

## 1<sup>st</sup> Virtual European Conference on Fracture - VECF1

Due to the Covid-19, the ECF23 (Funchal, Madeira) has been postponed to 2022. In order to keep alive the connection between European Structural Integrity Society (ESIS) and its community, this 1<sup>st</sup> Virtual European Conference on Fracture (VECF1) has been organised. The event will be held online with a similar timetable of the ECF23.

VECF1 is organised under the auspices of the European Structural Integrity Society (ESIS) and the organisers are the ESIS Executive Committee members. We hope you will appreciate our efforts to organize an interesting online event in just a few weeks.

First day of VECF1: June 29, 2020

Venue: Online, News will be soon available: [LINK](#)

### Main topics

Analytical, computational and physical models; Biomaterials and wood fracture and fatigue; Biomechanics; Ceramics fracture and damage; Composites; Computational mechanics; Concrete & rocks; Creep fracture; Damage mechanics; Damage and fracture in materials under dynamic loading; Durability of structures; Environmentally assisted fracture; Failure analysis and case studies; Fatigue - crack growth (all materials); Fatigue resistance of metals; Fatigue of metals - very high cycle; Failure analysis and forensic engineering; Fractography and advanced metallography; Fracture and fatigue at atomistic and molecular scales; Fracture and fatigue testing systems; Fracture under mixed-mode and multiaxial loading; Fracture vs. gradient mechanics; Functional gradient materials; Impact & dynamics; Fundamentals of cohesive zone models; History of fracture mechanics and fatigue; Innovative alloys; Linear and nonlinear fracture mechanics; Materials mechanical behavior and image analysis; Mesomechanics of fracture; Micromechanisms of fracture and fatigue; Multiphysics and multi-scale modelling of cracking in heterogeneous materials; Multiscale experiments and modeling; Nanostructured materials; Nondestructive examination; Physical aspects of brittle fracture; Physical aspects of ductile fracture; Polymers fracture and fatigue; Probabilistic fracture mechanics; Reliability and life extension of components; Repair and retrofitting: modelling and practical applications; Sandwiches, joints and coatings; Smart Materials; Structural Integrity; Temperature Effect; Thin Films.

Abstract: one page, with title, authors, affiliations, and emails. No template to be followed. Abstract must be submitted using the Registration and files upload page. Following Minisymposia will be organised:

Additive Materials (TC15); Mixed mode fracture and fatigue; Fracture and fatigue in presence of cracks or stress concentrators (TC3); Peridynamics and other non-local methods for damage and fracture analysis; Integrity of biomedical and biological materials (TC14); Energy methods for fatigue assessment; Recent advances in metamaterials; Dynamics of fracture and structural transformations; Viscoelastic behaviour of materials; ESIS TC8 symposium: 'Numerical Methods for Fracture'; ESIS TC10 Environmentally assisted cracking & hydrogen embrittlement; ESIS TC7 Engineering failure analysis; Applications of the theory of critical distances; ESIS TC12 Risk analysis and safety of complex structures and components; ESIS TC4 Fracture and fatigue of polymers and polymer composites: Industrial perspectives and applications in the digital age.

### Publications

All the submitted papers, after being reviewed, will be published in an issue of *Procedia Structural Integrity*, the new *Procedia* published by Elsevier and focused on the ESIS events (indexed in Scopus, WoS and Google Scholar).

Special issues will be published in the following Elsevier journals: *Engineering Fracture Mechanics*, *Engineering Failure Analysis*, *International Journal of Fatigue*, *Theoretical and Applied Fracture Mechanics*, *Journal of the Mechanical Behavior of Biomedical Materials*

### Chairpersons

Francesco Iacoviello (Università di Cassino e del Lazio Meridionale, Italy)  
Aleksandar Sedmak (University of Belgrade, Serbia)  
Liviu Marsavina (University Politehnica Timisoara, Romania)  
Bamber Blackman (Imperial College London, UK)  
Giuseppe Andrea Ferro (Politecnico di Torino, Italy)  
Valery Shlyannikov (Kazan Scientific Centre, Russian Academy of Science, Russia)  
Per Ståhle (Lund Institute of Technology, Sweden)  
Zhiliang Zhang (Norwegian University of Science and Technology (NTNU), Norway)  
Pedro M.G.P. Moreira (INEGI - Institute of Science and Innovation in Mechanical and Industrial Engineering, Portugal)  
Željko Božić (University of Zagreb, Croatia)  
Leslie Banks-Sills (Tel Aviv University, Israel)



### Deadlines

10.04.2020: Propose a minisymposium  
10.06.2020: Registration and fees payment  
10.06.2020: Presentation and abstract submission  
29.06.2020: First day of the conference  
20.08.2020: Papers submission for the *Procedia Structural Integrity* issue

### Event organisation

Authors have to prepare their presentations (e.g., using powerpoint) as videos with audio in English (10-15 minutes max). The Authors will submit their presentations with an abstract (one page) using an online procedure (soon available). A tutorial is available here: [LINK](#).

All the video presentations will be uploaded in the ESIS YouTube channel (as private playlist and videos: in this way, only the participants will be able to watch the videos).

The video presentations upload deadline is June 10, 2020, in order to give to all the participants the time to watch the videos of interest. The virtual conference will be organised online with thematic sessions (e.g., using the Google Meet platform). The chairpersons will prepare one question for each presentation, at least, and, after the first question from the chairperson, the discussion will be open to all the participants to the session. The sessions will be open only to the discussions, not to the presentations.

Authors will be asked to submit the papers for the *Procedia Structural Integrity* issue after the conference (before August 20, 2020).

A Virtual Summer School will be organised in July 2020.

All the ESIS Technical Committees have been invited to organise a one-day event in July 2020 focused on the basics of the TCs topics. All these events will be organised in the frame of the '1<sup>st</sup> Virtual ESIS Summer School - VESS1' and proposed to our community as a completely free of charge event. The final programme will be published before 30.05.2020.

All the participants will be only requested to have the @structural-integrity.eu account.

Chairs Francesco Iacoviello, Aleksandar Sedmak, Liviu Marsavina, Petro Yasnij.

The participants registration form will be available in this page after 30.05.2020.

More info: <https://www.vecf1.eu/home>

## 1<sup>st</sup> Mediterranean Conference on Fracture and Structural Integrity, MedFract1

Organised by The Greek Society of Experimental Mechanics of Materials (GSEMM) & the Italian Group on Fracture (IGF) in Athens, February 26-28, 2020. Two papers from Serbia were presented:

A. Milovanović, A. Sedmak, A. Grbović, T. Mijatović, Lj. Milović, K. Čolić: *Design aspects of hip implant made of Ti-6Al-4V extra low interstitials alloy*  
A. Grbović, Z. Božić, S. Kirin, G. Kastratović, A. Sedmak, N. Vidanović: *Fatigue life assessment of the structure with widespread damage exposed to high temperature*



Special recognition for L. Marsavina, A. Sedmak, K. Stavros, 'IGF honorary members', delivered by F. Iacoviello