

## **REGULATIONS ON THE CONTEST FOR RESEARCH PROJECTS OF THE MATHEMATICAL CENTER IN AKADEMGORODOK**

### **1. Objectives of the contest**

The main objectives of the contest for research projects of the Mathematical Center in Akademgorodok are:

1. To support and develop new relevant research topics in mathematics and mathematical problems in related areas.
2. To develop networking cooperation in mathematics and mathematical problems in related areas, to deepen integration of research carried out in Akademgorodok into the international network of mathematical research, to develop Akademgorodok as a significant node in the international network of mathematical research.
3. To involve early-career researchers in new topics, to attract undergraduate/graduate/postgraduate students to work on new research topics.
4. To support young leaders in the field of mathematics.

### **2. General terms**

The research project of the Mathematical Center in Akademgorodok is aimed at conducting research in one of up-to-date branches of mathematics and/or mathematical problems in related areas.

#### **2.1. Team of the project**

There are three types of members in the team of the project:

- **Leading researcher**

This category includes well-known specialists in the scientific field of the project which determine the trends in the development of this research field. Among other, this category includes the heads of existing international scientific teams, whose scientific activities are related to the project.

Belonging to this category will be determined by the international expert council of the Mathematical Center in Akademgorodok based on the assessments of international reviewers (see Section 4 of this regulations). The reviewer evaluation is complex, i. e. it takes into account both the significance of the leading researcher himself and achievements of his research group (in case the leading researcher is the head of an international research group).

Formal criteria may be used to determine belonging to this category (H-index according to Web of Science/Scopus/AMS is at least 10, participation as an invited speaker at international/European mathematical congresses, international scientific awards etc.).

- **Researcher**

This category includes specialists in the scientific field of the project (including postdocs). Postdoc refers to a young researcher (under 36 years old) who got a PhD degree not earlier than five years before applying for a postdoc position.

- **Undergraduate/graduate/postgraduate students**

This category includes undergraduate, graduate and postgraduate students of Novosibirsk State University, as well as postgraduate students of the research institutes of the Siberian Branch of the Russian Academy of Sciences, who are beginning to conduct research in the scientific field of the project.

The project team leader who can be either a «leading researcher» or a «researcher» should be identified among the project team members. The project team leader is responsible for the high-quality and timely implementation of all stages of the project, and provides reports on the work of the project team to the office of the Mathematical Center in Akademgorodok. In addition, the project team leader takes part in the meetings of the executive committee of the Mathematical Center in Akademgorodok.

## **2.2. Funding**

The amount of funding allocated for a single project cannot exceed 15 million rubles per year. Allocated funds can be used for the following costs.

- Salaries and bonuses for the project team members.
- Travel expenses of the project team members (including transportation, accommodation, conference registration fees etc.).
- Travel expenses of specialists invited by the project team from other organizations to Novosibirsk (including travel expenses, accommodation etc.).
- Expenditure on equipment purchase.
- Expenses for organizing of conferences and other events on the topic of the project.
- Other payments in coordination with the office of the Mathematical Center in Akademgorodok.

Payment of salaries to members of the project team is made

- in full, provided that the team member is in Novosibirsk;
- in part, provided that the team member is outside of Novosibirsk.

At the end of every year, each project team member can be paid by a bonus from the project budgets. The salaries and bonuses are decided by the project team leader in coordination with the office of the Mathematical Center in Akademgorodok.

In addition to financial support, the Mathematical Center in Akademgorodok is to provide:

- Work space for each project team member in one of the institutions included to the consortium, on the basis of which the Mathematical Center in Akademgorodok is created (Novosibirsk State University, Sobolev Institute of Mathematics).
- Necessary conditions for organizing scientific events of the project team (classrooms, equipment etc.).

- Access to information resources of the institutions named above for each project team member (library materials, international bibliographic databases, the Internet etc.).
- Access to active scientific seminars held in the institutions named above, for each project team member.
- Access to the interaction with undergraduate/graduate/postgraduate students of Novosibirsk State University and research institutes of Akademgorodok to attract them to the activities of the project group.

### **2.3. Reporting**

The maximum duration of the projects is 3 years; the teams are scheduled to report their quarterly and annual results in compliance with the reporting regulations. The annual reports will go through the independent international examinations. Following these examinations the International Expert Council of the Mathematical Center in Akademgorodok makes a decision on continuation or closure of the project.

Each report should include:

- a brief description of the scientific results obtained during the reporting period which reflect the importance for the research area; the presentation should be understandable to a wider range of mathematicians, including those who are not specialists in the field of the project;
- a list of works submitted for printing and a list of published works for the reporting period;
- information on the activities carried out by the team during the reporting period (business trips, invitations of experts, organization of conferences, seminars etc.), including contents of activities, the results of their implementation and justification for their importance.

All works published or submitted to print during the lifetime of the project must mention being supported by the Mathematical Center in Akademgorodok (the exact wording will be given in the agreement on the implementation of the projects), as well as the affiliation of at least one of the mentioned above institutions in the consortium (Novosibirsk State University, Sobolev Institute of Mathematics) where the results were obtained. The scientific publications of the project team members devoted to the topic of the project cannot be supported by any budgetary funding sources from the Russian Federation except for the Mathematical Center in Akademgorodok. Within five years after the completion of the project, the project team leader has to inform the office of the Mathematical Center in Akademgorodok about the publication of articles included in the report on this project.

## **3. Criteria for the competitive application**

### **3.1. Team of the project**

The project team should consist of:

- From two to four leading researchers.

At least one of these researchers must be external to the research and educational institutions of Novosibirsk (that is, within five years prior to the date of application this researcher must not have a primary employment at any research institute or university of Novosibirsk).

The inclusion of every person in the category of the leading researchers must be substantiated. If the leading researcher is the head of an existing international research team whose research activities are related to the project, the achievements of the team led by the leading researcher may be considered as those of that researcher.

- At least two researchers.

At least one of these researchers must be a postdoc selected in an international competition and who have not been affiliated before with any research institute or university of Novosibirsk. Postdocs are hired for one year with the possibility of an extension, but no longer than the project duration.

The total number of «leading researchers» and «researchers» should not exceed eight.

- At least two undergraduate/graduate/postgraduate students of Novosibirsk State University or postgraduate students from the research institutes of the Siberian Branch of the Russian Academy of Sciences.

The application has to contain the rigid list of leading researchers in the team of the project. Also the mechanisms and the timetable for attracting students, graduate students and postdocs have to be in the application. The total number of young project members (under the age of 39 years inclusive) should be more than 50% throughout the entire duration of the project, that is, every year the number of young researchers who participated in the project should be more than 50%.

External leading researchers should spend at least six weeks in Novosibirsk annually. If the leading researcher is the head of an existing research team whose research activities are related to the project topic, then the members of the team headed by the leading researcher can participate in the face-to-face work of the project team. In this case, the time spent in Novosibirsk by the leading researcher must be at least two weeks, and the total time spent in Novosibirsk by the leading researcher and members of his international research team must be at least six weeks.

The application must include the program of the face-to-face work and the distance work of each leading researcher in the project. If the leading researcher is the head of an existing research team whose scientific activities are related to the project, then the application must specify the members of the team headed by the leading researcher with whom the members the project plan to work face-to-face (in Novosibirsk). In addition, approximate dates of this face-to-face work should be indicated.

The rest of the project team members must spend at least eight months in Novosibirsk annually.

Throughout the lifetime of the project, all members of the team of the project must be employed in one of the institutions included in the consortium, on the basis of which the Mathematical Center in Akademgorodok is created (Novosibirsk State University, Sobolev Institute of Mathematics).

### **3.2. Scientific proposal**

Scientific proposals are invited for research programs in any of up-to-date branches of mathematics and mathematical problems in related fields. Scientific proposal must be clear as to the relevance of the project and its aims. Also, the scientific proposal must include a detailed work schedule for the first year of the project. A detailed work schedule for each subsequent year is to be provided alongside a report for the previous one. The proposal should include obligations to publish results of research in leading

international journals from the Q1/Q2 quartile of JSR (Web of Science) or SJR (Scopus) index (journal ranking is considered as it is at the time of submission of the article; every project should provide at least 15 publications in total in three years, at least five of which should appear in journals from Quartile 1). The quartile of the journal is understood as the maximum quartile by WoS or Scopus.

### **3.3. Educational proposal**

The competitive application must include plans for the conduct of educational activities with students, who not necessarily belong to the team of the project, which might be as follows:

- teaching advanced courses (including remotely);
- scientific advising of undergraduate/graduate students;
- taking part in initiating and or managing students projects;
- conducting scientific seminars.

Leading researchers external to Novosibirsk organizations must necessarily participate in educational activities. If the leading researcher is the head of an existing research team whose research activities are related to the subject of the project, instead of this leading researcher, members of his international team may participate in the educational activities.

The application must contain an approximate program of interaction of leading researchers participating in the project with undergraduate/graduate students, both face-to-face and remotely.

### **3.4. Extras**

Additionally, in the application, plans for participation in other activities supported and organized by the Mathematical Center in Akademgorodok can be indicated. The group may wish to:

- organize conferences/workshops;
- take part in conferences/seminars/workshops held by the Mathematical Center in Akademgorodok;
- be involved in other research projects implemented by the Mathematical Center in Akademgorodok, including interdisciplinary and/or in partnership with industry/business;
- present popular scientific lectures;
- work with schoolchildren.

## **4. Expert assessment**

The regulations on evaluation of the projects and reports are part of the general regulations on expert assessment of competitions held in the Mathematical Center in Akademgorodok. The results of the evaluation must then be approved by the International Expert Council of the Mathematical Center in Akademgorodok.