



Newsletter

16th INTERNATIONAL CONFERENCE on

MECHANICS, RESOURCE, AND DIAGNOSTICS OF MATERIALS AND STRUCTURES

in memoriam of Professor Eduard Gorkunov

Location: IES UB RAS

Address: 43 Komsomolskaya St., Ekaterinburg, Russia

Event date: May 16–20, 2022

Event languages: Russian, English

Dear colleagues,

You are welcome to participate in the 16th INTERNATIONAL CONFERENCE on MECHANICS, RESOURCE, AND DIAGNOSTICS OF MATERIALS AND STRUCTURES following the tradition of the conferences on *Mechanics of Microinhomogeneous Materials and Fracture* and *Resource and Diagnostics of Materials and Structures* held since 2001. The event will be held in memoriam of Professor E. S. Gorkunov, Full RAS Member.

Professor Eduard Gorkunov was a prominent expert in the development and design of magnetic, electromagnetic, and electromagnetic-acoustic methods of nondestructive testing and means for estimating the actual state of products and structural components and evaluating the service life of crucial objects. He headed the IES UB RAS for more than two decades and made a considerable contribution to the progress the institute has made by now. Professor E. S. Gorkunov came to the position of director in 1994 under conditions of severe financial and organizational difficulties, and he successfully guided the institute, between 2015 and 2020 as its research supervisor. He made a fundamental contribution to the formation and development of the lines of research that build the image of the institute even now. He always managed to combine fruitful research activity and organization of science at the highest and most important positions. From 1995 Prof. Gorkunov was deputy chairman of the Ural Branch of the Russian Academy of Sciences. He had a great experience of international scientific contacts, and he was a full member of Academia NDT International, honorary member of the Bulgarian and Israeli Societies for Nondestructive Testing.

The conference will host the 10th Russian conference school for young sciences on Diagnostics and Mechanics of Materials.

The goal of the conference is to encourage scientists working in mechanics of materials, materials science, and nondestructive testing, as well as industrial specialists, to solve scientific and applied problems.

CONFERENCE SCOPE

The scope includes the following priority areas of the development of basic and applied research in the field of materials, such as:

- ◆ new methods for studying and predicting the useful life of machines and structures during their production and operation with the application of a complex approach to estimating the current state of structural and functional materials in terms of nondestructive testing, materials science, and mechanics;
- ◆ methods for the use of the results of nondestructive testing and materials science analysis in models of mechanics intended for predicting the useful life of materials and structures;
- ◆ state-of-the-art technologies of design, production, processing, and testing of materials aimed at increasing the level of the functional properties, durability, reliability, and survivability of machine parts and structural components used under extreme conditions;
- ◆ interdisciplinary approach to studying advanced materials with a multilevel hierarchical structure for new technologies and reliable structures;
- ◆ integrated research and prediction of the lifetime of biological objects and living organisms with the application of nondestructive testing, materials science, and biomechanics.

SECTION 1. Mechanics of damage and fracture

SECTION 2. Structural aspects of deformation and fracture

SECTION 3. Inspection and diagnostics of materials and structures

SECTION 4. Materials with a multilevel hierarchical structure

SECTION 5. Modeling of materials with a multilevel hierarchical structure

SECTION 6. Physical methods of diagnostics and material science in medicine

SECTION 7. Mechanics of fluids and gases in engineering and living systems

Organizers:



Ministry of Science and Higher Education of the Russian Federation, Russia



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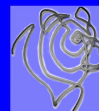
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**Current information on
publication:**

WhatsApp group



KEY DATES

Participant registration: **before 1 April, 2022**
Material submission: **before 15 April, 2022**
Admission fee transfer: **before 30 April, 2022**

PARTICIPANT REGISTRATION

Online participant registration at the conference website
<http://www.imach.uran.ru/conf2022/>

PAPER PRESENTATION

The conference activities will consist of plenary and sectional sessions, as well as poster presentations. Invited speakers will lecture at the plenary sessions.

Plenary presentation time: 30 min.

Sectional presentation time: 15 min.

Poster presentations: A1 posters or digitized as jpeg or pdf, sized at most 10 MB

ADMISSION FEE

- in-person participation: **6000 RUB**
- online: **2000 RUB**
- for undergraduates and postgraduates: **2500 RUB**

The banking details for the fee transfer are found at the conference website.

The fee includes:

for in-person participation: participation in the sessions, participant's kit, coffee breaks;

for participation in absentia: online participation in the sessions, collection of abstracts.

PUBLICATION

To participate in the conference, please send your abstracts in Russian or English at the conference email before **15.04.2022**. The abstract is to contain 1000 to 1500 characters, including spaces. It must not contain figures, tables or references. See the conference website for an example of abstract execution. According to the results of considering the abstracts, the Organizing Committee will recommend participants to publish papers on the topics within the conference scope in a special issue of the journal of *Procedia Structural Integrity* indexed in Web of Science and Scopus; the full papers will be accepted before **15 July, 2022** (publication will require payment, please pay attention to the cost). All papers are to be reviewed. Previously published papers will not be accepted.

The Organizing Committee arranges a contest for young scientists participating in the conference. To participate in the contest, please submit a manuscript of at least 7 pages to be published in the journal of *Diagnostics, Resource and Mechanics of materials and structures* (DRaM). The authors are welcome to submit papers both on the subjects of their presentations and on other subjects within the scope of the journal. The manuscripts must follow the requirements of the journal, and they are to be uploaded to the personal account of the website dream-journal.org before **15.04.2022**. According to the results of reviewing, the young scientists whose manuscripts will be accepted for publication **will be charged no admission fee**.

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