

ESIS Executive Committee Meeting - Catania December 4, 2015

The last meeting of the ESIS Executive Committee (ExCo) took place on December 4, 2015 in Catania, Italy. The Committee consists of Leslie Banks-Sills (President), Francesco Iacoviello and Aleksandar Sedmak (two Vice Presidents), Bamber Blackman (Secretary), Giuseppe Ferro (Treasurer), Valery Shlyannikov (Publications Manager), Zhiliang Zhang (Liaison to other organizations), and Per Ståhle (Blogger). The meeting was successful.

The meeting Agenda consisted of:

1. Welcome
2. Minutes of last meeting, Bamber Blackman
3. Actions from the last meeting, Bamber Blackman
4. Contract with Elsevier, Leslie Banks-Sills
5. Treasury Report, progress of audit (2010-2014), Beppe Ferro
6. Budget, Beppe Ferro
7. Membership report (2013, 2014), Bamber Blackman. A total of 8 countries.
8. Report on ECF21, Francesco Iacoviello.
9. Committee for support at ECF21, Aleksandar Sedmak.
10. Report on Statute changes, Leslie Banks-Sills.
11. Sponsorship of meetings, etc., Leslie Banks-Sills.
12. Procedia, Francesco Iacoviello.
13. Liaison activities, Zhiliang Zhang.
14. TC13-Education and Training, Leslie Banks-Sills.
15. Elsevier special issues, Valery Shlyannikov.
16. Blog, Per Ståhle.
17. Report on ECF22, Aleksandar Sedmak.
18. Miscellaneous.

Discussed was the ESIS contract with Elsevier which was signed for an additional two years. Another journal has been added to the affiliated journals. So, the included journals are: *Engineering Failure Analysis*, *Engineering Fracture Mechanics*, *International Journal of Fatigue* and *Theoretical and Applied Fracture Mechanics*. ESIS encourages authors to publish articles in these journals. The ExCo discussed the financial support which ESIS will be giving young and/or needy scientists to attend ECF21 in Catania. The support of 20 000 € has been earmarked for this purpose in the form of a waiver of the conference registration fees.

The statutes were discussed once again with three changes recommended. First, we are returning to the issue of 'one person, one vote'. At Council meetings, it is suggested that any particular member have only one vote. If a member of Council has two positions which would entitle him/her to vote twice, one of the votes will be given to another person to represent a National Group or a TC. Second, it is suggested to do away with proxy votes. Both of these steps have been suggested to make the Council more democratic. Finally, an additional type of ESIS membership class will be suggested: *university membership class*. The ExCo approved all of these changes and they will be brought to the ESIS Council at ECF21 in Catania for a vote.

ESIS is requested to support many conferences, most of which are part of TC or National Group activities. In order to coordinate the dates so as to avoid conflicts, the ExCo

has suggested to TC and the National Group Chairs to coordinate their meetings with Aleksandar Sedmak.

ESIS has made an additional contract with Elsevier. This year, Elsevier will begin publishing *Procedia Structural Integrity* which will contain proceedings resulting from ECF meetings, TC meetings and National Group meetings. The first issue will be published by the Portuguese National Group. In order to encourage TCs and National Groups to take advantage of this option, ESIS will support part of the publication costs.

The next ECF conference will take place in Catania, Sicily, from June 20 to June 24, 2016. The ExCo supported Francesco Iacoviello's proposal to video record the plenary sessions at ECF21. The videos will be put on *YouTube*. ESIS awards at the ECF conference will include: the Griffith medal, the Wöhler medal, the Award of Merit, Honorary Membership and ESIS-Elsevier Young Scientist Award (first and second prize). The Awards Committee is chaired by Francesco Iacoviello; its members are: Donka Angelova, Nenad Gubelj, Antonio Martin-Meizoso, Nikita Morozov, Hrihory Nykyforchin, Reinhard Pippan, Aleksandar Sedmak, Gordon Williams and Zhiliang Zhang. The Fellows Committee is chaired by Leslie Banks-Sills; the members are Francesco Iacoviello, Aleksandar Sedmak and Zhiliang Zhang.

Leslie Banks-Sills
(from ESIS Newsletter 57)

ESIS TECHNICAL COMMITTEE 25

TC25 is a new ESIS Technical Committee on *Risk Analysis and Safety of Structures and Components*.

The need for the creation of Technical Committee *Risk Analysis and Safety of Structures and Components* in the structure of ESIS is further explained.

1. The relevance of the problem

In recent decades the development of technical systems leads to intensification of contradictions in the technosphere and fast increase of threats for life and civilization. These contradictions are taken into consideration by industrialized countries and the scientific community.

The main tendencies of the development of technics, technologies and objects of technosphere:

- the creation of complex large technical systems (LTS) which are multiple hierarchical structures with a lot of technical devices, different in functional purpose, design and applied construction materials;
- the creation of LTS will change the technological way of industrial production, focusing it on science-based products;
- the dilemma escalation of scientific and technical progress: on the one hand, there are high technosphere rates in the 20th century and remarkable advances (electronic, atomic, space, aviation, energy and chemical technologies, genetic engineering, etc.); on the other hand, new potential and real dangers for humans, society and life environment are appearing and increasing as a result of technosphere objects;
- traditional methods of LTS safety at the expense of excessive strength, functional redundancy, reservation and doubling could not prevent catastrophes;
- deep fundamental researches of the LTS safety are required for localization of modern technogenic hazards.

The experience of previous decades shows that those traditional methods of LTS safety which are based on the statistical paradigm

of eliminating reasons of catastrophes, have almost exhausted their potential. New unexplored- or not taken into consideration causes inevitably arise instead of previous causes. To solve the problem, it is necessary to work out new theoretical approaches to the safety and to risk-based methods as a scientific basis for the prevention of technogenic disasters. The formulation and development of perspective research directions in this area should become the object of the activities of the Technical Committee *Risk Analysis and Safety of Structures and Components* in the structure of ESIS.

2. Tasks and objectives of the Technical Committee:

- consolidation of the European scientific community to solve scientific and technical safety problems and issues of protection of technospheric objects;
- development of perspective research directions, computational and experimental methods and technologies in the area of safety of engineering systems;
- cooperative researches, held by specialists and scientists from various countries on behalf of reducing the rate of accident risks while operating dangerous objects and systems;
- development of modelling the incident theory of large technical systems;
- development of mechanical and mathematical models and risk-analysis technologies;
- development of the concept of acceptable risk from the fracture mechanics' point of view, and modern possibilities of monitoring technical conditions of potentially dangerous technospheric objects;
- elaboration of standards using methods of probabilistic risk-analysis of technical systems according to fracture mechanics criteria;
- elaboration of standards using risk models of complex hierarchical technical systems;
- unification of approaches to safety analysis of large technical systems;

- unification of analysis methods of information on technical condition of large technical systems;
- creation of unified methods and the harmonization of national regulatory documents in the area of technical systems safety;
- elaboration of special study courses, problem books and test books on fracture mechanics, reliability theory, and risk-analysis of technical systems.

The structure of TC25 – Risk Analysis and Safety of Structures and Components is given below.

Co-chairs:

Aleksandar Sedmak	Serbia	asedmak@mas.bg.ac.rs
Vladimir Moskvichev	Russia	sktb@ksc.krasn.ru

Scientific secretaries:

Snežana Kirin	Serbia	snezanakirin@yahoo.com
Egor Moskvichev	Russia	juqr@icm.krasn.ru

Members

Jesús Toribio	Spain	toribio@usal.es
Bratov V.A.	Russia	Vladimir@bratov.com
Goldstein R.V.	Russia	goldst@ipmnet.ru
Lepikhin A.M.	Russia	aml@icm.krasn.ru
Makhutov N.A.	Russia	safety@imash.ru
Matvienko Y.G.	Russia	matvienko7@yahoo.com
Mitin A.S.	Russia	A.Mitin@omk.ru
Morozov N.F.	Russia	morozov@mnf.usr.pu.ru
Onischenko D.A.	Russia	Onish_DA@mail.ru
Osipenko N.M.	Russia	osipnm@mail.ru
Petrov Yu.V.	Russia	yp@YP1004.spb.edu
Schlyannikov V.N.	Russia	shlyannikov@mail.ru
Shushpannikov P.S.	Russia	shushpan@ipmnet.ru
Solozhentsov E.D.	Russia	esokar@gmail.com

A. Sedmak

LCF8 EIGHTH INTERNATIONAL CONFERENCE ON LOW CYCLE FATIGUE

Dresden, Germany, 27-29 June 2017

Scope

This series of events aims to provide a discussion forum for all those interested in both fundamental aspects and practical applications of low cycle fatigue and similar subjects.

A special emphasis lies in the design, manufacturing and operation of equipments and structures. We hope to resume the successful series of previous conferences (1979, Stuttgart; 1987, Munich; 1992, Berlin; 1998, Garmisch-Partenkirchen; 2003, 2008 Berlin, 2013 Aachen) and intend to bringing together experts in several fields with a common interest in low cycle fatigue, facilitating and encouraging mutual exchange of knowledge and experience; providing a forum for the presentation and the discussion of recent advances; helping to identify research and development needs in the future.

Topics

- Isothermal LCF
- Thermomechanical Fatigue
- Superimposed LCF/HCF and TMF/HCF Loadings
- Multiaxial and Variable Amplitude Loadings
- Creep-Fatigue Interaction
- Cyclic Deformation Mechanisms
- Influence of Environmental Conditions and Corrosion
- Advanced Materials and Protective Coatings
- Experimental Techniques and Standardization
- Fatigue Damage, Crack Initiation and -Growth
- Deformation Modelling
- Life Assessment
- Case Studies



Chairs

Prof. Tilmann Beck, Technische Universität Kaiserslautern, Germany
beck@mv.uni-kl.de

Prof. Eric Charkaluk, Ecole Centrale de Lille, Villeneuve d'Ascq Cedex, France
eric.charkaluk@ec-lille.fr

Organizer

LCF8 is organized under the auspices of Federation of European Materials Societies



Member Society in Serbia:

Materials Research Society of Serbia (MRS-Serbia)

c/o Prof. Dr. Dragan Uskoković

P.O. Box 433

11000 Belgrade

Serbia

Tel.: +381 11 2185 437, Fax: +381 11 2185 263

President: Prof. Dr. Dragan Uskoković

dragan.uskokovic@itn.sanu.ac.rs

Secretary: Aleksandra Stojičić

its@itn.sanu.ac.rs