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## IV International Conference «Safety Problems of Civil Engineering Critical Infrastructures

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## PREFACE

This volume contains conference proceedings of the IV International Conference on safety problems of civil engineering critical infrastructures «Safety2018» held on 4<sup>th</sup> – 5<sup>th</sup> October 2018 at Ural Federal University in Ekaterinburg, Russia

The main conference purpose is integration and coordination of efforts of scientists, experts and specialists in the field of integrated risk analysis related to building interdependent critical infrastructures throughout their life cycle at the international level. Design, fracture mechanics problems, diagnostics, monitoring, maintenance, survivability and optimal management of infrastructure systems issues is considered in the context of the creation and operation of safe, smart and durable infrastructure systems. Question of the creation of real conditions and a practical mechanism for an innovative scientific, educational and organizational breakthrough is one of the most important problems of the twenty-first century – safety and sustainable development of cities, regions and worldwide taking into account the human factor.

The objectives of Safety2018 are to collect and disseminate state-of-the-art research and technology for design, fracture mechanics problems, diagnostics, monitoring, maintenance, survivability and optimal management of infrastructure systems issues is considered in the context of the creation and operation of safe, smart and durable infrastructure systems.

The conference proceedings contain 60 papers, which are divided into 9 sections:

Safety technologies for building critical infrastructure and territories; Vitality of interdependent critical infrastructures; Statistical modeling of loads and impacts on building structures and buildings; Problems of viable and smart cities and sustainable development of territories; Energy efficiency and resource saving in the civil engineering; Information modeling technology in the construction industry; Building technology and materials of innovative type; Education in architecture and civil engineering; Expertise and management in construction.

We thank all authors of submitted papers for their participation. They contributed a great deal of effort and creativity to produce this work. We appreciate that they have chosen the IV International Conference on safety problems of civil engineering critical infrastructures to present their work. Many thanks also to all editors and reviewers, who donated substantial time to carefully read and evaluate the submitted papers.

At last but not at least, we would like to appreciate to all supporting organizations for their support and encouragement and making the event a success.

In addition, we would like to thank also to Organizing Committee for their great preparing work.

We look forward to the next 5<sup>th</sup> International Conference on Safety Problems of Civil Engineering Critical Infrastructures «Safety2019» that will be held next year on May at the same location. We hope that it will as be interesting and enjoying as all four predecessors.

Ekaterinburg, October 2018

Professor  
Vladimir Alekhin

Professor  
Lawrence Boswell

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