

# Preface

The International Scientific and Technical Conference «Construction and Architecture: Theory and Practice of Innovative Development» (CATPID-2021 Part I) was held from July 01 to 05, 2021, in Nalchik. CATPID-2021 part 1 was held in a separate conference format for the fourth time.

The work of the conference is aimed at providing an opportunity for scientists, graduate students, and representatives of the construction industry to generalize the recent achievements results in the field of industrial and civil construction (design, organization of all types of work, construction materials, etc.), discussing promising directions for the construction industry development and establishing useful partner relationships for future interaction.

The conference is held on numerous topics:

- Structural mechanics and structural theory, civil and industrial construction
- Architecture, design, and reconstruction of architectural heritage
- Building materials and technologies of binders, concrete, and building ceramics
- Deformable Solid Mechanics
- Computational methods, mathematical models, and information technology in construction
- Organization and technology of construction production. Geodesy, cartography, and photogrammetry
- Innovations in engineering communications
- Engineering and technology of land transport
- Construction of roads, bridges, tunnels, and airfields
- The economy in the industry
- Reliability, efficiency, and safety of objects of fuel and energy and construction complexes
- Natural and technosphere safety

303 participants from 25 regions of the Russian Federation and 18 participants from 5 countries near and far abroad (Poland, Vietnam, Germany, Belarus, Lithuania, Armenia, Ukraine, Czech Republic, Uzbekistan) were registered for the conference in May 2021.

The important problems of construction and architecture (from ideas and projects to immediate implementation) are raised. The ways of their solution and optimization are suggested in the reports presented in frameworks of these topics. Many reports were prepared as a benefit of the state support of science in the forms of grants, federal target programs, resolutions of the Government of the Russian Federation, and other programs.

Particular attention is paid to young researchers, whose works are evaluated separately. The general impression associated with the organization and holding of the conference is very positive.

Annual holding of such conferences is planned to be organized on the main topics of the construction industry.

## Editors:

Batr Yazyev

ps62@yandex.ru

Stepan Litvinov

litvstep@gmail.com

Anastasia Lapina

nasty-a-L1@yandex.ru

Anastasia Kotesova

a.kotesova@mail.ru

Oksana Akay

oksanaakay@gmail.com

## Committees

## Conference Chairman

Pavel Akimov Russian Academy of Architecture and Building Sciences

## **Deputy Chairman of the Organizing Committee**

Batyr Yazyev Don State Technical University

## Organizing Committee Co-Chairs

Besarion Meskhi	Don State Technical University
Nikolay Karpenko	Department of Building Sciences
Yuri Konoplev	Academy of Sciences of the Republic of Tatarstan
Yuri Altudov	Kabardino-Balkarian State University named after H.M. Berbekov
Svetlana Khashirova	Kabardino-Balkarian State University named after H.M. Berbekov
Zaven Ter-Martirosyan	Moscow State University of Civil Engineering
Boris Sokolov	Kazan Giproniaviaprom JSC
Viktor Fedorov	Russian University of Transport
Valery Azarov	Volgograd State Technical University
Sergey Fedosov	Moscow State University of Civil Engineering
Vladimir Erofeev	Ogarev Mordovia State University
Levon Mayilyan	Self-regulatory organization Association “Association of builders of the South and North Caucasus districts”
Vitaliy Kolchunov	Russian Academy of Architecture and Building Sciences
Vladimir Travush	Russian Academy of Architecture and Building Sciences
Linar Sabitov	Kazan State Power Engineering University
Irina Akhmetova	Kazan State Power Engineering University
Vladimir Andreev	Moscow State University of Civil Engineering
Aleksey Beskopylny	Don State Technical University
Sergey Kalashnikov	Volgograd State Technical University
Ashot Tamrazyan	Moscow State University of Civil Engineering
Armen Ter-Martirosyan	Moscow State University of Civil Engineering
Vladimir Sidorov	Russian University of Transport
Vladimir Mondrus	Moscow State University of Civil Engineering
Valery Lesovik	Belgorod State Technological University named after V.G. Shukhov
Alexander Belostotsky	Russian University of Transport
Sergey Evtushenko	Moscow State University of Civil Engineering
Valeria Pshenichkina	Volgograd State Technical University
Vladimir Bondarenko	Don State Agrarian University
Nail Kashapov	Kazan Federal University
Tolya Hezhev	Kabardino-Balkarian State University named after H.M. Berbekov
Mukhtar Bekkiev	High Mountain Geophysical Institute
Dmitry Mayilyan	Don State Technical University
Sergey Pushenko	Don State Technical University
Iftikhar Abbasov	Southern Federal University
Stepan Litvinov	Don State Technical University

## **Honorary Members of the Organizing Committee**

Alexey Adamsevich	Moscow State University of Civil Engineering
Gatiyatov Ilnur	Kazan State Power Engineering University
Zaripov Marcel	SO "Sozidanie", Kazan
Nabiullina Karina	Kazan Federal University
Oleg Radaykin	Kazan State University of Architecture and Engineering
Stanislav Roshchupkin	Sevastopol State University
Victor Taratuta	Kuban State Agrarian University
Nail Farilovich	Kazan State Power Engineering University
Svetlana Yazyeva	Don State Technical University

## **International Program Committee**

Shan Yue	Shandong Jiaotong University
Lyu Chunguan	Shandong Jiaotong University
Chariyar Amansahatov	Deputy Director of the Academy of Sciences of Turkmenistan
Erkin Nafasov	Chief expert of Gosstroy of Turkmenistan
Abbas Hodzhaev	Tashkent architecture and civil engineering institute (TACII)
Zaynalobuddin Kobuliev	Institute of Water Resources and Ecology of the Academy of Sciences of the Tajikistan Republic
Zbigniew Wójcicki	FCE WrUT, PL
Stanisław Jemioło	FCE WUT, PL
Artur Zbiciak	FCE WUT, PL
Dietmar Wiegand	TU Wien, Austria
Vera Steiner	FH Wien, Austria
Milan Radosavljevic	Paisley, Renfrewshire, United Kingdom
Christian Hellmich	TU Wien, Austria

## **Organising Committee of the Conference (Editorial Board)**

Oksana Akay	Don State Technical University
Alina Golubeva	Don State Technical University
Igor Dolbin	Kabardino-Balkarian State University named after H.M. Berbekov
Sergey Klyuev	Belgorod State Technological University named after V.G. Shukhov
Anastasia Lapina	Don State Technical University
Stepan Litvinov	Don State Technical University
Anastasia Kotesova	Don State Technical University
Svetlana Yazyeva	Don State Technical University
Georgy Molokanov	Kabardino-Balkarian State University named after H.M. Berbekov
Luiza Seferyan	Don State Technical University
Serdar Yazyev	Don State Technical University