Available online at www.sciencedirect.com

ScienceDirect

Procedia Structural Integrity 58 (2024) 1–2

Structural Integrity Procedia

www.elsevier.com/locate/procedia

7th International Conference on Structural Integrity and Durability (ICSID 2023)

Preface

Željko Božić[a,*], Siegfried Schmauder[b], Katarina Monkova[c], George Pantazopoulos[d], Sergio Baragetti[e], Francesco Iacoviello[f]

[a]*University of Zagreb, Faculty of Mechanical Engineering and Naval Architecture, Ivana Lučića 5, 10000 Zagreb, Croatia*
[b]*University of Stuttgart, Institute for Materials Testing, Materials Science and Strength of Materials (IMWF), Pfaffenwaldring 32, Stuttgart, Germany*
[c]*Technical University of Kosice, Faculty of Manufacturing Technologies, Sturova 31, 080 01 Presov, Slovakia*
[d]*ELKEME - Hellenic Research Centre for Metals S.A., Athens – Lamia National Road , 32011 Oinofyta Viotias, Greece*
[e]*University of Bergamo, Department of Management, Information and Production Engineering, Viale Marconi 5, Dalmine 24044, Italy*
[f]*Università di Cassino e del Lazio Meridionale, via G. DI Biasio 43, 03043, Cassino (FR), Italy*

Keywords: Preface; fatigue; fracture; structural integrity

1. Preface

The 7th International Conference on Structural Integrity and Durability, ICSID 2023, was organized by the Faculty of Mechanical Engineering and Naval Architecture, University of Zagreb, and the Croatian National Group of the European Structural Integrity Society (ESIS), in Dubrovnik in Croatia from September 19 to 22, 2023.

ICSID 2023 was organized as the Hybrid Conference i.e, a combination of on-site and online participation to provide convenience for participants. The Conference was held in the Centre for Advanced Academic Studies (CAAS) of the University of Zagreb, in the city of Dubrovnik. The magnificent old building of CAAS is situated in the center of Dubrovnik on the Croatian Adriatic Coast, in the vicinity of the most prominent historical places of the Old Town (https://icsid2023.fsb.hr/). Online presentations were held using a commercial meeting platform. In total 52 on-site and online presentations were given, including five plenary lectures.

* Corresponding author. Tel.: +385 1 6168 536; fax: +385 1 6156 940.
E-mail address: zeljko.bozic@fsb.unizg.hr

10.1016/j.prostr.2024.05.001

The objective of the ICSID 2023 Conference was to bring together scientists, researchers, and engineers from around the world to discuss how to analyze, predict and assess the fatigue and fracture of structural materials and components. The Conference provided a forum for discussion of contemporary and future trends in experimental, analytical, and numerical fracture mechanics, fatigue, failure analysis, structural integrity assessment, and other important issues in the field.

A wide range of topics was covered such as: Failure investigation and analysis; Structural integrity assessment; Analytical Models; Advanced testing and evaluation techniques; Applications to components and structures; Non-destructive evaluation (NDE); Fatigue and fracture simulation and testing at all length scales; Fracture and failure criteria; Multiscale materials modeling; Mixed-mode and multiaxial fatigue and fracture; Durability and life extension of structures and components; Structural integrity of 3D-printed structures; Models, criteria and methods in fracture mechanics; Finite element methods and their applications; Effect of residual stresses; Fatigue and fracture of weldments, welded components, joints and adhesives; Corrosion, environmentally enhanced degradation and cracking, corrosion fatigue; Fracture and damage of cementitious materials; Fatigue and fracture of polymers, elastomers, composites and biomaterials; and others.

Prior to the ICSID 2023 Conference a two-day Summer School with the topic “Fatigue and fracture modelling and analysis” was organized for graduate students, researchers, and engineers from industry. Those participants who came to Dubrovnik, besides the excellent technical program, had the opportunity to enjoy their stay in Dubrovnik, one of the most famous Mediterranean cities, world celebrated symbol of historical heritage and beauty, which has found its place in the UNESCO World Heritage List.

As the Guest Editors of this Conference Proceedings, we wish to thank all authors for their contributions.

Guest Editors of the Procedia Structural Integrity ICSID 2023 Conference Proceedings:

Željko Božić, University of Zagreb, Croatia
Siegfried Schmauder, University of Stuttgart, Germany
Katarina Monkova, Technical University in Kosice, Slovakia
George Pantazopoulos, ELKEME - Hellenic Research Centre for Metals S.A., Athens, Greece
Sergio Baragetti, University of Bergamo, Italy
Francesco Iacoviello, Università di Cassino e del Lazio Meridionale – DICeM, Italy