

International Conference “CONSCIOUSNESS 2024”

August 26-30, 2024 Russian Academy of Sciences with the participation of the national academies of sciences of Belarus, Kazakhstan, Uzbekistan, scientific centers of Russia, Belarus, Kazakhstan, Uzbekistan, China, India and other countries within the framework of the section of the World Congress “Systems Theory, Algebraic Biology, Artificial Intelligence : mathematical foundations and applications” (hereinafter referred to as the Congress) The forum "Consciousness: from problem formulation to mathematical models" is held

CONFERENCE "CONSCIOUSNESS-2024".

All conference sessions are held in person with the ability to connect via Zoom and broadcast on YouTube at the Krasnovidovo Rest House, located near the city of Mozhaik on the banks of the Mozhaik Reservoir - one of the most picturesque places in the Moscow region.



Accommodation for participants in the international conference “CONSCIOUSNESS 2024” is provided at the Moscow State University holiday home “Krasnovidovo”, located in a picturesque green area on the shore of the Mozhaik Sea. Participants are accommodated in 2 buildings: yellow and red in single, double and triple rooms.



Single Room



Double Room



Refrigerator, etc.



Table in the room



Bathroom



The cost of accommodation, including three meals a day, for conference participants is 2,400 rubles per day per person. For booking, payment is made in advance; as usual, payment is made

during the gathering of participants at the Physics Department of Moscow State University on the day of departure; all participants must (for check-in, etc.) have a passport with them.

When registering, please indicate the days on which you plan to attend the conference, and also take into account that the bus departure from the Physics Department of Moscow State University is scheduled for 08/25/24 at 14-00. In case of independent arrival at the Holiday House, payment for accommodation is paid to the cashier of the Holiday House on an individual basis. Mandatory, both for speakers and for participants without a report, payment for a collection of abstracts, materials (issued to participants present at the conference, including those who do not give a report) and their electronic version is paid in advance and amounts to 3000 rubles. (for undergraduate and graduate students 1,500 rubles). For immediate questions regarding booking and payment, please contact the Conference Executive Organizing Committee listed below.

Free buffet service is available to all conference participants (including those not planning to stay). The meeting rooms and the Organizing Committee are located on the 3rd floor of the yellow building.

Entrance to the building



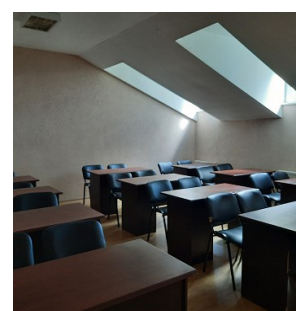
Foyer



Main hall



Section rooms



Conference bus

Participants of the conference, held at the Krasnovidovo Rest House, are provided with buses from the Faculty of Physics of Moscow State University to the Rest House on the day of arrival and back to Moscow on the day of departure. Departure from Moscow from the Faculty of Physics of Moscow State University on August 25 at 14-00 (it is advisable to arrive an hour before departure, take a seat on the bus, pay for accommodation in the Rest House).

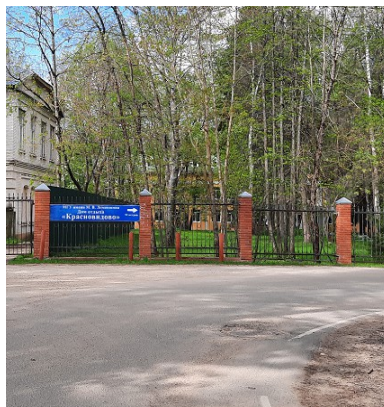
If you wish, you can get to the Holiday Home on ***your own***:

from the Belarusian railway station in Moscow by train to Mozhaisk (trains, including Lastochka, depart at intervals of 1-1.5 hours, the journey takes 1-2 hours), then by autoline or bus from the bus station, which is located nearby (70 m, crossing the bridge) with the railway station for the arrival of trains to Krasnovidovo, stop "Zoo" (15 minutes on the way); immediately ahead along the road from the stop, after 20 m turn left and then straight ahead, without turning, on foot for 10 minutes, you will see

Supermarket



Right turn



Checkpoint (20 m from the turn)



Among the attractions of the Moscow State University Holiday House "Krasnovidovo" we note the unique Artistic composition "Meeting of the headquarters of the Western Front"



Procedure for preparation and conduct

1. Submission of abstracts by August 1, 2024 via the Congress and Conference website <https://congrsysalgbai.ru/> (format requirements are indicated on the website, vol. 1-3 pages, etc.).

2. After receiving the abstracts, the Organizing Committee considers and makes a decision (approximately within a week from the receipt of the abstracts) on the participation of the abstract authors in the Conference and informs them of its decision.

3. Within a week from the moment of receiving a positive decision from the Organizing Committee, participants make a mandatory payment for the collection of abstracts, materials (issued to participants present at the conference) and their electronic version, which amounts to 3000 rubles. (for undergraduate and graduate students 1,500 rubles). Information about the details and details of the payment procedure is provided by the Executive Organizing Committee of the Conference (participants are asked to quickly decide on point 1, in view of issues of suitable accommodation in Krasnovidovo, choosing and booking a room number, etc.).

4. In addition to theses, speakers prepare presentations of their reports, which are reproduced during the report on appropriate equipment.

5. The theme of the Conference "CONSCIOUSNESS 2024" continues and develops the theme of the Forum "Consciousness: from problem formulation to mathematical models" held on June 26-30, 2023 within the framework of the Congress: detailed information is available in the Collection of Congress materials published by the Russian Academy of Sciences, which can be downloaded from the Congress website link

https://congrsysalgbai.ru/media/files_to_download/%D0%91%D1%83%D0%BA%D0%BB%D0%B5%D1%82-%D0%BE%D0%B1%D0%BB%D0%B6-%D0%BF%D1%80%D0%B8%D0%BB%D0%BE%D0%B6_9eyLnQk.pdf

This Collection also contains information about the Organizing Committee of the Congress, the Executive Organizing Committee of the Congress and the Conference, the topics of the sections, including the Forum section "Consciousness: from problem formulation to mathematical models", the decisions of the Congress, including the holding of the Conference "CONSCIOUSNESS 2024" and other detailed information that participants need to know.

6. The "CONSCIOUSNESS 2024" conference is being held on the basis of M.V. Lomonosov Moscow State University, one of the participants and organizers of the Congress. Faculty of

Physics, Moscow State University. M.V. Lomonosov and his Department of Biophysics provide the relevant part of the organization of the Conference, including the bus connection with the Recreation House of M.V. Lomonosov Moscow State University "Krasnovidovo".

The Executive Organizing Committee of the Conference has been formed, which includes members of the Organizing Committee and the Secretariat of the Congress.

The co-chairs of the Executive Organizing Committee of the Conference, where you can contact for details of the preparation and holding of the Conference, are:

Tverdislov Vsevolod Aleksandrovich, Doctor of Physical and Mathematical Sciences, Head. Department of Biophysics, member of the Congress Organizing Committee (general issues), tverdislov@mail.ru

Mazurov Mikhail Efimovich, Doctor of Physical and Mathematical Sciences, member of the Organizing Committee of the Congress (issues of publishing abstracts, placement in Krasnovidovo), mazurov37@mail.ru

Vityaev Evgeniy Evgenievich, Doctor of Physical and Mathematical Sciences, member of the Organizing Committee of the Congress (general issues), vityaev@math.nsc.ru

Ryabchikova Natalia Afanasyevna, Doctor of Biological Sciences, member of the Congress Organizing Committee (issues of publishing abstracts, placement in Krasnovidovo), nat@guesstest.ru

Tolokonnikov Georgy Konstantinovich, Ph.D., Head of the Congress Secretariat (general issues of the Conference and Congress), admcit@mail.ru

The following directions have been identified

Theories of consciousness	Neurophotonics and optogenetics for consciousness research
Experimental Evidence on Consciousness	Medical and social aspects of consciousness
Consciousness in artificial intelligence	Social consciousness, its types
Strong AI and artificial consciousness in engineering solutions	Nonlinear dynamics and information systems
Formation of consciousness in biological and artificial intelligence	The list is being formed.
Neuroinformatics methods for studying consciousness	

Mini-courses of lectures

The CONSCIOUSNESS 2024 conference has a component similar to the form of a summer scientific school.

Every day, from 16-00 (early on the last day) three lectures are held, the first by S.K. Sudakova, the second by E.E. Vityaeva. and the third - Tolokonnikova G.K., lectures for 30-40 minutes, 5-10 minutes for discussion.

Sudakov S.K. "Functional systems of P.K. Anokhin - K.V. Sudakova, complex structure of the acceptor of the result of an action, system quanta, interaction of functional systems"

Vityaev E.E. "Semantic probabilistic inference, modeling of functional systems based on it, integrated information according to Tononi and information non-reductionist theory of consciousness, ensuring maximum accuracy of reality forecast"

Tolokonnikov G.K. "Categorical systems and the category model of neural networks, neural information networks according to Yu.I. Manin, covering the theory of consciousness according to Tononi"

The minicourse program is being formed.

The publications of the Congress, including the CONSCIOUSNESS 2024 Conference, are endowed with the RAS logo (300th anniversary of the RAS)



The conference program includes the following sections
Symposium "*Medical and social aspects of consciousness*", organized by



Institute for Advanced Brain Research
Lomonosov Moscow State University

the section was organized with the participation



Academician N.N. Burdenko Neurosurgery Center



N.A. Alekseev Psychiatric Clinical Hospital No. 1



Neuroscience Research Center

coordinator *Ushakov Vadim Leonidovich* (tiuq@yandex.ru)

section "*Strong AI with elements of artificial consciousness in engineering solutions*",
organized by



Russian Engineering Academy, section
"System approach: engineering, industry, agro-industrial
complex, artificial intelligence"

chaired by Vice President of RIA Academician of the Russian Academy of Sciences and RIA
Chernoivanov Vyacheslav Ivanovich

***Within the framework of the Section, the General Meeting of the Branch (section) of RIA
"System approach: engineering, industry, agro-industrial complex, artificial intelligence" is
held.***

The meeting is led by the Academician-Secretary of the Department, Academician of the
Russian Academy of Sciences and RIA Chernoivanov V.I., Scientific Secretary of the Department,
Corresponding Member. RIA Tolokonnikov G.K.

The agenda is formed with the participation of members of the Branch, including colleagues
recommended for election to the RIA, the final text of the agenda is sent out on August 15, 2024.

book presentation "Fundamentals of the theory of biomachine systems" Chernoivanov V.I.,
Tolokonnikov G.K. by its authors (the book file can be received by e-mail by contacting the
Organizing Committee; to receive a printed copy of the book, you must pay for it before the start of
the conference)

section "Methodological aspects of forecasting"

Section co-chairs:

Ryabchikova Natalia Afanasyevna, Doctor of Biological Sciences; Innovation center Skolkovo, Moscow State University. M.V. Lomonosov, e-mail: nat@guesstest.ru

Godarev-Lozovsky Maxim Grigorievich, head of the Laboratory-Department of "Forecasting Research" of the Institute of IIPV (Moscow - St. Petersburg), Doctor of Philosophy (PhD), corresponding member of PANI, e-mail: godarev-lozovsky@yandex.ru Tel. 8 (950) 038 57 90. Candidate of Philosophical Sciences.

Scientific secretary of the section

Poltarakova Varvara Aleksandrovna, master, e-mail: v.poltarakova@gmail.com

Section moderator

Petrunya Oleg Eduardovich, candidate of philosophical sciences.

Areas of the section's work

Forecasting as one of the types of intellectual activity in a broad sense is the ability to discover factors and predict the main trends that underlie fundamental science and influence its development. There is a need to identify areas for expanding knowledge and assess the priority of the main areas of science. One of the main directions can be considered the development of a methodology for philosophical forecasting, namely: finding means and resources for the development of science, predicting the consequences of this development, and identifying its long-term forecasts. Of great importance for the success of results in any field is the determination of a person's intellectual abilities to make adequate decisions in a problem situation.

For this purpose prof. ON THE. Ryabchikova at Moscow State University named after M.V. Lomonosov has developed a computer complex of psychological testing "Forecast 2.5", which makes it possible to determine a person's cognitive abilities. Such properties of the brain as consciousness and thinking make it possible to predict human behavior in any, and especially important, problem situation that requires quick and adequate decision-making.

The next event within the section was organized on the basis of "Forecast 2.5".

Testing the cognitive abilities of participants (of course, those who wished to take the test!) of the CONSCIOUSNESS 2024 conference.

Detailing the topic of the section involves the following series of questions.

What systemic factors influence science and what is the role of the scientist's consciousness in its progress?

What are the specifics of such a forecasting object as science?

How to determine the forecast time horizon?

What are the forecast alternatives?

How to combine search and target approaches to forecasting?

In what areas of fundamental science are breakthroughs possible and where can they be used?

What are the limitations for the development of science?

What is the active role of the scientific community?

How to achieve completeness of predictive models and continuity of forecast?

How to realize independence and complexity in the analysis of information about the future?

How to practically predict man-made and natural disasters, as well as carry out appropriate monitoring?

How and by what criteria should forecasting experts be selected?

What radical changes are coming in fundamental science?

See the work of the section "Methodological aspects of forecasting", conducted by the Laboratory-Department of Forecasting Research of the Institute of IPV (World Congress "Systems Theory, Algebraic Biology, Artificial Intelligence: Mathematical Foundations and Applications", June 26-30, 2023) <https://www.youtube.com/watch?v=wyqg7ptHep8&t=4s>

round table "Philosophical ethics, science, production, agro-industrial complex: artificial societies, consciousness, intelligence" chaired by

Vice President of RIA Academician of the Russian Academy of Sciences and RIA **Chernoivanov Vyacheslav Ivanovich**

Chairman of the National Research Institute of Fine Arts of the Russian Academy of Sciences, Academician of the Russian Academy of Sciences **Vladislav Aleksandrovich Lektorsky**
round table organized



Federal State Budgetary Educational Institution of Higher Education
"Samara State Technical University"



Russian Engineering Academy, section
"System approach: engineering, industry, agro-industrial complex,
artificial intelligence"



Scientific Council of the Russian Academy of Sciences on the
methodology of artificial intelligence and cognitive research
(sections of Mathematical Biology and Bionics)



Institute of Scientific Information for Social Sciences RAS
(INION RAS)

Co-leaders and moderators of the round table

prof. **Shestakov Aleksandr Alekseevich**, shestakov.aa@ssau.ru,

prof. **Vladislav Olegovich Sheleketa**, vladshelo@mail.ru,

Doctor of Philosophy **Malyshev Vladislav Borisovich**, vlmaly@yandex.ru,

Ph.D. **Elena Aleksandrovna Gavrilina**, gavrilina@inion.ru

prof. RAS **Elena Aleksandrovna Dergacheva**, eadergacheva2013@yandex.ru

As part of the round table, the founding meeting of the opening of the "International Scientific Center for Comprehensive Socio-Humanitarian Expertise of Innovative Technologies" is taking place; the expertise is based, among other things, on the use of artificial intelligence. The leaders of the initiative group will make a detailed report and comments, the Conference will make an appropriate decision based on the results of the Round Table and the founding meeting. Colleagues and conference participants are invited to participate in discussions at the Round Table and work at the Scientific Center.

cultural program includes

- boat trips with descriptions of the sights and history of the region, coordinators **Sergei Vladimirovich Garbuk** (garbuk@list.ru) and prof. **Evgeniy Antonovich Yumatov** (eayumatov@mail.ru).

- **friendly dinner** on August 28 from 20-00

The program is being formed.

Postal address of the Executive Organizing Committee of the Conference: 119992, GSP-2, Moscow Lenin Hills, Moscow State University. M.V.Lomonosov Building 1, building 2, Faculty of Physics, Department of Biophysics, room: 5-67 (see also <http://biophys.phys.msu.ru/index.php/ru/>)

We are waiting for you at the CONSCIOUSNESS 2024 Conference!