipends for Young Mathematicians
- Program of complementary education of talented schoolchildren “Formula of Unity”
- Program for supporting mathematicians and their families
- Stipends for the 1st year students of St. Petersburg universities specializing in IT
- Mobile modular workshop



## Fourteenth Euler Olympiad for Teachers of Mathematics in St. Petersburg and Leningrad Region

The competition is organized by the Government of St. Petersburg (who donated RUR 200 000 for the winners award), the Government of Leningrad Region (RUR 133 000 for the winners award), Leonhard Euler International Charitable Foundation for Mathematics (RUR 1175 for the organizing committee work related expenses), Educational Committee of St. Petersburg Government, St. Petersburg Department of V.A. Steklov Mathematical Institute, St. Petersburg Academy of Post-Graduate Pedagogical Education.

There were two stages of the Competition: offsite round (Dec 31, 2019 – Apr 4, 2020) and online round (Nov 22, 2020). 22 math teachers from St. Petersburg and Leningrad region took part in the competition. The competition winners were awarded with financial grants and diplomas within the St. Petersburg Government meeting (9 winners on Dec 24) and Leningrad Region Government Meeting (6 winners). The gratitude to the President of the Euler Foundation S.V.Vostokov was announced at the Leningrad Region Government Meetings on Dec 3.





## V.A. Rokhlin grants for young scientists

Students, PhD students and young scientists (younger than 30 years by the date of submissions) can become owners of the Rokhlin's grants. 7 young mathematicians received the grant in 2020: 10-15 thousand rubles per month. They have successfully completed their projects and prepared scientific publications on their basis.

For more information, please refer to: [https://www.pdmi.ras.ru/ru/rokhlin\\_grant/win2019.html](https://www.pdmi.ras.ru/ru/rokhlin_grant/win2019.html) (article in Russian).



### Formula of Unity program

The Formula of Unity program is a socio-pedagogical educational program. The program aims to achieve the goal of creating and developing accessible and educational environment comfortable for gifted children.

Tasks:

- Development of a methodology for organizing a multidisciplinary camp based on the world-leading experience of the Leningrad (St. Petersburg) system of work with gifted children in circles and summer camps and socio-technical potential methods of collective creative activity of I.P. Ivanova.
- Practical exchange of experience with teachers from other countries working with gifted children.
- Development of abilities and additional education of schoolchildren from rural areas and small towns, where work with students interested in mathematics and other sciences is not carried out effectively enough.
- Inclusion of schoolchildren in research work, preparation them for participation in scientific conferences.
- Students' acquisition of communication skills, experience of creative work in a team, experience of building relationships based on mutual understanding and joint creativity.

The focus of this program is done on the complementary education of school students from countryside and small towns where they have less opportunity to satisfy their interest to science. The central element of the program is a network of seasonal educational camps in several regions of Russia. Olympiads, competitions and online courses in math and others sciences are organized over the country and abroad. Unfortunately the pandemic has imposed some restrictions on our activity.

6 shifts of ['Formula of Unity'](#) camp was organized including one on-line shift:





New year shift in Garbolovo(Dec 30-Jan 9), Winter shift in Gelendzhik (Jan 3-9), Spring shift in Garbolovo (March 22-28), On-line shift(July 20-24), Socio-technical shift (Aug 14-26), Autumn shift in Garbolovo (Oct 25-31).



'Third Millennium'/'Formula of Unity' international olympiad on mathematics, physics, chemistry, and English were organized

The following online courses were organized: mathematics, physics, chemistry, astronomy, anatomy, literature and others. UniversUm class for 1-3 years school students and Teachers academy continued their work. The work on creation of open online courses started.

The olympiads on mathematics and physics were included to the List of Olympiads of the Ministry of Education and Science of Russia (2nd and 3rd level, respectively). More than 5000 students from 30 countries took part in the Olympiad on mathematics in 2020/2021.

In 2020 the Information system "Formula of Unity" was developed and launched, providing a convenient interface for the participants of the Olympiad and members of the jury, participants, teachers and administrators of circles, organizers of camps, participants in open online courses.

Formula of Unity also participates in the organization of St. Petersburg mathematics competition for the school students of 1-3 years. Circa 20 000 students took part in the competition in 2019/2020.

The project "Development of the socio-pedagogical program" Formula of Unity" was supported by the grant from the President of the Russian Federation for the development of civil Society provided by the Presidential Grants Fund (№ 20-1-003819).



## Program for support of mathematicians and their family members

In 2020 was organized a support of Andrey Markov (22 060 RUR donated by the mentees and co-workers of Andrey Markov Sr. – E. Nogina and S. Artemov).

## Dell First Year Student Grant program

The purpose of the program is to increase students' interest in the specialties "Mathematical provision and administration of information systems" and "Software engineering".

In 2020 St.-Petersburg Dell Technologies Development Center as usual highlighted funds for scholarships to the most successful at the end of the 1st course students of specialties "Mathematical support and administration". The universities independently chose the best students and formed lists of nominees.

30 sophomores were awarded with the charity grant provided by Dell Technologies. The key goal of these grants is to support desire to learn software engineering and computer science among St. Petersburg students. The amount that was donated for further distribution between 30 top sophomores of top 6 universities was 1 000 000 RUR.

## Mobile modular workshop

In modern school education, there is a deficit in the availability of handicraft labor that develops fine motor skills, coordination, imaginative and visual-effective thinking, inventiveness and ingenuity. Opportunities for clubs and studios for additional education are not always available for the audience of children with disabilities and from low-income families. The project is aimed at replenishing the spectrum of the educational environment for children with disabilities, as well as for small groups of children of 7-14 years old who are deprived of access to such workshops due to their remoteness or financial inaccessibility for the family.

Each organization participating in a mobile workshop has one of the technological environments for work stored and deployed for the duration of the class. After 6 weeks (one module), this environment is sent to another place, and it is replaced by another, in a circle. The workshop is divided into several places (organizations). On the one hand, it does not take up much space in each organization, on the other hand, it is used simultaneously by several groups of children. The project was supported by a grant from the President of the Russian Federation for the development of civil Society provided by the Presidential Grants Fund (number 21-1-005542).