

# PREFACE

Ladies and Gentleman, dear Readers,

the publication summarizes conference papers from the 51st annual of the international scientific conference Experimental Stress Analysis (EAN 51). The conference was from the 11th to 13th of June 2013 in Litomerice in the Czech Republic. The conference were organized by Faculty of production Technology and Management, J.E. Purkyně University in Usti nad Labem, Faculty of Mechanical Engineering and Management of the Poznan University of Technology, Pollack Mihály Faculty of Engineering and Information Technology of the University Pécs, Faculty of Mechanical Engineering of Slovak University of Technology in Bratislava.

In the submitted publication, which is divided into two chapters, are summarized selected conference papers from researchers of eminent czech-slovak-hungarian-polish-russian and other educational universities, research institutes and industrial practice.

The publication includes following issues

- development of experimental methods in mechanics
- development of experimental methods in biomechanics
- new methods and applications of deformation and stress analysis of machinery construction
- new methods and applications of deformation and stress analysis of building industry and other constructions
- experiment as a tool of verification of analytical and numerical methods
- experimental research and prediction of construction and device strength, durability and reliability
- monitoring of operational load and operational state of construction and device
- dynamics of system of rigid bodies
- methods and instruments of teaching of experimental methods

The conference papers of expert researchers deal with experimental stress analysis from machinery construction, building industry and biomechanics area, verification of numerical and analytical solutions by experiments.

*Alena Petrenko*  
*issue editor*

## Conference Program Committee

### Chairman

- doc. Ing. Josef Soukup, CSc. (FVTM UJEP v Ústí n. L.)

### Members

- doc. Ing. Vladimír Dekýš, CSc. (SF ŽU Žilina)
- prof. Ing. Pavel Élesztös, PhD. (SjF STU Bratislava)
- prof. Ing. Nikolaj Ganev, CSc. (FJFI ČVUT Praha)
- prof. dr. Ing. František Holešovský (FVTM UJEP Ústí n. L.)
- prof. Ing. Stanislav Holý, CSc. (FS ČVUT Praha)
- prof. Ing. Josef Jíra, CSc. (FD ČVUT Praha)
- prof. DSc. PhD. MSc. Eng. Stanislav Legutko, prof. h. c. (FMEM Polytechnika Poznaň)
- Ing. Aleš Lufinka, Ph.D. (FS TU v Liberci)
- prof. Ing. Ferenc Orbán, CSc. (FEIT University of Pécs)
- Dr. Ing. Pavel Polach (VZÚ Plzeň)
- prof. Ing. František Plánička, CSc. (FAV ZČU Plzeň)
- prof. Ing. Milan Růžička, CSc. (FS ČVUT Praha)
- Ing. Jan Skočilas, Ph.D. (FS ČVUT Praha)
- prof. Ing. František Trebuňa, CSc., dr. h. c. mult. (SjF TU Košice)

## Organizing Committee of the Conference

### Chairman

- Ing. Martin Svoboda, Ph.D.

### Members

- Ing. Alena Petrenko
- Ing. Blanka Skočilasová
- Dr. Ing. Pavel Polach
- Mgr. Jana Bejdlová
- Ing. Milan Dian, Ph.D.

## Conference Secretariat

### **Ing. Alena Petrenko**

FVTM UJEP  
Na Okraji 1001  
400 96 Ústí n. L.

tel. +420 475 285 521

e-mail: [petrenko@fvtm.ujep.cz](mailto:petrenko@fvtm.ujep.cz)

### **Šárka Fockeová**

FVTM UJEP  
Na Okraji 1001  
400 96 Ústí n. L.  
tel. +420 475 285 522  
e-mail: [fockeova@fvtm.ujep.cz](mailto:fockeova@fvtm.ujep.cz)

## Sponsors



**SKUPINA ČEZ**