

# PREFACE

We are pleased to present selected papers from the Proceedings of the 12<sup>th</sup> International Conference on New Trends in the Statics and Dynamics of Buildings, held on October 16 -17, 2014, in Bratislava, Slovakia. The conference was organized by the Slovak University of Technology in Bratislava, Faculty of Civil Engineering, in cooperation with the Slovak Society of Mechanics, Slovak Academy of Science in Bratislava.

The purpose of this conference is to provide a forum for scientists and experts to obtain the latest knowledge concerning technologies and the development of numerical methods in the statics and dynamics of buildings and to discuss actual problems concerning theoretical and experimental trends in structural analysis. Now in its second decade, the conference is well established as a platform for researchers working in the area of the statics and dynamics of buildings to share their knowledge with colleagues interested in the same area of study.

The conference is focused on major problems in research and development in the following areas:

- Seismic Behavior of Structures
- Aeroelasticity of Structures
- Thermomechanics and Fire Resistance
- Structure-Subgrade Interaction
- Optimization of Structures
- Life Span and Safety of Structures
- Damage to and Failure of Structures
- Diagnostics and Experimental Analysis

The presented publication is divided into three chapters: Chapter 1: Statics and Stability of Civil Structures, Chapter 2: Dynamics and Wind Engineering, Chapter 3: Problems in Material Engineering. The papers are oriented towards an enhancement of the efficiency and quality of building structures as well as their safety and reliability. All the papers published in this issue have gone through a scientific review and editorial scrutiny. We believe that the results of the scientific work presented in this issue will prove to be a valuable source of the knowledge and experience acquired by these experts for all of its readers.

We would like to express our special thanks and appreciation to all of the members of the organizing and scientific committee, the authors, the participants, the reviewers and all of the others who contributed to the organization of the conference.

Editors

# Scientific Committee

## **Chairman:**

**Jendzelovsky Norbert**      Slovak University of Technology Bratislava, Slovakia

## **Members:**

<b>Bencat Jan</b>	University of Zilina, Slovakia
<b>Gyorgyi Jozsef</b>	Budapest University of Technology and Economics, Hungary
<b>Janas Petr</b>	VSB-Technical University of Ostrava, Czech Republic
<b>Kralik Juraj</b>	Slovak University of Technology Bratislava, Slovakia
<b>Maca Jiri</b>	Czech Technical University in Prague, Czech Republic
<b>Melcer Jozef</b>	University of Zilina, Slovakia
<b>Novak Drahomir</b>	Brno University of Technology, Czech Republic
<b>Partov Doncho</b>	Higher School of Civil Engineering (VSU) Sofia, Bulgaria
<b>Ravinger Jan</b>	Slovak University of Technology Bratislava, Slovakia
<b>Skrzypczyk Jerzy</b>	Silesian University of Technology, Gliwice, Poland
<b>Sokol Milan</b>	Slovak University of Technology Bratislava, Slovakia

## **Conference organized by:**

Slovak University of Technology in Bratislava, Slovakia  
Faculty of Civil Engineering  
Department of Structural Mechanics

and

Slovak Society for Mechanics, Slovak Academy of Sciences, Bratislava, Slovakia