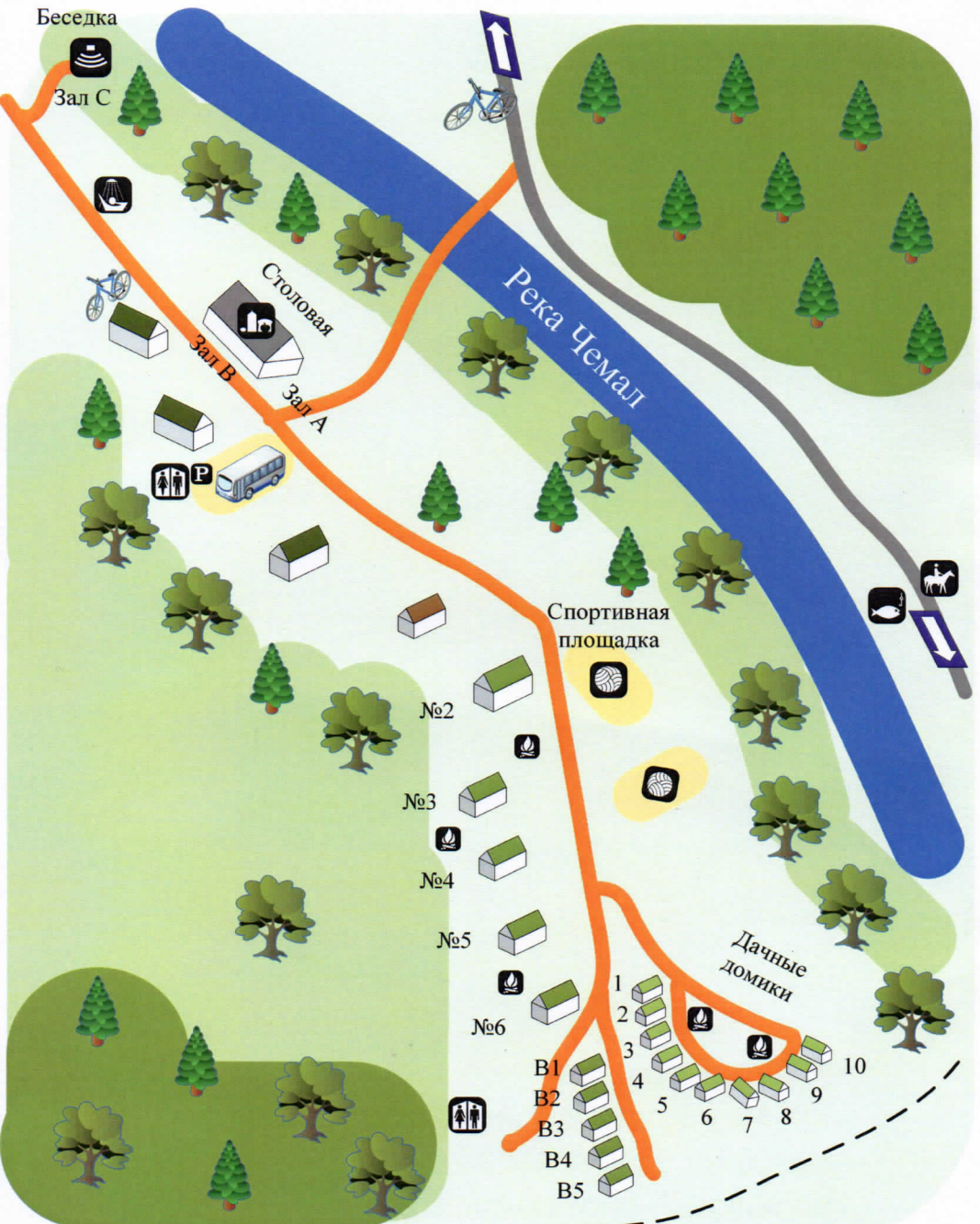
















Программа
XIX Международной конференции
молодых специалистов
по микро/нанотехнологиям
и электронным приборам

2018



- | | | | | | | | |
|---|---------|---|----------|---|-----------------|---|--------------------|
|  | Душ |  | Столовая |  | Рыбалка |  | Прокат велосипедов |
|  | Туалет |  | Костер |  | Спортплощадка |  | Дорожка |
|  | Беседка |  | Парковка |  | Конные прогулки |  | Река |



**Программа
XIX Международной конференции молодых
специалистов по микро/нанотехнологиям и
электронным приборам
EDM 2018**

Эрлагол, Республика Алтай, Россия
29 июня - 3 июля 2018 г.

ОРГАНИЗАТОР

Новосибирский государственный технический университет

СПОНСОРЫ

Новосибирский государственный технический университет

Российский фонд фундаментальных исследований

Сибирская секция IEEE

ПРИ ПОДДЕРЖКЕ

ИНСТИТУТ ФИЗИКИ ПОЛУПРОВОДНИКОВ ИМ. А.В. РЖАНОВА

Бийский технологический институт

ПРЕДСЕДАТЕЛЬ ОРГАНИЗАЦИОННО-ПРОГРАММНОГО КОМИТЕТА

Харитонов С.А. – д.т.н., проф., зав. кафедрой ЭЭ НГТУ, директор

Института силовой электроники (ИСЭ) НГТУ, г. Новосибирск

ЗАМ. ПРЕДСЕДАТЕЛЯ

Брованов С.В. – д.т.н., доцент, проректор по учебной работе НГТУ, г.

Новосибирск

Хрусталев В.А. – д.т.н., проф., декан факультета РЭФ НГТУ, г.

Новосибирск

ЧЛЕНЫ ОРГАНИЗАЦИОННО-ПРОГРАММНОГО КОМИТЕТА КОНФЕРЕНЦИИ

Неизвестный И.Г. - чл.-корр. РАН, д.ф.-м.н., проф. ИФП СО РАН, г. Новосибирск;

Воробьева С.В. - к.т.н., зав. каф. РТС СибГУТИ, г. Новосибирск;

Гридчин В.А. - д.т.н., проф. каф. ППиМЭ НГТУ, г. Новосибирск;

Остертак Д.И. - к.т.н., зав. каф. ППиМЭ НГТУ, г. Новосибирск;

Евтушенко Г.С. - д.т.н., проф. ПМЭ ТПУ, г. Томск;

Vinnikov D. - Dr.Sc.techn., Head of Power Electronics Group, TUT, Tallinn, Estonia;

Зиновьев Г.С.- д.т.н., проф. каф. ЭЭ НГТУ, г. Новосибирск;

Макуха В.К. - д.т.н., проф., зав. каф. ЭП НГТУ, г. Новосибирск;

Васильев В.Ю. – заместитель генерального директора ООО СибИС, д.х.н. проф. каф. ППиМЭ НГТУ, г. Новосибирск;

Радионов А.С. – председатель сибирской секции IEEE, проф. каф. ВС СибГУТИ, проф. каф. ВТ НГТУ, г. Новосибирск;

Алиферов А.И. - д.т.н., проф., зав. каф. АЭТУ НГТУ, г. Новосибирск;

Гарганеев А.Г. – д.т.н., проф., зав. каф. ЭКМ НИ ТПУ, г. Томск;
Степанов М.А. - к.т.н., доц. каф. РПиРПУ НГТУ, г. Новосибирск;
Сыпин Е.В. - к.т.н., проф. каф. МСИиА БТИ АлтГТУ, г. Бийск, Алтайский край;
Хмелев В.Н. - д.т.н., проф., зам. директора по науч. работе БТИ АлтГТУ, г. Бийск;
Jürgen Petzoldt - Univ. Prof. Dr.-Ing. Habil TU Ilmenau, Ilmenau, Germany;
Patricio Salmerón Revuelta – Prof., Universidad de Huelva, Huelva, Spain;
Нос О.В. - д.т.н., доц. каф. ПТМ НГТУ, г. Новосибирск;
Ozhikenov K.A. – Cand.Sc., Associate Prof., Head of the Department of Robotics and Engineering Tools of Automation, KazNRTU, Almaty, Kazakhstan;
Халютин С.П. – д.т.н., проф., зав. каф. ЭТ и АЭО МГТУ ГА, ген. дир. “Экспериментальная мастерская НаукаСофт”, г. Москва.

СЕКРЕТАРИ КОНФЕРЕНЦИИ

Шульц Т.Е. – м.н.с. каф. ЭЭ НГТУ, г. Новосибирск
Христолюбова А.И. – ст. преподаватель каф. ЭЭ НГТУ, г. Новосибирск
Сидоров А.В. – м.н.с. ИСЭ НГТУ, г. Новосибирск

КОНТАКТЫ

Шульц Татьяна +7 963 944 8847
Христолюбова Александра +7 913 792 7098
E-mail: edm.cof@mail.ru
Web: edm.conf.nstu.ru

РАБОЧИЕ ЯЗЫКИ

Русский, английский.

РЕГЛАМЕНТ ВЫСТУПЛЕНИЙ

Время выступления с докладом до 7 мин.

ТРЕБОВАНИЯ К ОФОРМЛЕНИЮ ПРЕЗЕНТАЦИЙ

Для иллюстрации докладов предоставлен мультимедийный проектор и компьютер. Докладчикам рекомендуется подготовить презентации в среде MS Power Point, в качестве носителя информации использовать USB флеш-накопитель.

План мероприятий

Дата	Время	Мероприятие
29.06.18 пятница	8.30 – 9.30	Сбор участников перед 4-ым корпусом НГТУ
	10.00	Отправление в ЗСОК НГТУ «Эрлагол»
	19.30	Прибытие в ЗСОК НГТУ «Эрлагол»
	19.30 – 20.00	Размещение участников
	20.00 – 21.00	Ужин
	21.00 – 22.00	Выдача комплекта участника (Зал А)
30.06.18 суббота	8.30 – 8.45	Утренняя зарядка
	9.00 – 10.00	Завтрак
	10.10 – 11.40	Открытие конференции. Пленарные доклады
	11.40 – 11.55	Кофе-брейк (зал В)
	11.55 – 12.35	Пленарные доклады
	13.00 – 14.00	Обед
	14.30 – 16.20	Работа секций
	16.20 - 16.35	Кофе-брейк (зал В)
	16.35 – 19.00	Работа секций
	19.00 – 20.00	Ужин
20.00 – 23.00	Свободное время	
1.07.18 воскресенье	8.30 – 8.45	Утренняя зарядка
	9.00 – 10.00	Завтрак
	10.10 – 12.10	Работа секций
	11.40 – 11.55	Кофе-брейк (зал В)
	11.55 – 14.00	Работа секций
	14.00 – 15.00	Обед
	15.20 – 16.10	Работа секций
	17.00 – 18.00	Заключительное заседание Оргкомитета
	15.00 – 18.00	Турнир по волейболу между командами секций
	19.00 – 20.00	Ужин
21.30 – 23.30	Награждение лучших докладчиков. Фуршет (зал А)	
2.07.18 понедельник	8.30 – 8.45	Утренняя зарядка
	9.00 – 10.00	Завтрак
	10.00 – 14.00	Свободное время (сплавы, катание на лошадях)
	14.00 – 15.00	Обед
	15.15 – 18.00	Экскурсии (по желанию)
	18.00 – 19.00	Свободное время
19.00 – 20.00	Ужин	
3.07.18 вторник	8.00 – 9.00	Завтрак
	9.00 – 9.30	Подготовка к отъезду
	9.30	Отъезд в Новосибирск
	19.00	Прибытие в Новосибирск

Пленарные доклады (Зал А)

30 июня 2018 г.

- 10.10 – 10.20 Открытие конференции – председатель организационно-программного комитета, д.т.н., проф. **Харитонов Сергей Александрович**
- 10.20 – 11.00 Доклад «**Challenges in Design of a Full Electric Aircraft Power Complex**». Докладчик **Халютин Сергей Петрович**, д.т.н., проф., генеральный директор ООО «Экспериментальная мастерская «Наука Софт»», зав. каф. ЭТ и АЭО МГТУ ГА, г. Москва, Россия
- 11.00 – 11.40 Доклад «**Fusion of Hard and Soft Control Strategies for a Smart Prosthetic/Robotic Hand**». Докладчик **Desineni Subbaram Naidu**, PhD, Life Fellow IEEE Minnesota Power Jack Rowe Endowed Chair, University of Minnesota Duluth, USA
- 11.40 – 11.55 Кофе-брейк (зал В)**
- 11.55 – 12.35 Доклад «**Next Generation Electronics**». Докладчик **Антонова Ирина Вениаминовна**, д.ф.-м.н., проф., Институт физики полупроводников им. А.В. Ржанова СО РАН, г. Новосибирск, Россия

	30 июня 2018 г.	1 июля 2018 г.
Зал А	<p>14:30 Секция 7 «Робототехника, мехатроника и автоматика» Председатель – д.т.н., проф. Олег Викторович Нос, НГТУ, г. Новосибирск</p>	<p>10:10 Секция 2 «Радио и техника СВЧ. Информатика и телекоммуникация» Председатель – к.т.н., доц. Светлана Владимировна Воробьева, СибГУТИ, г. Новосибирск</p>
Зал В	<p>14:30 Секция 3 «Звуковые и ультразвуковые устройства: физика, электроника, применения» Председатель – д.т.н., проф. Владимир Николаевич Хмелев, БТИ АлтГТУ, г. Бийск</p>	<p>10:10 Секция 5 «Силовая и энергетическая электроника» Председатель – д.т.н., проф. Геннадий Степанович Зиновьев, НГТУ, г. Новосибирск</p>
Зал С	<p>14:30 Секция 1 «Физика и технология полупроводников. Фотовольтаика» Председатель - д.т.н., проф. Виктор Алексеевич Гридчин, НГТУ, г. Новосибирск</p>	<p>10:10 Секция 4 «Оптико-электронные приборы и системы: физика, электроника, применения» Председатель - к.т.н., проф. Евгений Викторович Сыпин, БТИ АлтГТУ, г. Бийск</p> <p>13:00 Секция 6 «Медицинская электроника» Председатель - д.т.н., проф. Владимир Карлович Макуха, НГТУ, г. Новосибирск</p>

Секция 1. «Физика и технология полупроводников. Фотовольтаика»
30 июня 2018 г., зал С

Открытие секции

Руководитель – д.т.н., проф. Виктор Алексеевич Гридчин,
НГТУ, г. Новосибирск

Пленарно-секционный доклад

Peculiarities of A^{III}B^V semiconductors high-temperature annealing

Nataliya L. Shwartz, Cand. Sc., associate prof. , NSTU, Novosibirsk, Russia

Пленарно-секционный доклад

Fluorographene: fabrication, properties and research perspectives

Nadezhda A. Nebogatikova, Cand. Sc., junior researcher, A.V. Rzhanov Institute of
Semiconductor Physics SB RAS,
Novosibirsk, Russia

**Structure and Optical Properties of Nanocrystalline Titanium Dioxide Prepared via Pulsed Laser
Ablation in Liquid**

Elena D. Fakhrutdinova

**TCAD Simulation of the Influence of Grain Boundaries on the Temperature Dependence of
Conductivity in Polycrystalline Silicon Films**

Vladislava I. Saburova

**Investigation of Hf(Zr)O₂ Film Ferroelectric Properties Grown by Atomic Layer Deposition
Method**

Ramin M. H. Iskhakzay

Shapes of the Micron-Sized SiGe Islands Grown on Si(100) in Dewetting Conditions

Anastasia E. Budazhapova

Influence of Technological Parameters on the Energy Efficiency of Oxide Solar Cells

Kirill O. Nikolaev

**Simulation of the Heterodyne Method for Measurement of the Second Derivative of the Current-
Voltage Characteristic**

Nikita I. Lysenko

**Research of Atomic Layer Deposited HfO₂/TiO₂ Multilayer Structures by Spectroscopic and
Multiangle Monochromatic Null Ellipsometry**

Irina B. Mishchenko

Examination of Schwoebel Barrier Influence on GaN Quantum Dot Formation

David V. Shterental

GaAs Substrates Langmuir Evaporation Kinetics

Anna A. Spirina

An Evaluation of CMOS Inverter Operation Under Cryogenic Conditions

Anton A. Cherepanov

Microelectromechanical Generator with Autostabilization Mode

Dmitriy I. Ostertak

**Multifunctional Magnetophotonic Structure Creation Based on Magnetic Properties of Micro and
Nanoscale Clusters**

Yuliya A. Shokova

Analysis of the Technological Parameters Influence on the Reproducibility of the Active Dielectrics Properties

Pavel E. Golubkov

Mild Fluorination of Carbon Nanocages to Enhance the Supercapacitor Performance

Aleksei V. Sosunov

Evaluation of Hall Effective Masses in Gallium Arsenide Monocrystal in Quantizing Magnetic Field

Konstantin N. Savinov

Секция 2. «Радио и техника СВЧ. Информатика и телекоммуникации»

1 июля 2018 г., зал А

Открытие секции

Руководитель – к.т.н., доц. Светлана Владимировна Воробьева, СибГУТИ, г. Новосибирск

Simulation and Comparative Analysis of Packet Delivery in Flying Ad Hoc Network (FANET) using AODV

Alexey V. Leonov

Simulation-Based Packet Delivery Performance Evaluation with Different Parameters in Flying Ad-Hoc Network (FANET) Using OLSR

George A. Litvinov

The Complementary Buffer Amplifiers with Low Static Current Consumption for Low-Voltage Analog Microcircuits

Anna V. Bugakova

Flexible Dynamical Control of Bandwidth Resources and Quality of Functioning/Services for 5G Heterogeneous Communications Using Universal Network Virtual Slicing Models

Vera G. Drozdova

Use of Genetic Algorithm and Evolution Strategy when Revealing the Worst Case Effects of Crosstalk Propagation in PCB Bus of Spacecraft Autonomous Navigation System

Ruslan R. Gazizov

Spectral Method of Synthesis of Geometric Models of Surface-Distributed Objects

Vadim V. Artyushenko

High Stability Microwave Radiometer

Tilekbek Abdirasul uulu

The Problem of Biometric Identification of a Subject and Subject's Changed State: Perspectives of New Features Application in Analysis of Face and Neck Thermograms

Samal S. Zhumazhanova

Determination of Critical Parameters of Binary Gibbs Random Field Based on Image Modeling

Anna Yu. Zaitseva

Quantitative Measure of Phase Noise Assessment for Quartz Oscillators

Pavel V. Sak

The Differentiating Correction Circuits in Complementary Buffer Amplifiers

Anna V. Bugakova

Differential Broadband Transimpedance Amplifier in 130 nm SiGe BiCMOS

Rodion R. Fakhrutdinov

Wideband Double-Balanced Active Mixer Based on Gilbert Cell with Integrated Baluns in SiGe BiCMOS 130nm Technology

Konstantin V. Murasov

Spatial Interpolation of LTE Measurements for Minimization of Drive Tests

Ruslan V. Akhpashev

Security Checking Experiments with Mobile Services

Anton D. Ermakov

Problems of Neural Networks Training

Grigory A. Fofanov

SCMA Codebooks Generation for Transmission on an Arbitrary Subcarriers Number

Dmitriy A. Pokamestov

Examination of Physical Phenomena and Processes in Magnetophotonic Composite Media. Magnetophotonics Material Medium

Alexander A. Shelud'ko

Evaluation and Compensation of Systematic Errors of Matrix Simulator Calibration

Artemy O. Podkopayev

The Analytical Dependence of the Range from the Angular Position of the Line-of-Sight for an Object Represented as Several Planes

Andrey V. Nikulin

A Distributed Object Model with Division into Space and Time Variables

Maksim A. Stepanov

Spurious-Free Dynamic Range of CORDIC Based Digital Quadrature Demodulator

Pavel I. Puzyrev

Orthogonal Multiple Chirp Modulation for Tasks of Robust Data Transmission

Pavel I. Puzyrev

Experimental Research of PD/NOMA

Yakov V. Kryukov

Processing of Signals with Orthogonal Frequency Multiplexing and Spread Spectrum at Low Signal-to-Noise Ratios

Eugeniy V. Rogozhnikov

Compact Dual-Frequency Microstrip Branch-line Coupler Using Artificial Transmission Lines

Denis A. Letavin

Band-Pass Filters on U-Shaped Resonators

Denis A. Letavin

Compact Crossover Based on Low-pass Filters

Denis A. Letavin

Compact Branch-Line Coupler Based on an Inductor and a U-Shaped Capacitor

Denis A. Letavin

Microstrip Diplexer Implemented on High-Pass and Low-Pass Filters

Denis A. Letavin

Testing Microcontroller Based Physical Systems Using Finite Transition Models

Andrey V. Laputenko

Mathematical Model and Heuristic Methods for Solving the Multi-Criteria Scheduling Problems

Igor R. Zhdanov

Ontology Integration in Complex Information Systems with Distributed Architecture

Olesya A. Bubareva

Multi-Element Film Microwave Load

Gleb G. Savenkov

Testing Digital Circuits: Studying the Increment of the Number of States and Estimating the Fault Coverage

Evgenii Vinarskii

An Interface Model of the Interconnection Between Integrated Circuit Chip Die and Printed Circuit Board

Andrey A. Antonov

1.58 GHz Low Noise Amplifier Design and Verification in 130 nm CMOS Technology

Igor K. Surin

Research of the Noise Immunity when Using the Fractional Frequency Reuse in the Mobile Satellite Service

Maxim S. Krasikov

The Modified Dual-Frequency Dipole Antenna

Sergey A. Alekseitsev

Quasistatic Simulation of Ultrashort Pulse Propagation in the Spacecraft Autonomous Navigation System Power Circuit with Modal Reservation

Pavel E. Orlov

Секция 3. «Звуковые и ультразвуковые устройства: физика,
электроника, применения»
30 июня 2018 г., зал В

Открытие секции

Руководитель – д.т.н., проф. Владимир Николаевич Хмелев, БТИ АлтГТУ, г. Бийск

Ultrasonic Disk Radiators at High Temperatures

Viktor A. Nesterov

Increasing the Uniformity of Amplitude Oscillations of Anisotropic Ultrasonic Disc Emitters for Gas Media

Andrey V. Shalunov

Radiators for Forming of High-Intensive Ultrasonic Vibrations In Gaseous Media

Viktor A. Nesterov

Experimental Researches of Process of Trapping of Particles by Centrifugal-Acoustic Gas-Cleaning Equipment

Andrey V. Shalunov

Increasing of Efficiency of Ultrasonic Vibration System Work for Cavitation Treating of Liquid

Alexey N. Slivin

Apparatus for Ultrasonic Drying of Disperse Materials

Sergey S. Zorin

Intensification of the Process of Ultrasonic Extraction of Dehydroquercetin from Wood Waste

Vladislav A. Shakura

The Ultrasonic Device and the Positioning System of the Welding Tool for Welding of Automobile Bumpers

Alexey D. Abramov

The Study of Regularities of Ultrasonic Coagulation of Two-Phase Aerosol in Gas Flow

Roman N. Golykh

The System of Frequency Matching of the Ultrasonic Generators with the Radiators in “Bulava” Apparatuses

Roman V. Barsukov

Radiation Pattern of Ultrasonic Transducer with Polymer-Powder Matching Layer

Marsel Fazlyyyakhmatov

Hydro-Acoustic Communication Channel in the Underground Pipeline

Dzhamilya A. Maltseva, Valery A. Zibrov, Aleksey G. Iliev

The Two-Channel Instrumentation Amplifier Based on a New Radiation-Hardened Microcircuit MH2XA010-03 for Reading Signals of Differential Piezoelectric Converters

Anna V. Bugakova

Features of Designing of a Specialized High-Frequency Ultrasonic Sprayer

Viktor A. Nesterov

Research of the Process of Ultrasonic Dispersing on the Example of Brown Coal and Peat

Vladislav A. Shakura

Experimental Study of the Process of Low-Temperature Drying of Waste Wood By the Application of Ultrasonic Fields

Sergey S. Zorin

Realization of Results of Laboratory Researches in Industrial Scales

Sergey N. Tsyganok

Development of Power Circuit of the Ultrasonic Generator with Low-Voltage Power Supply

Evgeniy Ilchenko

The Modeling of Ultrasonic Cavitation Depolymerization Causing Reducing of Polymer Viscosity

Roman N. Golykh

Improving the Performance of the Processes in the Systems "Gas-Liquid" Methods of High-Intensity Ultrasonic Effects

Galina Bobrova

Spray Shape Formation at Ultrasonic Spraying Process

Dmitry Genne

Measuring Instrument of Impedance Characteristics of the Ultrasonic Vibrating Systems

Roman V. Barsukov

Ultrasonic Devices for Aluminum Melt Processing

Denis Abramenko

Секция 4. «Оптико-электронные приборы и системы:
физика, электроника, применения»
1 июля 2018 г., зал С

Открытие секции

Руководитель – к.т.н., проф. Евгений Викторович Сыпин, БТИ АлтГТУ, г. Бийск

Study of High-Frequency Brightness Amplifiers Radial Profile

Ilya S. Musorov

Semiconductor Power Supply for Capacitance Copper Bromide Active Filters

Pavel P. Gugin

Development and Research of MOPA System Laboratory Model

Nikolai A. Vasnev

Digital Control Circuit for Synchronization of Two Metal Vapor Lasers. Development and Application

Valeriya V. Taratushkina

Modeling of Concentration Electro-Optical Sensors for Gas and Coal Dust in Multi-Criterial Electro-Optical Device for Control of the Emergency and Pre-emergency Situations in Coal Mines

Ivan S. Zorin

Adaptation of the High-Speed Multipoint Electro-Optical System for Determining of Flame Spatial Coordinates at the Object of the Specified Form

Andrey I. Kin

Modeling of the Nonstationary Combustion Process of Methane-air Mixture in Coal Mines

Yuri A. Galenko

Experimental Determination of Response Time for Multipoint Electro-Optical System of Flame Detection and Determination of Its Spatial Coordinates

Anton I. Sidorenko

Experimental Investigation of Nonstationary Combustion for Propane-Air Mixture in Pipe with Ring Partitions

Andrey. N. Pavlov

Experimental Study on Verification of the Flame Spatial Coordinates Determining Adequacy by Multipoint Electro-Optical System

Vyacheslav A. Shadrin

Секция 5. «Силовая и энергетическая электроника»

1 июля 2018 г., зал В

Открытие секции

Руководитель – д.т.н., проф. Геннадий Степанович Зиновьев, НГТУ, г. Новосибирск

An Analysis of Input and Output THD Factors of Matrix Converter

Evgeny D. Baranov

Maximum Power Point Tracking Methods for the Solar Battery

Irina A. Belova

Step-by-step Design of the Digital Closed Loop System of the Boost Voltage Converter

Nikita A. Sevostyanov

PWM on the Basis of Different Configurations of Reference Signals for a Multilevel Converter on H-Bridge

Vladimir S. Meshalkin

Spectral Mathematical Model of AC-AC Converter

Dmitry B. Kuguchev

Calculation of Hybrid Bus Power Demands by Standard Driving Cycles

Wu Xiaogang

Increasing the Length of Trolleybus Contact Line Sections by Installation of Stationary Energy Storage Posts

Mikhail V. Yaroslavtsev

Aircraft Control System Immunity Study at the Direct Lightning Strike

Igor V. Artemiev

Fault Symptom Diagnostics for Coupling Capacitors Using the Analytic Hierarchy Process

Dmitry V. Orlov

Analysis of Thyristors Operation in Longitudinal Compensation Devices for Distribution Networks

Michail I. Petrov

Design Rules of the DC-DC Voltage Converter with the Two-Loop Feedback System

Ivan V. Alexandrov

Short-Term Electricity Consumption Forecast in Siberia IPS Using Climate Aspects

Nikita S. Terlyga

Analysis of the Modern State of Power Converters for Wind Turbine Systems

Alexander G. Volkov

Calculation of the Voltage Inverter Parameters in the Starter-Generator System of the Aircraft

Regina Yu. Dubkova

Mathematical Models for Analysis of Electromagnetic Processes in Thyristor Circuits of AC Voltage Regulators

Aleksey V. Udovichenko

Development of a Mathematical Model of Variable-Voltage Variable-Frequency Aircrafts Electric Power System

Maxim A. Khoroshev

The Regulation, Protection and Control System for Magnetolectric Generator with Combined Excitation

Maxim V. Balagurov

Modernization of the Weinberg's Converter for the Implementation of a Charge-Discharge Device in the Power Supply System of a Spacecraft

Dmitriy Li

Research on Cross-Regional Interaction in Converter-Dominated Distribution Grids

Teng Jiang

Base Switch Element for High-Power High-Voltage Converters

Elena M. Dukhnych

Research and Development of Resonant Converter for High-Voltage Spacecraft Power Supply Systems with Accumulator Battery

Mariya M. Chernaya

Hybrid Microgrid in Islanded Operation Based on Renewable Energy Sources

Mojtaba Abbasi

New Approach for Thyristors Switched Capacitors Design for Static VAR Compensator Systems

Ahmed E. ElGebaly

Load Leveling for a Diesel Generator Using an Energy Storage and Instantaneous Power Theory

Maksim A. Dybko

Step-by-Step Design of Two-Loop Control System for Boost DC-DC Converter

Roman L. Gorbunov

SVPWM Capacitor Balancing Method for Single-Phase Three-Level NPC Impedance-Source Inverters

Alena S. Filatova

Study of a Dual-Loop Subordinate Control System for a DC-DC Converter with Galvanic Isolation

Sergey V. Klassen

Evaluation of Electrical Parameters in the System "Synchronous Generator with Permanent Magnets - Active Rectifier"

Andrey S. Kharitonov

Simulation of a Metal Vapor Active Media Power Supply

Ilya S. Musorov

The Condition of Self-Oscillation in Distributed Power Supply Systems. Low-Level and High-Level Excitation Signal Modes

Zinaida V. Zaitseva

Detecting Voltage Swell, Interruption and Sag

Vladimir A. Skolota

Mathematical Analysis of the Multiport Converter Operation Algorithm

Vadim E. Sidorov

Three Phase AC Voltage Cuk Converter with Galvanic Isolation

Andrey V. Sidorov

PMSM Analysis in dq Axis at Starter Mode as the Part of ISG

Alexander N. Reshetnikov

DC/DC Boost Converter with Additional Inductance for the Space Power Supply System

Andrei V. Geist

Buck DC-DC Converter with Neural Network Sawtooth-Similar Carrier Signal Generator

Ilya V. ZaeV

Секция 6. «Медицинская электроника»

1 июля 2018 г., зал С

Открытие секции

Руководитель – д.т.н., проф. Владимир Карпович Макуха, НГТУ, г. Новосибирск

Characterization of Electrochemical Aptasensor for Lung Cancer Tumor Marker Determination

Anastasiia V. Shabalina

Automated System for Bioimpedance Measuring

Pavel E. Golubkov

Luminescence of Acupuncture Point in Darkened Area Under Optical Pulse Excitation of Adjoining Areas of Investigated Meridian

Alexander A. Blokhin

Comparative Analysis of Acoustic Parameters of the Saarbruecken Database's Voice Records

Tatiana A. Shevchenko

Секция 7. «Робототехника, мехатроника и автоматика»

30 июня 2018 г., зал А

Открытие секции

Руководитель – д.т.н., проф. Олег Викторович Нос, НГТУ, г. Новосибирск

Пленарно-секционный доклад

Analysis of Electromagnetic Processes in the Induction Channel Unit

Timofeev Viktor Nikolaevich, Dr. Sc., Prof., Head of the Department of

Electrotechnology and electrical engineering of SFU, director of RPC “Magnetic Hydrodynamics” Ltd, Krasnoyarsk, Russia

Hysteresis Clutch in the Electric Drive of Pipeline Valves

Din K. Kyui

Bidirectional DC-DC Conversion Device Usage in Tram

Anna V. Kulekina

Evaluation of Two-Sided Feed Scheme Efficiency for Tram Traction Network in Novosibirsk

Evgeniy Y. Abramov

The Basic Factors on Development of the Drive Control Subsystem for the Special Purpose Mobile Robot Named Geokhod

Irina Yu. Semykina

The Control Technique for Cascaded H-bridge Multilevel Converter with Faulty Cells

Ekaterina E. Abramushkina

Virtual Device for Processing the Signals from MEMS Pressure Sensors

Alina M. Esimkhanova

On the Issue of the Arc Steelmaking Furnaces Operating Mode Stability at the Beginning of Melting

Andrey S. Bulgakov

Development of a Power Controller for an Induction Crucible Furnace of Industrial Frequency for Melting Magnesium

Alexey O. Kuleshov

Comparative Analysis of Measures to Improve the Quality of Electricity in Metro

Andrey A. Petrov

Traction Network Current Rate Changing Analysis

Anna V. Kulekina

The Concept of Multiparameter Protection of System Elements Construction's «Traction Substation - Electric Traction Network - Electric Rolling Stock»

Anna V. Kulekina

Simulation Modeling of the Internal Combustion Engine Starting System Using a Supercapacitor Battery

Michail A. Smirnov

Synthesis of Full Order Observer by Akkermann Formula

Ekaterina S. Kucher

The Comparative Analysis of the Maximum Slew Rate of the Output Voltage BJT and CMOS (SiGe TSMC 0.35 μ) Operational Amplifiers

Nikolay V. Butyrlagin

The Non-Linear Differentiating Circuits of Correction of Transient Process in Differential Operational Amplifiers

Anna V. Bugakova

Development and Testing of Plasma-Thermal Electric Furnace for Organic Waste Processing

Pavel V. Domarov

Methods of Energy Efficiency Evaluation for Output Voltage of the Single-phase Controlled Rectifier

Vladlen V. Ivanov

Improving the Idea of Development of the Single-Phase AC Rectifier with the High Power Factor

Vladlen V. Ivanov

The Robot System for Remote Robotics Hackathon

Aleksey.A. Korchagin

The Participants' Work Checking Subsystem of the Remote Technological Competitions in Robotics

Anastasija A. Fokina

Off-Line Legged Robot with Cross-Country Capacity

Nikita A. Gulyaev

Optimization of Vibratory Source Electromagnetic Drive Operating Process

Aleksey O. Kordubailo

Analysis of Impact Interaction of Forces Impulses in an Electromechanical Vibratory System with Electromagnetic Excitation

Andrei S. Shabanov

The Processes of Energy Transformation in a Two-coil Synchronous Electromagnetic Shock Machine

Alexei V. Markov

Structural Analysis of Vehicle's Hybrid Power System Based on Fuel Cell

Kirill I. Kulikov

Digital Filtration-Based Power Distribution between Windings of Traction Transformers

Pavel V. Morozov

Increase of Flux Probable Paths Method Accuracy in Design of a Magnetic System with a Teeth-Slot Zone

Olga V. Rogova

MHD Steering of Aluminum Melt in Cylindrical Bath by Means of Permanent Magnets System

Andrey E. Morev

Energetic Parameters of Inductors for Induction Heating of Internal Cylindrical Surfaces

Alexander A. Meleshko

About One Approach to the Characteristics Assessment of the Wave Solid-state Gyroscope

Olga S. Khalyutina

Induction Heating with Rotating Permanent Magnets: Experimental Results on an Industrial Installation

Michele Forzan



Иоанно-Богословский скит
о. Патмос

Архиерейское подворье

Start
P

Река Чемал
Чемальская ГЭС

Finish
P



Тарзанка



Аквапарк



Чемальская ГЭС



Церковное подворье



Парковка для автобуса



Сувенирные лавки

Прогулочная тропа

Река

Дорога

