

Dear colleagues,

We would like to invite you to attend the International Forum "*GeoBuilding 2020*" - "*Geospatial Solutions for Structural Design, Construction and Maintenance*" including the exhibition and the business program that will be held on 25–27 March 2020 at the AZIMUT Hotel Siberia in Novosibirsk, Russian Federation.

HOSTED BY: 21 Lenina Street, Novosibirsk, Russia (reservations.sibir@azimuthotels.com)

FORUM ORGANIZERS:

- Novosibirsk State University of Architecture and Civil Engineering (Sibstrin)
- Construction Association of Novosibirsk Region (SRO ASONO)
- ISPRS WG V/7
- Exhibition operator "ExpoGEO" LLC

CO-ORGANIZERS:

- Ministry of Construction, Housing and Utilities of the Novosibirsk Region
- Department of Construction and Architecture of the Mayor's Office of Novosibirsk
- Environmental Protection Company, LLC, Novosibirsk, Russian Federation
- Institute "PHEDCS", Prague, Czech Republic

SPONSORS:

- Construction Association of Novosibirsk Region (SRO ASONO), Russian Federation
- RIEGL Laser Measurement Systems GmbH, Horn, Austria
- Environmental Protection Company, LLC, Novosibirsk, Russian Federation

FORUM AGENDA:

This event is aimed at integration of geospatial data obtained by means of advanced electronic and digital measuring tools and techniques (remote sensing), data processing and interpretation with design, construction and maintenance of engineering structures that makes possible to completely switch to 3D, BIM technologies, detailed quality control, to implement the process of transparent construction that will become an important stage to change-over to the new technology level in building industry. All these measures are aimed at improving the efficiency and quality of construction.

Within the International forum "GeoBuilding 2020" it is planned to hold the following events: conferences, round-tables, workshops on engineering, geological, geophysical and geochemical surveys and information management of construction with participation of representatives from the federal authorities, Russian, CIS and foreign design and construction companies and users.

FULL PAPER DEADLINE: 10 March 2020

GENERAL THEMES AND TOPICS:

1. Engineering surveys and design of engineering structures using 3D technologies

- Design quality increase and risk prevention. Soft transition from surveying toward BIMbased design
- Design of capital construction facilities and engineering structures
- 2. Territorial development management
 - Master plans, large metropolitan areas, and rural settlements
 - Comprehensive territorial development. Risk management in large metropolitan areas, health protection zones, green zones and urban forests, and environmental aspects

3. Architecture and design, application of digital technologies

- Façade certificates
- Historical and cultural heritage sites, recreations, visitor streets, and urban territories
- Real properties design by laser scanning data
- 4. Advanced measuring and geospatial data collection tools
 - Robotic systems, laser scanners, and BIS

5. Construction and reconstruction of buildings and structures

- Construction compliance monitoring. Construction verification
- Complete geometry control. Transparent construction
- Construction of suspended facades
- Building survey by laser scanning data
- Virtual and augmented reality
- Bank supervision in construction. Construction risk management. Risk insurance
- Construction project management

6. Road construction and operation

- Automated technologies for road construction
- Regulatory and engineering provision
- Road construction compliance monitoring
- Application of laser scanning in road construction and operation

7. Facilities Management (buildings, structures, industrial facilities and territories, housing and utilities facilities)

- Generation of 3D and BIM models of industrial facilities (industrial estates, workshops, energy supply facilities, communications)
- Effective management of residential buildings, social and public buildings and structures, application of smart management systems
- Geotechnical monitoring of buildings and structures. Implementation of automated monitoring systems
- 3D modelling of oil and gas industrial facilities
- BIM-based housing facilities management
- Application of 3D and BIM in property accounting

8. Digital technologies in mining

- Generation of digital mining models
- Mine management
- Determination of mine output and mine stripping
- Wall stability observations
- Mining documents
- Resloping of pit shafts
- Application of laser scanning and UAVs

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