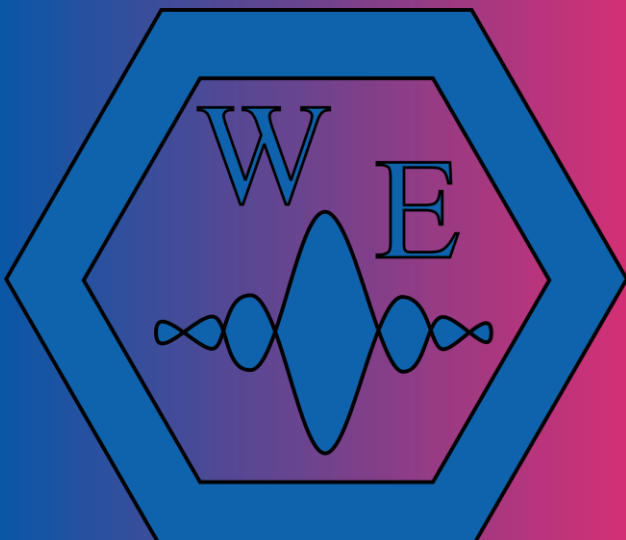


St. Petersburg State University of  
Aerospace Instrumentation  
(SUAI)

XIV International Conference  
“Wave electronics and its applications in  
information and telecommunication  
systems”

St. Petersburg, Russia

31 May – 4 June 2021



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About the Conference

Wave electronics and infocommunication systems are the most modern and significant fields of science and technology today. The organization of these types of international scientific conferences helps to identify priority fields of scientific research, increase the level of engineering and scientific training, intensify research in these fields and, thereby, increase the competitiveness of Russian developments.

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## Key Dates

February 1, 2021 – pre-registration.

March 16, 2021 – paper submission deadline.

April 06, 2021 – end of the registration.

## Conference Fee

The participation in the work of the plenary session, section sessions and round tables is free. For publishing the papers in IEEE Conference Publication Program with the indexation in the Web of Science Core Collection or Scopus must be paid \$ 300.

Accommodation, meals, and excursions must be paid separately.

## Additional information

The official languages of the conference are Russian and English.

Types of presentations are plenary (up to 20 minutes), oral (up to 15 minutes), and poster. The organizing committee reserves the right to make a final decision on the type of presentation.

If you need to get an official invitation to the conference, please contact us via e-mail: [weconf@weconf-guap.ru](mailto:weconf@weconf-guap.ru).

## Conference sections

### Acoustooptics

The results of current and promising scientific research on the solution of the problems of the interaction of optical and sound waves, the results of research in the fields of knowledge related to acousto-optics, as well as the results of the development and research of instruments using acousto-optical interaction are presented. A variety of applications of acousto-optic devices are made possible by the versatility of the acousto-optic effect, with which it is possible to effectively manipulate all the parameters of an optical wave. Acousto-optic devices make it possible to control the intensity of laser radiation, the position of the optical beam in space, the polarization and phase of the optical wave, as well as the spectral composition and spatial structure of the optical beams. A significant place is given to the development of new materials for acoustooptics.

### Acoustoelectronics

The results of current and promising scientific research on solving the problems of applying the effects of interaction of optical radiation with matter, the results of research in areas of knowledge adjacent to acoustoelectronics, as well as the results of the development and research of devices using elements or nodes of optoelectronics used to convert optical radiation into electrical signals and vice versa are presented. A significant place is given to the development of new materials for acoustoelectronics.

### Methods and devices of information processing

The most important issues of the theory of optical imaging, coherent optics, and holography, taking into account the current achievements of scientific and technological progress are considered. Signal processing systems both in the radio and in the optical range, imaging, elements of Fourier optics, the principles of spatial optical filtering are discussed. The range of issues under consideration also covers the following issues: the design and operation of modern filters, modulators, signal processing of radar systems, information storage devices and optical computers.

## Data processing and transmission in information and telecommunication systems

The results of current research directions in the field of information transmission and processing, dedicated to solving important problems of noise-resistant coding, evaluation of the limiting characteristics of communication systems, machine learning, and decision-making methods are presented. Such a wide range of studies shows a lot of current problems that are formed at the junction of information theory, coding theory, and queuing theory.

### Round table «Acoustoelectronics and acoustooptics: problems, prospects, and applications»

The current and promising scientific developments of research and production associations and industrial enterprises of Russia and abroad in the field of acoustooptics and optoelectronics are presented. Scientific discussions of universities and industry participants in the framework of the round table on the problems and prospects of development of acoustooptics and optoelectronics are needed to strengthen the communication of science and production, further improve information and telecommunication systems, improve their technical characteristics and will contribute to the introduction of high technologies.

### Microelectronic Embedded Systems

The issues include but not limited to microelectronic components architecture and design, embedded systems architecture, embedded networks and protocols, firmware for microelectronic systems, microelectronic systems testing and verification, microelectronic embedded systems software engineering and tools, problem-oriented microelectronic systems.

### Electromechanics and control systems

The current issues are reviewed and current research results in areas related to automation, control and management systems, as well as issues relating to technical diagnostics, information support and methods of designing automated technical systems are given. No less important are issues related to the creation of electromechanical transducers with high-energy parameters that have both traditional and non-traditional designs.

### Modeling and situational quality management in electronics and instrumentation

The issues of metrological support, environmental management, process modeling at various stages of the life cycle of high-tech production in the radio-electronic industry are considered.

### Instrumentation and intelligent transportation systems

Topical issues and the results of scientific research in the field of advanced instrumentation, obtaining dynamic data from instrumentation systems for processing and building digital models of systems and processes, information processing methods, developing instrument designs for unmanned systems and making decisions on the digital transformation of transport processes are considered. The relevance of the problems of the section forms the interdisciplinary nature of scientific tasks, issues related to the creation of a new generation of information-measuring systems and instrumentation systems for transport systems, issues of data collection and processing for building dynamic systems models.

## Rules of manuscript preparation

Four or more pages manuscript (in English) containing sufficient details of the proposed paper should be submitted by e-mail to the Conference Secretariat (E-mail: [weconf@weconf-guap.ru](mailto:weconf@weconf-guap.ru)).

Please submit your manuscript together with the completed registration form and copy of the first page of your passport with following information: passport number, date of issue, and your full name to the Organizing committee by e-mail to [weconf@weconf-guap.ru](mailto:weconf@weconf-guap.ru).

### Registration form

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