

Timisoara has hosted, on 9-10th November 2017, the 12th edition of the international conference '**Structural Integrity of Welded Structures - ISCS17**'.



The 12th edition of the conference brought together scientists, researchers, and industrial engineers to discuss:

- Welded structure stability
- Advanced methods and new trends in NDT
- Prospects in materials science, nanomechanics, nanomaterials, nanotechnologies
- Advanced materials and joints, mechanical and structural characterization
- Quantitative non-destructive testing
- Fracture mechanics of metallic and non-metallic materials
- Materials damage under time-dependent-actions, fatigue, creep, corrosion, irradiation
- Remaining life assessment of industrial equipment
- Quality management of materials and welded joints
- Damage of metal and non-metal structure

The Conference was organised by:

- National R&D Institute for Welding and Material Testing - ISIM Timișoara
- Romanian Academy of Technical Sciences (ASTR) - Timișoara Subsidiary; and
- 'Politehnica' University of Timișoara.

Session I, held on 9th November, with a short Introduction, presented by A. Sedmak, was dedicated to Prof. Dr Stojan Sedmak, on the occasion of his 88-th birthday.

The following papers from Serbia have significantly contributed to the success of the ISCS17 conference:

- *Use of Non-Destructive Tests for the Assessment of Integrity and Service Life of Hydro-Mechanical Equipment* by M. Arsić, S. Bošnjak, V. Grabulov, M. Mladenović, Z. Savić
- *Fracture Toughness in the Transition Temperature Region* by E. Džindo, Z. Radaković, B. Petrovski, S. Tadić, S. Petronić, S. Sedmak, B. Đorđević
- *P91 Steel Simulated HAZ Behaviour at 600°C* by L. Milović, B. Aleksić, S. Petronić, A.M. Hemer, V. Aleksić
- *Numerical Investigation of J-Integral on a Notched Pressure Vessel* by S. Tadić, A. Sedmak, R. Nikolić
- *The Influence of Laser Drilling Process on the Microstructural Changes of Nickel Based Superalloy* by S. Petronić, A. Milosavljević, M. Burzić, O. Erić-Cekić, S. Polić, R. Jovičić

**International Conference on Structural Integrity and Durability 2017 –
Fatigue and Fracture at all Scales**

Dubrovnik, August 15-18, 2017, and 4th ESIS Summer School, August 14-15, 2017

Chair: Željko Božić zeljko.bozic@fsb.hr



PLENARY LECTURES:

- Leslie Banks-Sills:
Fatigue delamination propagation in a woven multi-directional composite in Mode I
- John Landes, Juan R. Donoso:
Some new ideas in fracture toughness evaluation
- Neil M. James:
Applications of residual stresses in combatting fatigue and fracture
- Dan M. Frangopol:
Life-cycle of deteriorating structures: emphasis on fatigue damage detection delay and its effect on reliability and life-extension of bridges and ships
- Michael Vormwald:
Fatigue strength of autofrettaged components of diesel injection systems under elevated temperature
- Snežana Kirin, Aleksandar Sedmak:
Structural integrity assessment of pressure vessels by using the risk based approach

The 4th ESIS Summer School

John Landes (University of Tennessee), Aleksandar Sedmak (University of Belgrade):

Fundamentals and applications of fracture mechanics

Neil James (University of Plymouth):

Fatigue, fracture and failure analysis

Viggo Tvergaard (Technical University of Denmark):

Ductile fracture at high or low hydrostatic tension

Siegfried Schmauder (University of Stuttgart):

Multiscale materials modelling - recent applications

In addition to contributions in the scope of Plenary lectures and Summer School, two papers from Serbia have also been presented:

- *Numerical simulation of the influence of reinforcement ring on the stress and strain distribution in pressure vessels* by Simon Sedmak, Nikola Milovanović, Emina Džindo, Branislav Đorđević, and Uroš Tatić
- *Influence of crack position and repair activities on the stress state in a shaft tooth* by Uroš Tatić, Drakče Tanasković, Branislav Đorđević, Simon Sedmak, Aleksandar Sedmak

The next ICSID will be held also in Dubrovnik, October 2018.

**International Conference CIBv2017
Civil Engineering and Building Services**

Brasov, Romania, November 2-4, 2017

Chairman: Prof. Dr Ioan Tuns.

Spiritus movens: Dr Dorin Radu



**Transilvania
University
of Brasov**

FACULTY OF CIVIL ENGINEERING

Lectures from Serbia:

A. Sedmak:

Fatigue crack growth in welded joint - case study bridge Gazela in Belgrade, Serbia

D. Kukaras:

Field tests and numerical analysis of lateral load distribution for RC road bridges

Lj. Kozarić, D. Kukaras, M. Bešević, A. Prokić, N. Durić:

Acetylated wood in constructions”

D. Radu, A. Sedmak:

Welding joints failure assessment - fracture mechanics approach

S. Sedmak, A. Sedmak:

Finite element analysis of stresses strain in a welded metal structure



European Structural Integrity Society (ESIS)

ESIS TC1 Spring Meeting 2018

April 12-13, Prague

ESIS TC01 - Elastic Plastic Fracture Mechanics, in co-operation with the DVM and DVS working groups on 'Fracture Mechanics of Weldments' is organising a workshop on

'Damage and Damage Tolerance of Welded Structures'

to be held on April 12-13, 2018 and hosted by SVUM Research Centre in Prague, Czech Republic.

The following aspects are envisaged:

- Mechanisms of fracture and fatigue of welded structures
- Weld defects and imperfections
- Fracture mechanics and integrity of welds, lifetime assessment
- Effects of material, weld geometry and manufacturing technology on the structural integrity of welds
- Welding residual stresses in the as-welded state and modified after post weld treatment and in service

It is intended to provide ample time for discussion. Therefore, the number of presentations will be limited to about 15.



We would enjoy your positive commitment to participate and, if possible, to contribute. Please contact:

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Phone: +49(0)30-8104 1531

E mail: uwe.zerbst@bam.de

You will be provided with further information on public traffic, hotels etc. We are looking forward to hearing from you.

Chairs of ESIS-TC1

Uwe Zerbst (BAM Berlin)

Igor Varfolomeev (Fraunhofer IWM Freiburg)

Local organization

Ivo Černý (SVUM)

(First announcement)

————— IN MEMORIAM —————



Prof. dr Aleksandar Veg (1959-2017)

Sa sajta Mašinskog Fakulteta Univerziteta u Beogradu, 25.6.2017:

- Profesor dr. Aleksandar Veg, redovni profesor Katedre za teoriju mehanizama i mašina na Mašinskom fakultetu Univerziteta u Beogradu i legenda jedriličarstva u Srbiji, tragično je nastradao u subotu, 24. juna, u udesu letelice kod Sremske Mitrovice.
- Erudita, kreativan, inovativan, pun optimizma i pozitivne životne i omiljen kod studenata Mašinskog fakulteta. „Jedan od najboljih profesora na fakultetu, vrhunski stručnjak. Ovo je zaista velika tragedija“, izjavio je prof. dr. Radivoje Mitrović, dekan MF.

Biografija

Dr Aleksandar Veg, rođen je 1.9.1959. godine u Beogradu. Mašinski fakultet upisao je 1978. godine, a diplomirao je 1982. godine na grupi za Aerokosmotehniku, sa srednjom ocenom 9,82. Za ostvareni uspeh na studijama dobio je više fakultetskih i univerzitetskih nagrada. Poslediplomske studije upisao je na istom fakultetu i završio odbranom magistarskog rada iz oblasti optimizacije konstrukcija: „Metoda izbora optimalnog pogona mašine za uravnotežavanje“. Doktorski rad iz oblasti dinamike mašina, pod naslovom „Istraživanje nelinearne merne karakteristike rama izotropne krutosti“ radio je pod rukovodstvom mentora prof. Todora Pantelića, i odbranio ga je.1993. godine. Godine 1984. primljen je za saradnika na grupi za Aerokosmotehniku Mašinskog fakulteta u Beogradu, a 1985. godine izabran je za asistenta pripravnika na Katedri za Teoriju mašina i mehanizama. Za docenta izabran je 1993. godine, u zvanje vanrednog profesora 2001. godine, a u zvanje redovnog profesora 2008. godine.

U organizaciji naučnog skupa *International Symposium of Machines and Mechanisms*, održanog pod pokroviteljstvom IFToMM-a (*International Federation for the Theory of Machines and Mechanisms*) u Beogradu, 1997. godine, bio je sekretar Naučnog odbora i predsedavao jednom od sesija vezanom za oblast Mehatronike. Od 1982. godine bio je član JUToMM-a, nacionalnog udruženja IFToMM-a (*Internacionalne federacije za Teoriju mašina i mehanizama*), a od 1988. godine do 2005. godine obavljao je dužnost izvršnog sekretara udruženja. Godine 2005. godine izabran je za predsednika ASToMM-a (*Asocijacija Srbije za promociju i razvoj Teorije Mašina i Mehanizama*). Aleksandar Veg je bio višegodišnji član DIVK i ESIS.

Kao osnivač firme RoTech, pokazao je svoje veliko inženjersko umeće, i iskoristio preduzetnički duh da napravi izuzetno uspešnu firmu, konkurentu i na međunarodnoj sceni. Uravnotežavanje rotora je bila glavna tema, a najveći doprinos verovatno mobilni uređaj sopstvene proizvodnje.

Lični osvrt

Ne znam kako, i ne znam zašto je moj prijatelj Aleksandar Veg, nebeski junak, stradao ... pada mi na pamet da nebo ne prašta, ali ne znam šta, pa onda pomislim da je to neka ravnoteža među zvezdama, ali ne znam kakva ... i tuga me obuzme zbog nemoći, i kao da se naljutim na nebo što ne prašta ... a onda opet, setim se da su ostale dve blistave zvezde na tom nebu, Emil i Marko, pa mi bude lakše. Pa onda mislim, pamićemo Aleksandra, i dok je nas, biće i njega ... i nastavićemo veliko delo sjajnog profesora i briljantnog inženjera, i daćemo uvek sve od sebe da uradimo najbolje što možemo, kao što je Aleksandar Veg radio.

A. Sedmak