




The 6th International Conference

DYNAMICS AND VIBROACOUSTICS OF MACHINES

 Samara National Research University

21 - 23.09.2022

TECHNICAL PROGRAM

THE 6TH INTERNATIONAL CONFERENCE

DYNAMICS AND VIBROACOUSTICS OF MACHINES

DVM-2022

Samara University, 21-23 September 2022
Samara, Russia



Conference DVM-2022

Time	Wednesday, September 21			Thursday, September 22		Friday, September 23	
	Session 2 (Room 325)	Session 5 (Room 326)	Session 6 (Room 303)	Session 1 (Room 325)	Session 4 (Room 326)	Session 7 (Room 325)	Session 3 (Room 326)
09-00 ÷ 10-00	Registration (Hall Vostok 1, building 15)						
10-00 ÷ 10-15	Plenary session (Hall Vostok 1, building 15)			ID-44	ID-04	ID-27	ID-39
10-15 ÷ 10-30				ID-45	ID-20	ID-28	ID-43
10-30 ÷ 10-45				ID-79	ID-60	ID-48	ID-66
10-45 ÷ 11-00	ID-01	ID-10	ID-09	ID-62	ID-76	ID-75	ID-71
11-00 ÷ 11-15	ID-02	ID-11	ID-15	Refreshments (building 14. ASEU dept.)			
11-15 ÷ 11-30	ID-03	ID-12	ID-22	ID-47-	ID-80	ID-110	ID-67
11-30 ÷ 11-45	ID-144	ID-13	ID-38	ID-84	ID-97	ID-114	ID-90
11-45 ÷ 12-00	ID-57	ID-25	ID-32	ID-86	ID-98	ID-116	ID-91
12-00 ÷ 12-15	Lunch			ID-103	ID-107	ID-123	ID-115
12-15 ÷ 12-30				ID-112	ID-133	ID-140	ID-143
12-30 ÷ 12-45				ID-132	ID-201	ID-142	ID-146
12-45 ÷ 13-00				ID-111	ID-56	ID-85	ID-06
13-00 ÷ 13-15	ID-59	ID-26	ID-33	Lunch			
13-15 ÷ 13-30	ID-61	ID-30	ID-51				
13-30 ÷ 13-45	ID-102	ID-31	ID-52				
13-45 ÷ 14-00	ID-117	ID-36	ID-65				
14-00 ÷ 14-15	ID-118	ID-42	ID-81	ID-72	ID-89	ID-141	ID-113
14-15 ÷ 14-30	ID-122	ID-50	ID-82	ID-77	ID-68	ID-137	ID-127
14-30 ÷ 14-45	ID-128	ID-105	ID-87	ID-69	ID-109		ID-138
14-45 ÷ 15-00	ID-104	ID-106	ID-88				
15-00 ÷ 15-15		ID-139					
Poster presentations							
	ID-202	ID-54		ID-108	ID-53	ID-07	ID-126
	ID-131	ID-63		ID-121	ID-200	ID-92	ID-23
				ID-136			
15-00 ÷ 16-00	Cruise along the Volga			Excursion around Samara University (Engines Museum, Aerospace Museum)			
16-00 18-00							
18-00 20-00				Gala Dinner			
20-00 22-00							

WEDNESDAY, SEPTEMBER 21

Opening

- 9-00 ÷ 10-00** **Registration (Hall Vostok 1, building 15)**
- 10-00 ÷ 10-45** **Plenary session (Hall Vostok 1, building 15)** Online: <https://bbb0.ssau.ru/b/c4t-yop-r5c-tag>

Session 2 (Room 325, build. 14) Online: <https://bbb.ssau.ru/b/3aq-0mt-giw-cho>
Hydrodynamic and aerodynamic noise, aviation acoustics
Chair: Professor Alexander Kryuchkov

- 10-45 ÷ 11-00** **ID 01**
 In person
P.A. Moshkov¹, V.N. Lavrov²
¹Moscow, Moscow Aviation Institute (National Research University); ²Moscow, IRKUT Corporation Regional Aircraft
ANALYSIS OF VIBROACOUSTICS OF THE SUPERJET 100 AIRCRAFT
- 11-00 ÷ 11-15** **ID 02**
 In person
Moshkov P.A.
 Moscow, Moscow Aviation Institute (National Research University)
STUDY OF THE PROPELLERS NOISE OF LIGHT AIRCRAFT UNDER STATIC CONDITIONS
- 11-15 ÷ 11-30** **ID 03**
 In person
Moshkov P.A.
 Moscow, Moscow Aviation Institute (National Research University)
ON THE RECALCULATION OF THE RESULTS OF LABORATORY AND STATIC TESTS OF PROPELLER-DRIVEN POWER PLANTS ON WITH FLIGHT CONDITIONS
- 11-30 ÷ 11-45** **ID 144**
 Online
V.B. Tupov, A.B. Mukhametov
 Moscow, NRU "MPEI"
NOISE OF COOLING TOWERS AT THE BORDER OF THE SANITARY ZONE DEPENDING ON THE CAPACITY OF THE THERMAL POWER PLANT
- 11-45 ÷ 12-00** **ID 57**
 In person
A.A. Frantov, P.I. Kizilov
 Saint-Peterburg, Concern Aurora Scientific and Production Association JSC
EVALUATION OF THE INFLUENCE OF THE DESIGN OF THE FLOW PARTS OF PIPELINE VALVES ON NOISE AND VIBRATION ACTIVITY
- 12-00 ÷ 13-00** **LUNCH**
- 13-00 ÷ 13-15** **ID 59**
 In person
E.G. Berestovitsky, Y.A. Gladilin, N.V. Pyalov
 S.-Peterburg, Concern Aurora Scientific and Production Association JSC
DEVELOPMENT OF HYDRAULIC DEVICES WITH ELASTIC REGULATING ELEMENTS
- 13-15 ÷ 13-30** **ID 61**
 In person
E.G. Berestovitsky¹, Y.A. Gladilin¹, A.A. Frantov¹, A.N. Vidyaskina²
 Saint-Peterburg, Concern Aurora Scientific and Production Association JSC; ² Samara, Samara National Research University
EVALUATION OF THE EFFECTIVENESS OF A SET OF MEASURES TO REDUCE THE OWN VIBROACOUSTIC NOISE OF A PIPELINE TEST STAND
- 13-30 ÷ 13-45** **ID 102**
 In person
V.F. Kopiev, I.V. Belyaev, O.P. Bychkov, M.Yu. Zaitsev, G.A. Faranosov
 Moscow, TsAGI
THE NOISE OF A MODERN AIRPLANE AT LANDING: LABORATORY EXPERIMENTS AND FLIGHT TESTS
- 13-45 ÷ 14-00** **ID 117**
 In person
A.V. Vasilyev
 Samara, Samara State Technical University
NEW TECHNICAL SOLUTIONS OF DEVICES OF REDUCTION OF VIBRATION OF POWER PLANTS
- 14-00 ÷ 14-15** **ID 118**
 In person
A.V. Vasilyev

Samara, Samara State Technical University

SOFTWARE FOR RESEARCH OF ACOUSTIC CHARACTERISTIC OF POWER PLANTS

14-15 ÷ 14-30
In person

ID 122

A.V. Vasilyev

Russia, Samara, Samara State Technical University

DEVICE OF ACTIVE SOUND CONTROL OF POWER PLANT WITH INCREASED PROTECTION

14-30 ÷ 14-45
In person

ID 128

K.N. Pyalov, R.V. Slutskiy, A.B. Maisel

Russia, Saint-Peterburg, CDB ME "Rubin"

CALCULATION OF NOISE EMISSION CAUSED BY THE FLOW OF A BODY WITH A CAVITY USING AN INTEGRAL ACOUSTIC ANALOGY

14-45 ÷ 15-00
In person

ID 104

F.F. Legusha¹, K.N. Pjalov², G.V. Chizhov³

¹Saint-Petesburg, State marine technical university; ² Saint-Petesburg, CDB ME "Rubin";

³ Saint-Petesburg, SPMEB "Malachite"

INVESTIGATION OF THE ANGULAR DEPENDENCES OF THE SOUND ABSORPTION COEFFICIENT AT THE LIQUID-SOLID INTERFACE

POSTER PRESENTATIONS

ID 202

Shakhmatov E.V.

Samara, Samara University

AN INTEGRATED APPROACH TO SOLVING THE PROBLEMS OF MACHIN VIBROACOUSTICS

ID 131

Reshetov V.M.

Samara, Samara National Research University

INVESTIGATION OF SCHEMES FOR HYDRODYNAMIC CLEANING OF UNITS OF HYDRO-FUEL SYSTEMS

16-00

Cruise along the Volga

WEDNESDAY, SEPTEMBER 21

Session 5 (Room 326, build. 14)

Online: <https://bbb.ssau.ru/b/xvz-dql-af6-ren>

Vibration Dynamics and Durability

Chair: Professor Sergey Falaleev

10-45 ÷ 11-00
In person

ID 010

V.V.. Biryuk, A.A. Gorshkalev, M.O. Zakharov, V.L. Larin

Samara, Samara University

DEVELOPMENT OF A METHOD FOR DETERMINING EIGENFREQUENCIES AND CARRYING OUT ACCELERATED RESONANCE TESTS FOR RELIABILITY OF VALVE SPRINGS OF AN INTERNAL COMBUSTION ENGINE

11-00 ÷ 11-15
Online

ID 011

A.S. Gvozdev, V.S. Melentjev, I.D. Ibatullin

Samara, Samara University

ANALYSIS OF DYNAMIC WEAR AT THE JET NOZZLE SHUTTERS SYNCHRONIZATION SYSTEM ELEMENTS

11-15 ÷ 11-30
In person

ID 012

D.K. Novikov, E.V. Akseñov, N.S. Shliandina

¹Samara, Samara University; ²Samara, JSC Kuznetsov

SQUEEZE FILM DAMPER DYNAMIC STIFFNESS ANALYSIS, TAKING INTO ACCOUNT THE END GAP

11-30 ÷ 11-45
In person

ID 013

A. Bukatyj, S. Bukatyj, E. Zotov, R. Akhtamiyanov

Samara, Samara University

OPTIMIZATION OF AVIATION SHASSIS PARTS CONSTRUCTION BASED ON STRESS STIFFNESS CRITERION

11-45 ÷ 12-00
In person

ID 025

V.S. Melentjev, S.Yu. Sychugov, P.D. Rekadze, L.V. Rodionov

Samara, Samara University

OPTIMAL BALANCING METHOD OF THE CRANK MECHANISM WITH ONE COUNTERWEIGHT

12-00 ÷13-00	Lunch
13-00 ÷13-15 Online	<p>ID 026 <u>K.K. Laiko</u>, <u>D.L. Lerner</u>, <u>D.F. Khabarova</u> Chelyabinsk, Testing and research center Chelyabinsk Compressor Plant LLC; Department of Hydraulics and Hydraulic and pneumatic systems South Ural State University (NRU) EXPERIMENTAL INVESTIGATION OF THE EFFECT OF COUPLING MISALIGNMENT OF A CENTRIFUGAL PUMP UNIT ON ITS VIBRATION AND NOISE CHARACTERISTICS</p>
13-15 ÷13-30 Online	<p>ID 030 <u>R.R. Khaliulin</u>, <u>V.A. Sychenkov</u>, <u>N.V. Stepicheva</u> ¹Kazan, Kazan National Research Technical University named after A.N. Tupolev–KAI; ² Rostov-on-Don, Don State Technical University RESEARCH OF THRUST INCREASE ON THE EJECTOR TURBOJET ENGINE WITH THE AFTERBURNER</p>
13-30 ÷13-45 Online	<p>ID 031 <u>V.V. Ankudimov</u>, <u>V.A. Sychenkov</u>, <u>W.M. Yousef</u>, <u>N.V. Davydov</u>, <u>R.R. Khaliulin</u>, <u>A.V. Sychenkova</u> Kazan, Kazan National Research Technical University named after A.N. Tupolev–KAI FEATURES OF THE COMBUSTION CHAMBER DEVELOPMENT FOR A SMALL-SIZED TURBOJET ENGINE</p>
13-45 ÷14-00 In person	<p>ID 036 <u>P.A. Dvoryak</u>, <u>V. M. Ryzhenkov</u> Moscow, Moscow Aviation Institute (Research University), Institute No. 2 "Aircraft, rocket engines and power plants" THE INFLUENCE OF TECHNOLOGICAL FACTORS ON THE DYNAMIC CHARACTERISTICS OF THE ROTORS OF GAS TURBINE ENGINES</p>
14-00 ÷14-15 In person	<p>ID 042 <u>M.A. Bedyuk</u>, <u>R.R. Badykov</u>, <u>A.O. Lomachev</u>, <u>K.V. Bezborodova</u>, <u>A.A. Yurtaev</u> Samara, Samara National Research University COMPARISON OF THE AXIAL MAGNETIC BEARING LOAD CAPACITY CALCULATION RESULTS WITH EXPERIMENTAL DATA</p>
14-15 ÷14-30 Online	<p>ID 050 <u>A.B. Prokofev</u>¹, <u>A.G. Chernyavskiy</u>¹, <u>D.A. Vorokh</u>¹, <u>S.A. Danilin</u>¹, <u>N. Aksenov</u>², <u>A.I. Danilin</u>¹ ¹ Samara, Samara University; ² Tyumen, PJSC "Tyumenskije Motorostroiteli" RESEARCH OF VIBRATION CHARACTERISTICS OF ROTOR BLADES OF LOW-PRESSURE COMPRESSOR OF GTE DN80</p>
14-30 ÷14-45 In person	<p>ID 105 <u>K.A. Lonin</u>, <u>V.A. Panov</u>, <u>V.L. Patrushev</u>, <u>D.V. Savchuk</u>, <u>S.A. Soloviev</u> Nizhny Novgorod, JSC «OKBM Afrikantov» SPECIAL FEATURES OF NUCLEAR PLANT EQUIPMENT STRENGTH ASSESSMENT UNDER DYNAMIC LOAD</p>
14-45 ÷15-00 In person	<p>ID 106 <u>D.E. Bescherov</u>, <u>D.A. Kulikov</u>, <u>V.A. Panov</u>, <u>V.L. Patrushev</u>, <u>M.S. Porfirief</u>, <u>D.V. Savchuk</u>, <u>S.A. Soloviev</u> Nizhny Novgorod, JSC «OKBM Afrikantov» VIBRATION CHARACTERISTICS ASSURANCE OF REACTOR FACILITIES CENTRIFUGAL PUMPING EQUIPMENT</p>
15-00 ÷15-15 In person	<p>ID 139 <u>V.A. Berns</u>¹, <u>A.I. Godin</u>², <u>E.P. Zhukov</u>¹, <u>D.A. Krasnorutskiy</u>¹, <u>P.A. Lakiza</u>¹, <u>A.V. Para</u>² ¹ Novosibirsk, Siberian Aeronautical Research Institute named after S.A. Chaplygin; ² Moscow, PJSC United Aircraft Corporation FINITE ELEMENT MODEL UPDATING OF AN AIRPLANE WING</p>
	POSTER PRESENTATIONS
	<p>ID 054 <u>V.F. Pavlov</u>, <u>V.S. Vakulyuk</u>, <u>V.P. Sazanov</u>, <u>O.YU. Semyonova</u>, <u>D.S. Churikov</u> Samara, Samara University MULTI-CYCLIC FATIGUE OF MACHINES PARTS PREDICTION AFTER SUPERFICIAL PLASTIC DEFORMING</p>

ID 063

*V.F. Pavlov, V.K. Shadrin, K.F. Matveeva, D.S. Churikov, S.A. Anisimov
Samara, Samara University*

A VARIANT OF THE DIAGRAM OF THE COMPRESSIVE OF RESIDUAL STRESS ON AN ENDURANCE LIMIT OF HARDENED PARTS

16-00	CRUISE ALONG THE VOLGA
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WEDNESDAY, SEPTEMBER 21

Session 6 (Room 303, build. 14) Online: <https://bbb.ssau.ru/b/4t6-ft5-0vh-gez>

Dynamic processes in the production and operation of machines and equipment

Chair: Professor Egor Makariants

10-45 ÷ 11-00

In person

ID 09

D. Evdokimov, D. Skuratov, A. Bukatyj

Samara, Samara University

DEVELOPMENT OF A FINITE ELEMENT MODELS AND METHOD FOR DETERMINING RESIDUAL STRESSES IN THE WORKPIECE AFTER THE END MILLING OPERATION.

11-00 ÷ 11-15

Online

ID 15

E. Butakova, V. Doroshenko, A. Noskov

Russia, Yekaterinburg, Ural Federal University

EXPERIMENTAL STUDIES OF THE BLOCK OF HYDRAULIC CONTROL OF DISTRIBUTORS

11-15 ÷ 11-30

Online

ID 22

I.M. Klebanov, A.D. Moskalik, A.M. Brazhnikov

Samara, Samara State Technical University

SEIZING FORMATION CONDITIONS AT HYDRODYNAMIC FRICTION IN ROLLING BEARINGS

11-30 ÷ 11-45

Online

ID 38

I.M. Klebanov, K.A. Polyakov, V.R. Petrov

Samara, Samara State Technical University

EFFECTIVE COEFFICIENT OF HYDRODYNAMIC FRICTION IN ROLLER BEARINGS

11-45 ÷ 12-00

Online

ID 32

O.V. Ponomareva, A.V. Ponomarev, N.V. Smirnova

Izhevsk State Technical University

FAST PARAMETRIC FOURIER TRANSFORM

12-00 ÷ 13-00

Lunch

13-00 ÷ 13-15

In person

ID 33

V.B. Balyakin, B.B. Kosenok

Samara, Samara University

OPTIMIZATION OF THE PARAMETERS OF THE STEERING UNIT OF LIQUID ROCKET ENGINES

13-15 ÷ 13-30

In person

ID 51

N.I. Klyuev, K.A. Polyakov

Samara, Samara State Technical University

EMERGENCY OPERATION OF THE FLAP IN THE ROCKET FUEL CHANNEL

13-30 ÷ 13-45

Online

ID 52

Ivanov A.V.^{1,2}

Khimki, JSC "NPO Energomash";² Russia, Moscow, "Moscow Aviation Institute (National Research University)"

DYNAMICS OF ROCKET ENGINE TURBOPUMP TURBINE SEAL CLEARANCE CHANGES

13-45 ÷ 14-00

Online

ID 65

S.Y. Konstantinov, D.V. Tselischev, V.A. Tselischev

Ufa State Aviation Technical University;² Russia, Ufa, JSC "Ufa Aggregate Enterprise "Gidravlika"

NUMERICAL SIMULATION OF HYDRAULIC SCREEN FILTER

14-00 ÷ 14-15

Online

ID 81

V.P. Sazanov, V.S. Vakulyuk, O.Yu. Semenova, A.V. Pis'marov, E.A. Deniskina

Samara, Samara University

AN EVALUATION OF PARTS FATIGUE RESISTANCE AFTER SURFACE THERMO CHEMICAL TREATMENT

- 14-15÷14-30**
Online
ID 82
V.P. Sazanov, A.V. Pis'marov, A.S. Zlobin, S.A. Mihalkina, O.M. Pilipiv
Samara, Samara University
A RESIDUAL STRESSES INFLUENCE ON A FATIGUE RESISTANCE OF THREADED PARTS AFTER ADVANCE ROLLER STRENGTHENING
- 14-30 ÷14-45**
In person
ID 87
A.V. Medvedev¹, E.M. Khalatov²
¹Kovrov, DB «Armatura» – branch of JSC «Khrunichev SRPSC»; ²Kovrov FSBEI of HE «KSTA named after V.A. Degtyarev»
METHOD OF INDIVIDUAL SELECTION OF PARTS FOR SELECTIVE ASSEMBLY OF ELECTROHYDRAULIC SERVO DRIVES
- 14-45 ÷15-00**
Online
ID 88
S.P. Prikhodko, V.S. Sidorenko, D.A. Korotych
Rostov-on-Don, Don State Technical University
SIMULATION OF A COMBINED PNEUMO-MECHANICAL DRIVE OF A MULTI-TOOL REVOLVER (ROTATING DIVIDING MECHANISM)
- 16-00**
CRUISE ALONG THE VOLGA

THURSDAY, SEPTEMBER 22

Session 1 (Room 325, build. 14) Online: <https://bbb.ssau.ru/b/3aq-0mt-giw-cho>
Fundamental and applied problems in the dynamics and vibroacoustics of machines
Chair: Associated Professor Dmitry Zavershinsky

- 10-00÷10-15**
Online
ID 44
O.V. Ponomareva¹, A.V. Ponomarev¹, N.V. Smirnova²
¹Izhevsk, Kalashnikov Izhevsk State Technical University; ²Russia, Sevastopol, Sevastopol State University
FAST ALGORITHMS FOR TWO-DIMENSIONAL DISCRETE FOURIER TRANSFORM OF VIBROACOUSTIC SIGNALS IN SOLVING PROBLEMS OF CONTROL AND TECHNICAL CONDITION OF MACHINES AND MECHANISMS
- 10-15÷10-30**
Online
ID 45
O.V. Ponomareva¹, A.V. Ponomarev¹, N.V. Smirnova²
¹Izhevsk, Kalashnikov Izhevsk State Technical University; ²Russia, Sevastopol, Sevastopol State University
TWO-DIMENSIONAL DISCRETE FOURIER TRANSFORM WITH VARIABLE PARAMETERS IN SOLVING FUNDAMENTAL PROBLEMS OF DYNAMICS AND VIBRODIAGNOSTICS OF MACHINES
- 10-30÷10-45**
Online
ID 79
O.V. Ponomareva¹, A.V. Ponomarev¹, N.V. Smirnova²
¹Izhevsk, Kalashnikov Izhevsk State Technical University; ²Russia, Sevastopol, Sevastopol State University
REVEALING PARAMETERS OF HIDDEN PERIODICITIES BY PARAMETRIC DFT METHOD IN FUNCTIONAL DIAGNOSTICS OF MACHINES AND MECHANISMS
- 10-45÷11-00**
Online
ID 62
T.N. Dogadina, V.Y. Khromatov
Moscow, NRU "MPEI"
THE DENSITY OF NATURAL FREQUENCIES OF OSCILLATIONS OF ORTHOTROPIC FLAT SHELLS AND PLATES
- 11-00÷11-15**
REFRESHMENTS
- 11-15÷11-30**
Online
ID 47
A.S. Pugachuk¹, V.M. Burkhanova², N.K. Fominykh³
¹Moscow, JIHT RAS; ²Moscow, Bauman Moscow State Technical University;
³Moscow, Bauman Moscow State Technical University
EXPERIMENTAL STUDIES OF WORKING PROCESSES IN THE THERMAL UNIT OF A BACTERIOLOGICAL INCUBATOR
- 11-30÷11-45**
In person
ID 84
A.A. Akopyan, V.V. Kiyashchenko, S.Yu. Ganigin
Samara, Samara State Technical University
THE PROSPECTS OF INDIVIDUAL BIOMECHANICAL MODELLING OF THE HUMAN BODY USING A MOTION CAPTURE SYSTEM BASED ON SDR ARCHITECTURE
- 11-45÷12-00**
In person
ID 86
V.V. Kiyashchenko, A.A. Akopyan, S.Yu. Ganigin
Samara, Samara State Technical University

A SYSTEM BASED ON A SDR FOR DETERMINING THE STRUCTURE OF ENERGYINTENSIVE SUBSTANCES BY NMR

12-00÷12-15
In person

ID 103
D. Evdokimov, I. Bajrikov, A. Nikolaenko, A. Bukatyj, D. Fedorov, S. Bukatyj
Samara, Research Institute of Bionics and Personalized Medicine Samara State Medical University, Ministry of Health of the Russia

OPERATIONAL DESIGN OF A MANDIBULAR IMPLANTIN SOFT TISSUE DEFICIENCY CONDITIONS

12-15÷12-30
Online

ID 112
A. N. Temnov, Yan Naing Oo
Moscow, Bauman Moscow State Technical University

HYDRODYNAMIC ANALOGUE OF THE MOTIONS OF A HEAVY RIGID BODY

12-30÷12-45
In person

ID 132
I. Bajrikov, A. Bukatyj, D.Evdokimov, A. Bajrikov, A. Ushakov, A. Nikolaenko
Samara, Research Institute of Bionics and Personalized Medicine Samara State Medical University, Ministry of Health of the Russia

DESIGNING A JAW IMPLANT MADE OF POLYETHER-ETHER-KETONE (PEEK) MATERIAL TAKING INTO ACCOUNT ANISOTROPY OF MECHANICAL PROPERTIES CAUSED BY THE APPLICATION OF ADDITIVE TECHNOLOGIES

12-45 ÷13-00
In person

ID 111
A.I. Zhuzhukin, K.G. Nepein
Samara, PJSC "UEC – Kuznetsov"

EXPERIMENTAL INVESTIGATION OF VIBRATION MISTUNING FOR THE BLADED WHEELS OF GAS TURBINE ENGINES

13-00 ÷14-00

LUNCH

14-00 ÷14-15
In person

ID 72
A.S. Suvorova, E.M. Sokova, V.A. Sharagina
Nizhny Novgorod, IAP RAS

FINITE ELEMENT MODELING OF NOISE EMISSION IN MECHANOACOUSTIC SYSTEMS WITH ROTATING SUBDOMAINS

14-15 ÷14-30
In person

ID 77
S.A. Smirnov, A.S. Suvorov, N.S. Suslov, I.A. V'yushkina, M.B. Salin
IAP RAS, Nizhny Novgorod

NOISE REDUCTION OF MECHANOACOUSTIC SYSTEMS BY TOPOLOGICAL OPTIMIZATION METHOD

14-30 ÷14-45
In person

ID 69
A.S. Suvorov, V.O. Ereemeev, S.G. Zaitseva, N.V. Balakireva
N.Novgorod, IAP RAS

APPLICATION OF FINITE ELEMENT MODELING TO THE PROBLEM OF DETERMINING HYDRODYNAMIC NOISE GENERATED BY LOCAL INHOMOGENEITY

POSTER PRESENTATIONS

ID 108
A.G. Egorov, A.S. Tisilov, K.A. Sidenko
Togliatti, Togliatti State University

ORGANIZING OF PULSE COMBUSTION OPERATION IN AIR SUSPENSION FLUX

ID 121
M.V. Lavrushin¹, A.Y. Tisarev^{1,2}, K.A. Bedenko¹, A.S. Vinogradov²
¹Samara, PJSC «UEC-Kuznetsov»; ²Samara, Samara National Research University

DEVELOPMENT OF A MATHEMATICAL MODEL OF HOT GAS INGRESS INTO THE TURBINE RIM CAVITY

ID 136
A.B. Бикбова¹, А. Тисарев¹, А. Виноградов²
¹Самара, ПАО Кузнецов; ²Россия, Самара, Самарский университет

ИССЛЕДОВАНИЕ ВЛИЯНИЯ ПАРАМЕТРОВ ЧИСЛЕННОЙ МОДЕЛИ ОБЛЕДЕНЕНИЯ НА ФОРМУ ОБРАЗОВАВШЕГОСЯ ЛЬДА

15-00 ÷18-00	Excursion around Samara University
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18-00	Gala Dinner
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THURSDAY, SEPTEMBER 22

Session 4 (Room 326, build. 14) Online: <https://bbb.ssau.ru/b/xvz-dql-af6-ren>
Signal processing and analysis. Diagnostics and control of technical condition.
 Chair: Professor Ilia Lezin

<p>10-00÷10-15 In person</p>	<p>ID 04 <i>N.A. Sazonnikova, R.V. Uklein</i> Samara, Samara University MULTILATERATION LARGE-SIZED STRUCTURE ELEMENT DISPLACEMENT MEASUREMENT USING LASER TRACKER DURING STATIC LOADING</p>
<p>10-15÷10-30 In person</p>	<p>ID 20 <i>N. A. Sazonnikova, V.N. Ilyukhin, S.V. Surudin, O.S. Efremkin, D.A. Mezentsev</i> Samara, Samara University, AO RSC «Progress» INCREMENTAL FORMING SLIPWAY GEOMETRY MEASUREMENT WITH USING OF A LASER TRACKER</p>
<p>10-30÷10-45 In person</p>	<p>ID 60 <i>A.A. Gretsikov, U.V. Boyarkina, A.I. Danilin</i> Samara, Samara University RADIO-WAVE MOTION TRANSDUCERS FOR CONTROLLING THE DEFORMATION STATE OF TURBINE UNIT SHAFTS</p>
<p>10-45÷11-00 In person</p>	<p>ID 76 <i>R.N. Sergeev, M.N. Osipov, M.D. Limov</i> Samara, Samara University EVALUATION OF THE APPLICATION OF THE SPECKLE PHOTOGRAPHY WITH THE ANNULAR APERTURE FOR THE STUDY OF VIBRATIONS</p>
<p>11-00÷11-15</p>	<p>REFRESHMENTS-</p>
<p>11-15÷11-30 In person</p>	<p>ID 80 <i>M.D. Limov, M.N. Osipov, R.N. Sergeev</i> Samara, Samara University MEASUREMENT OF DYNAMIC CHARACTERISTICS OF STRUCTURES BY THE SPECKLE INTERFEROMETRY ON SINGLE SPECKLE</p>
<p>11-30÷11-45 Online</p>	<p>ID 97 <i>I. Nekrasov¹, V.A. Trapeznikov², N. Kukin³</i> ¹ Russia, Moscow, Laboratory of Schedule Theory and Discrete Optimization; ² Russia, Moscow, Institute of Control Sciences RAS; ³ Russia, Moscow, National Research Nuclear University MEPHI APPLYING ADAPTATION METHODS IN EXPERT DIAGNOSTIC RULES FOR INDUSTRIAL EQUIPMENT – REAL EXPERIENCE</p>
<p>11-45÷12-00 In person</p>	<p>ID 98 <i>A.V. Ivchenko, A.I. Safin</i> Samara, Samara University THE TECHNIQUE IMPROVEMENT FOR GTE-WHEEL OSCILLATION RECORDING BY THE NOISE-PROOF DIGITAL SPECKLE PATTERN INTERFEROMETER</p>
<p>12-00÷12-15 In person</p>	<p>ID 107 <i>V.E. Десятников</i> Нижний Новгород, АО «Опытное конструкторское бюро машиностроения им.И.И.Африкантова» ОСОБЕННОСТИ ВЫЯВЛЕНИЯ ТРЕЩИН В ПОДШИПНИКАХ КАЧЕНИЯ МЕТОДОМ ОГИБАЮЩЕЙ</p>
<p>12-15÷12-30 In person</p>	<p>ID 133 <i>I.A. Karpov</i> Moscow, Institute of Mechanical Engineering named after A.A. Blagonravov ON THE IDENTIFICATION OF DAMPING IN LINEAR VIBRATORY SYSTEMS USING PARAMETRIC ARX-MODELS</p>
<p>12-30÷12-45 In person</p>	<p>ID 201 <i>V.A. Акулов, М.А.Х.Шуджаури</i> г. Самара, Самарский университет ПРОТОТИПИРОВАНИЕ КАК МЕТОДОЛОГИЯ И ЦИФРОВАЯ ТЕХНОЛОГИЯ УПРАВЛЕНИЯ ПРОЕКТАМИ ПАССАЖИРСКИХ ТРАНСПОРТНЫХ СРЕДСТВ</p>
<p>12-45 ÷13-00 In person</p>	<p>ID 056 <i>D.S. Diligenskiy, D.S. Lezhin, D.K. Novikov, S.A. Prokhorov</i> Samara, Samara University EXPERIMENTAL DETERMINATION OF DISSIPATIVE PROPERTIES IN SQUEEZE FILM DAMPERS BY IMPACT METHOD</p>

13-00 ÷14-00	LUNCH
14-00 ÷14-15 In person	ID 089 <i>P.N. Kapustin, T.S. Degtyareva</i> <i>Moscow, Bauman Moscow State Technical University</i> TORSIONAL VIBRATIONS CALCULATION OF A CRANKSHAFT OF A MULTI-ROW RECIPROCATING COMPRESSOR
14-15÷14-30 Online	ID 68 <i>A.D. Tershukova, A.S. Nechaev, M.V. Tenyakov, S.U. Ganigin</i> <i>Russia, Samara, Department of "Radio engineering devices", FSBEI HE "Samara State Technical University"</i> ULTRASONIC SYSTEM FOR MONITORING THE STATE OF THE BODY OF AN UNMANNED OBJECT
14-30 ÷14-45 Online	ID 109 <i>Narveen Kumar, Neelam Choudhary</i> <i>India, Greater Noida, Bennett University</i> EFFECT OF RIGID Baffle IN REDUCTION OF SLOSHING IN THREE-DIMENSIONAL RIGID RECTANGULAR CONTAINER POSTER PRESENTATIONS
	ID 53 <i>О.М. Саубанов</i> <i>г. Томск, ООО «Газпром трансгаз Томск</i> СОВЕРШЕНСТВОВАНИЕ УДАЛЕННОЙ ДИАГНОСТИКИ ГАЗОПЕРЕКАЧИВАЮЩИХ АГРЕГАТОВ НА БАЗЕ ШТАТНОГО ОБОРУДОВАНИЯ.
	ID 200 <i>D.V. Fomin¹, A.E. Golikh¹, D.S. Tarasov²</i> <i>¹Blagoveshchensk, Amur State University; ²Branch of JSC "Center for the Operation of Ground—based Space Infrastructure" - "Vostochny Space Center"</i> DESIGN AND CALCULATION OF NATURAL OSCILLATION FREQUENCIES OF TRANSPORT AND LAUNCH CONTAINER SIMULATORS FOR NANOSATELLITES

15-00 ÷18-00	Excursion around Samara University
18-00	Gala Dinner

FRIDAY, SEPTEMBER 23

Session 7 (Room 325, build. 14) Online: <https://bbb.ssau.ru/b/3aq-0mt-giw-cho>
Dynamics of control systems. Mechatronic systems.
Chair: Professor Sergey Matiunin

10-00÷10-15 Online	ID 27 <i>I.Sh. Nasibullayev¹, O.V. Darintsev^{1,2}</i> <i>¹Ufa, Mavlyutov Institute of Mechanics, UFRC RAS; ²Ufa, Ufa State Aviation Technical University</i> FINITE ELEMENT MODEL OF MANIPULATOR FOR CALCULIX SOLVER
10-15÷10-30 Online	ID 28 <i>I.Sh. Nasibullayev</i> <i>Ufa, Mavlyutov Institute of Mechanics, UFRC RAS</i> PARAMETRIC SIMULATION OF UNSTEADY THERMOHYDRODYNAMIC REGIME IN MICROGRIPPER COOLING SYSTEM
10-30÷10-45 Online	ID 48 <i>L.A.Kotkas, N.A.Zhurkin, A.S. Donskoj, A.AZharkovskij</i> <i>St. Petersburg, Peter the Great St. Petersburg Polytechnic University</i> POSITION CONTROL OF PNEUMATIC ARTIFICIAL MUSCLE MANIPULATOR
10-45÷11-00 Online	ID 75 <i>A.A. Solyatov, V.S. Sidorenko</i> <i>Rostov-on-Don, Don State Technical University</i> SYSTEM OF MECHATRONIC ADAPTIVE BRAKING CONTROL MODULES
11-00÷11-15	REFRESHMENTS
11-15÷11-30 Online	ID 110 <i>D.A. Korotych, V.S. Sidorenko, V.I. Grishenko</i> <i>Rostov-on-Don, Don state technical university</i> DYNAMICS OF A JET POSITIONAL PNEUMATIC DRIVE SYSTEM FOR LONG-STROKE INSTALLATION MOVEMENTS

- 11-30÷11-45**
Online
ID 114
V. Zasov, P. Melnikov
Samara, Samara State Transport University
ADAPTIVE INTERFERENCE CANCELLERS WITH ADAPTIVE DECORRELATION
- 11-45÷12-00**
In person
ID 116
V.N. Belopukhov, P.E. Podlypnov
Samara, Samara Federal Research Scientific Center RAS, Institute for the Control of Complex Systems RAS
STUDY OF ALGORITHMS FOR STABILIZING THE CONSTANT COMPONENT OF THE OUTPUT SIGNAL OF THE MEASURING CIRCUIT WITH A SINGLE-COIL EDDY CURRENT SENSITIVE ELEMENT IN THE SYSTEMS FOR DEBRIS MONITORING OF FRICTION PAIRS OF POWER PLANTS
- 12-00÷12-15**
In person
ID 123
A.K. Britenkov¹, A.A. Zaycev², D.A. Kosteev¹, M.V. Pakhomov², A.A. Ponomarenko^{1,3}, M.B. Salin¹, R.V. Travin¹
¹ Russia, Nizhny Novgorod, Institute of Applied Physics RAS; ² Russia, Murmansk, Murmansk Marine Biological Institute; ³ Russia, Nizhny Novgorod, HSE University
PROBLEMS OF IMPLEMENTING INSTRUMENTS AND METHODS FOR MARINE ANIMALS COMMUNICATION SIGNALS RESEARCH
- 12-15÷12-30**
In person
ID 140
A.K. Britenkov^{1,2}, B.N. Bogolybov¹, M.S. Norkin^{1,2}, R.V. Travin², S.B. Zakharov²
¹ Russia, Nizhny Novgorod, Institute of Applied Physics, Russian Academy of Sciences; ² Russia, Nizhny Novgorod, Lobachevsky State University of Nizhniy Novgorod
VIBROMECHANICAL CHARACTERISTICS OF THE EMITTING SHELLS OF SMALL-SIZED LOW-FREQUENCY HYDROACOUSTIC PIEZOELECTRIC HIGH POWER DENSITY TRANSDUCERS
- 12-30÷12-45**
Online
ID 142
Yayun Zhang, Jinghui Peng, Songjing Li
China, Harbin, dept. of fluid control and automation harbin institute of technology
NUMERICAL SIMULATION OF HIGH-TEMPERATURE GAS FLOW RATE CONTROL VALVE WITH LAVAL STRUCTURE BY FLUID-THERMAL-STRUCTURE COUPLING
- 12-45÷13-00**
Online
ID 85
S.Yu. Ganigin, I.D. Ibatullin, A.S. Nechaev, E.S. Markelova
Samara State Technical University
ROTOR BALANCING CONTROL SYSTEM WITH PERFORMANCE EVALUATION ACCORDING TO THE VIBRATION INDICATORS OF THE SUPPORT ELEMENTS OF THE MECHANICAL SYSTEM
- 13-00 ÷14-00**
LUNCH
- 14-00÷14-15**
In person
ID 141
M.N. Dadychenkov¹, M.A. Ermilov², V.A. Kozlov¹, A.N. Kryuchkov², A.V. Shmotikov¹
¹ St. Petersburg, JSC "SSTC"; ² Samara, Samara University
DEVELOPMENT OF STRUCTURAL ELEMENTS AND EXPERIMENTAL WORKS TO ENSURE THE CREATION OF LOW-NOISE CONTROL FITTINGS
- 14-15 ÷14-30**
In person
ID 137
S.A. Asfandiyarov¹, T.M. Tomilina¹, M.L. Litvak^{2,1}
¹ Moscow, Blagonravov Institute of Mechanical Engineering; ² Moscow, Space Research Institute
NUMERICAL CALCULATION OF VIBRATION AND IMPACT STRENGTH OF A MULTI-ELEMENT STRUCTURE OF SPACE APPLICATION BY THE FINITE ELEMENT METHOD
- POSTER PRESENTATIONS**
- ID 07**
V.A. Shishkov
Tolyatti, Palladio LLC
METHOD OF SUPPLYING FUEL TO AN INTERNAL COMBUSTION ENGINE
- ID 92**
M.V. Stepanov
Samara, Samara University
FIBER-OPTIC PRESSURE SENSOR ON THE BASIS OF GRADIENT-LENS FOR MEKHATRONNY SYSTEMS

FRIDAY, SEPTEMBER 23

Session 3 (Room 326, build. 14)

Online: <https://bbb.ssau.ru/b/xvz-dqj-af6-ren>

Noise and vibration reduction of machinery and equipment

Chair: Professor Alexander Igolkin

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| <p>10-00 ÷10-15
Online</p> | <p>ID 39
A.A. Taratorin, <u>A.B. Mukhametov</u>
Moscow, National Research University "MPEI"
ACOUSTIC AND AERODYNAMIC PROPERTIES OF THE PETAL-SHAPED ABSORPTIONSILENCER</p> |
| <p>10-15 ÷10-30
In person</p> | <p>ID 43
<u>A.I. Komkin</u>, T.G. Karakaeva, A.I. Bykov
Moscow, SBauman Moscow State Technical University
IMPEDANCE OF AN ORIFICE IN NON-LINEAR REGIMES WITH GRAZING FLOW</p> |
| <p>10-30 ÷10-45
In person</p> | <p>ID 66
A.Ya. Zverev, <u>V.V. Chernyh</u>
Moscow, Central Aerohydrodynamic Institute named after Prof. N.E. Zhukovsky (TsAGI), Moscow branch
ON ACOUSTIC AND VIBROACOUSTIC CHARACTERISTICS OF MULTILAYER COMPOSITE PANELS</p> |
| <p>10-45 ÷11-00
In person</p> | <p>ID 71
<u>F.A. Zaripov</u>, G.I. Pavlov, O.R. Sitnikov
Kazan National Research Technical University named after A.N. Tupolev
EXPERIMENTAL STUDY OF THE EFFICIENCY OF DAMPING RESONANT OSCILLATIONS IN A LIQUID BY ADDING GAS</p> |
| <p>11-00÷11-15</p> | <p>REFRESHMENTS-</p> |
| <p>11-15 ÷11-30
In person</p> | <p>ID 67
D.A. Ivanova, <u>A.M. Bazinenkov</u>, V.S. Sherbakova, V.P. Mikhailov
Moscow, Bauman Moscow State Technical University
INVESTIGATION ON THE MECHANICAL PROPERTIES OF A MAGNETOACTIVE ELASTOMER FOR A VIBRATION CONTROL SYSTEM IN A VACUUM PROCESSING MEDIUM</p> |
| <p>11-30 ÷11-45
In person</p> | <p>ID 90
<u>A.M. Bazinenkov</u>, V.S. Shcherbakova, S.V. Sidorova, D.A. Ivanova
Moscow, Bauman Moscow State Technical University
THIN-FILM ELECTRODEA OF DIELECTRIC ELASTOMERS ACTUATORS BASED FOR ACTIVE VIBRATION CONTROL SYSTEM</p> |
| <p>11-45 ÷12-00
In person</p> | <p>ID 91
<u>A.M. Bazinenkov</u>, A.K. Shagimuratova, I.V. Makeev, V.A. Bakharev, V.V. Mukhanov
Moscow, Bauman Moscow State Technical University
THIN-FILM ELECTRODEA OF DIELECTRIC ELASTOMERS ACTUATORS BASED FOR ACTIVE VIBRATION CONTROL SYSTEM</p> |
| <p>12-00 ÷12-15
Online</p> | <p>ID 115
<u>I.V. Khramtsov</u>, V.V. Palchikovskiy, A.A. Kuznetsov
Perm, Perm National Research Polytechnic University
INVESTIGATION OF THE IMPEDANCE ALONG THE SURFACE OF THE ACOUSTIC LINER SAMPLE BASED ON NUMERICAL SIMULATION</p> |
| <p>12-15 ÷12-30
In person</p> | <p>ID 143
<u>S.N. Ponomareva</u>, A.S. Grebennikov, T.M. Tomilina
Moscow, Blagonravov Institute of Mechanical Engineering
ON THE PRACTICE OF CONDUCTING VIBRATION AND SHOCK TESTS OF SPACE INSTRUMENTS</p> |
| <p>12-30÷12-45
In person</p> | <p>ID 146
A.A. Igolkin, A.G. Filipov
Samara, Samara University
ON ACCOUNTING FOR LOCAL NONLINEARITY OF A SPACE VEHICLE DESIGN IN VALIDATION OF ITS FINITE ELEMENT MODEL</p> |

12-45÷13-00

Online

ID 06

P.A. Popov

Samara, JSC RCC Progress

DEVELOPMENT OF EXPERIMENTAL EQUIPMENT FOR ASSESSING THE SOUNDPROOFING CHARACTERISTICS OF THE DESIGN OF ASSEMBLY-PROTECTIVE UNIT

13-00÷14-00

LUNCH

14-00÷14-15

Online

ID 113

K.N. Pantyukhin¹, N.E. Nicolaev²

¹ Kazan, JSC Kazan Helicopters; ² Russia, Kazan, Kazan National Research Technical University

MATHEMATICAL MODEL OF BLADE OSCILLATIONS ON ELASTIC HUB OF HELICOPTER MAIN ROTOR WITH INERTIAL VIBRATION ABSORBER

14-15÷14-30

Online

ID 127

V. Korolskii, V. Eremin, A. Bolshikh, P. Klykov

Moscow, Moscow Aviation Institute (National Research University)

FINITE ELEMENT METHOD MODELLING OF A BUMPER ELEMENT USING A FRONT DEFORMED IMPACTOR ACCORDING TO UNECE NO. 94-01

14-30÷14-45

Online

ID 138

A.V. Pakhomenkov¹, S.A. Bukatyi²

¹Rybinsk, PJSC 'UEC-Saturn'; ² Russia, Samara, Samara University

FORECASTING THE ESTIMATED LIFE OF PARTS BASED ON THE IMPACT OF ANALYTICAL AND OPERATIONAL FACTORS

POSTER PRESENTATIONS

ID 23

A. Yu. Patrushev, M.M. Serov

Moscow, Moscow Aviation Institute (National Research University)

SOUND-ABSORBING STRUCTURES MADE OF POROUS-FIBROUS MATERIALS

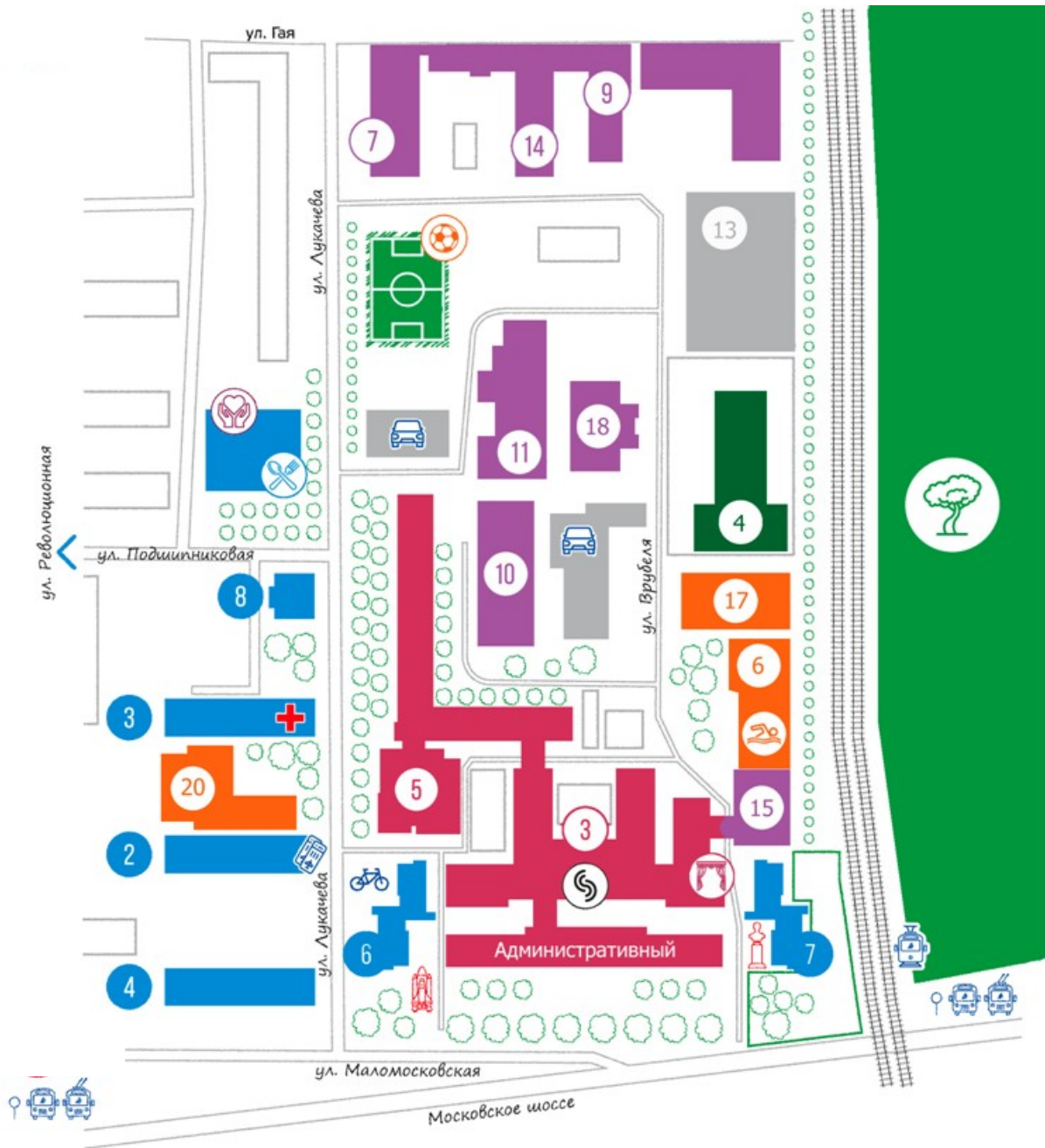
ID 126

V.I. Chernyshev, R.N. Polyakov, O.V. Fominova

Orel, Oryol State University named after I.S. Turgenev

CONTROLLED VIBRATION PROTECTION SYSTEMS: OPTIMIZATION AND ENERGY EFFICIENCY

CAMPUS MAP



SAMARA, 2022