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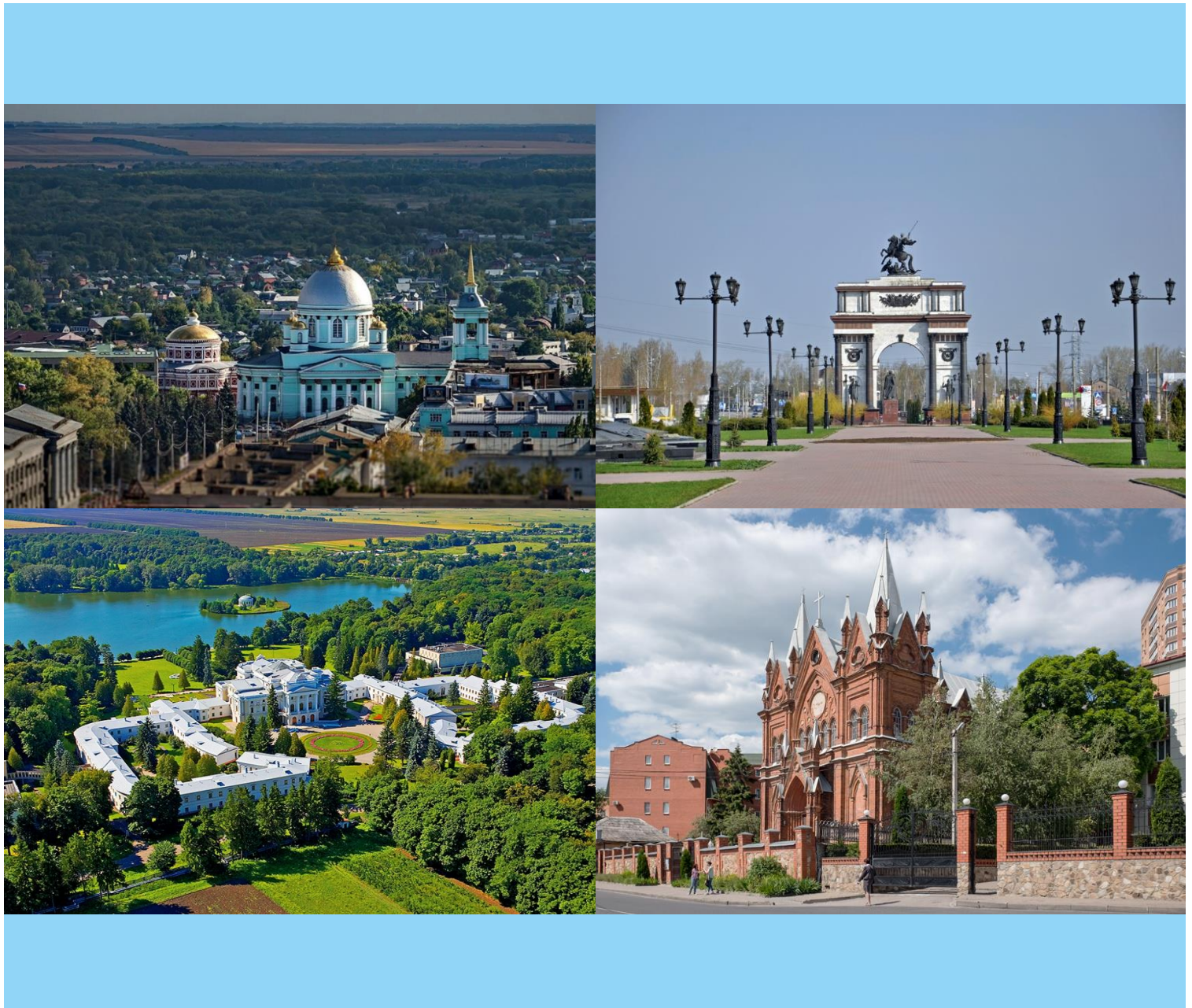
International Scientific and Practical Conference "Modern Problems in Construction: Setting Tasks and Ways to Solve Them"

18th – 19th November 2021

Southwest State University, Kursk, Russian Federation



CONFERENCE PROGRAM



Thursday, 18th November 2021

Time zone: UTC+03:00

12:00 – 12:40 Room 1 – Plenary

Chairman: Ass. Prof. Marina ZVYAGINTSEVA

Prof. Alexey PYKHTIN, Vice-Rector of Southwest State University

Prof. Carlos Marmolejo-Duarte, Polytechnic University of Catalonia

Ass. Prof. Lino Bianco, University of Malta

12:40 – 14:00 Lunch break

PARALLEL SESSIONS

14:00 – 16:20 Room 1 – Session 1 -
Environmental Engineering and
Sustainability

Chairman: Prof. Alexey PYKHTIN

Improving the reliability of gas distribution networks

Kuznetsov Sergey, Kolosov Aleaxander, Galina Shchedrina, Kuznersova Galina

Hydrodynamics of the flow of an ideal liquid when it flows out of the bottom hole of a parabolic tank

Boris Kumitskiy, Svetlana Tul'skaya, Viktor Morozov, Egor Aralov, Victor Budnikov

Prognostic approach to sustainable development in urban planning analysis of green areas

Yana Zolotukhina, Ekaterina Prokshits, Semyon Podvalny, Yulia Pashchenko, Tatiana Polivanova

Implementation of the calculation program to optimize the routing of heating networks

Ekaterina Kopytina, Evgeny Umerenkov, Anastasia Chuikina, Natalya Petrikeeveva, Dmitry Chudinov

The temperature control methods for the heat supply system of buildings and structures

Dmitry Tyutyunov, Aleksey Pihtin, Aleksey Borodin

14:00 – 15:30 Room 2 - Session 2 -
Building Materials

Chairman: Specialist of the KURSK NUCLEAR POWER PLANT State Enterprise Vasily AMELIN

Experimental establishment of the required number of experiments per point in determining the thermal fluctuation constants of the generalized Zhurkov for the method of direct temperature and control point

Alexander Erofeev, Timofey Gorokhov

Aging and long-term mechanical impact in the durability of wood composites

Semyon Mamontov, Aleksandr Mamontov, Pavel Monastyrev, Sergey Emelianov, Ekaterina Pakhomova

Component compositions of mixtures of cement-wood heat-insulating material

Natalia Kuznetsova, Artem Seleznev, Valeria Tolmacheva

The use of ash and slag waste in the production of building materials

Olga Sotnikova, Elena Zhidko, Vladislav Pakhomov, Sergei Tenyachkin

Thermofluctuation constants of built-up section wooden beams without special ties

Aleksandr Erofeev, Pavel Monastyrev

<p>Two-dimensional temperature fields of variants design of a double-skin facade structure Angelina Tkachuk, Elina Umerenkova, Andrey Goikalov, Mikhail Novikov</p> <p>Heat exchanger with heat pipes Natalia Semicheva, Artem Umerenkov</p> <p>Method for analysis of hierarchies for development of gas industry enterprises Galina Martynenko, Vitaly Zhmakin, Vera Ukhlova, Vladimir Lukyanenko, Maria Popova</p> <p>Using linear equations in calculating the heat capacities of gases Dmitry Kitaev, Svetlana Tulskaia, Vitaly Zhmakin</p> <p>The mathematical model of a multilayer wall of a plate heat exchanger Vladimir Yezhov, Natalia Semicheva, Aleksey Burtsev, Nikita Perepelitsa</p> <p>The mathematical model of automated control of heat flows in the supply and exhaust ventilation system Dmitry Tyutyunov, Alexey Burtsev, Nikita Perepelitsa, Alexander Burtsev</p>	<p>Hardening mode and foam concrete properties Mikhail Novikov, Andrey Goykalov, Elvira Semenova, Vladislav Pakhomov</p> <p>15:30 – 16:00 Coffee break</p> <p>15:00 – 15:30 Room 2 - Session 3 - Concrete, Steel and Timber Structures</p> <p>Chairman: Specialist of the KURSK NUCLEAR POWER PLANT State Enterprise Vasily AMELIN</p> <p>IR spectroscopic analysis of plywood aging Semyon Mamontov, Aleksandr Mamontov, Pavel Monastyrev</p> <p>Effects of Basalt Fibre on the Strength of Concrete Alexey Bulgakov, Klaus Holschemacher, Iuliia Davidenko, Vladimir Bredikhin</p>
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Friday, 19th November 2021

Time zone: UTC+03:00

PARALLEL SESSIONS

<p>10:00 – 11:30 Room 2 - Session 4 - Construction and Structural Mechanics</p>	<p>12:00 – 12:30 Room 2 - Session 5 – Surveying and Geographical Information Systems</p>
<p>Chairman: Ass. Prof. Marina ZVYAGINTSEVA</p> <p>Analysis of the implemented project for the construction of a high-rise building between two low-rise buildings in the zone of maximum mutual influence of their foundations Ali AL – Bukhaiti, Viktor Ledenev, Yaroslav Savinov, Olga Umnova</p> <p>Experimental studies of the effect of reinforcement on the bearing capacity of a sandy base under static and cyclic loading</p>	<p>Chairman: BIM manager of LLC "Europroject Group of Artem BREZHNEV</p> <p>Comparing Embedded Technologies for Aerial Geomatics Using Unmanned Aerial Systems Alexey Bulgakov, Daher Sayfeddine, Wen-der Yu, Natalia Buzalo</p>

Vasiliy Antonov, Ibtehal Abdolmonem Al-Naqdi., Pavel Monastyrev, Sergey Emelianov, Ekaterina Pakhomova

The Study of the Stability of Statically Indeterminate Frame-rod Structural Systems Made of Timber, Considering the Deteriorating Support Conditions

Alexey Bulgakov, Ksenia Dubrakova, Dmitrii Mishin, Klaus Holschemacher

Methods for Calculating Rectangular Section Beams Made of Timber and Concrete

Alexey Bulgakov, Klaus Holschemacher, Ksenia Dubrakova, Viacheslav Aseev

Operability of Frame Buildings in the Event of an Emergency Situation Associated with the Subsidence of the Base of one of the Supports

Alexey Bulgakov, Klaus Holschemacher, Ksenia Dubrakova, Pavel Maltsev

Determination of homogeneous foundation's settlement based on the integral estimation method

Ksenia Dubrakova, Alexey Bulgakov, Thomas Bock

The effect of long-term storage on the compressive strength along the grain of pine timber

Alexander Masalov, Viktoriia Solodilova

Experimental study of deformation of flexible timber compressed elements under environmental loading

Alexey Bulgakov, Jens Otto, Sergei Dubrakov, Denis Shvartcer

13:00 – 14:30 Room 2 Poster Session Hall - Poster Session

Chairman: BIM manager of LLC "Europroject Group of Artem BREZHNEV

The new effect of reinforced concrete for crack resistance and rigidity based on mechanics of fracture under bending with torsion

Vladimir Kolchunov

Variant of the Formula for the Calculated Resistance of the Soil for Plate Foundations

Alexey Bulgakov, Jens Otto, Iuliia Matvienko, Oksana Osipova

Numerical modeling of steel joints

Anastasia Alekseeva, Nina Buzalo, Jens Otto, Alexey Bulgakov

Fast-hardening slag-alkaline heat-resistant aerated concrete of increased heat resistance with additives of fly ash of Novochoerkassk SDPP

Alexey Bulgakov, Jens Otto, Arsen Avakyan, Kirill Protsenko, Gennadiy Skibin, Alexander Mikheev

Bulldozer Sensing Technique for the Purpose of Automation for Bulldozer's Workflow

Alexey Bulgakov, Georgii Tokmakov, Wen-der Yu

14:30 - 14:45 Room 2 - Closing of the conference