

Lecture Notes in Mechanical Engineering

Magd Abdel Wahab *Editor*

Proceedings of the 10th International Conference on Fracture Fatigue and Wear


FFW 2022, 2–3 August, Ghent
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Lecture Notes in Mechanical Engineering


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Editor

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Preface

This volume contains the proceedings of the 10th International Conference on Fracture Fatigue and Wear FFW 2022, which is held online during the period 2–3 August 2022. Previous conferences were celebrated in Jinan (China, 2010), Kitakyushu (Japan, 2013), Kitakyushu (Japan, 2014), Gent (Belgium, 2015), Kitakyushu (Japan, 2016), Porto (Portugal, 2017) and Gent (Belgium, 2018–2021).

The overall objective of the conference is to bring together international scientists and engineers in academia and industry in fields related to fracture mechanics, fatigue of materials, tribology and wear of materials. The conference covers industrial engineering applications of the above topics including theoretical and analytical methods, numerical simulations and experimental techniques. One of the aims of the conference is to promote cooperation between international scientists and engineers from a large number of disciplines, who are involved in research related to fracture, fatigue and wear. The presentations of FFW 2022 are divided into three main sessions, namely (1) fracture, (2) fatigue and (3) wear.

The organising committee is grateful to the keynote speaker, Prof. Dr. Jesús Toribio, Fracture and Structural Integrity Research Group (FSIRG), University of Salamanca (USAL), Spain, for his interesting keynote speech entitled ‘Innovative Approach to Fatigue Crack Propagation on the Basis of Microstructurally-Induced Locally-Deflected Crack Paths: A Tribute to Antonio Machado and Fray Luis de León’, and to Keynote Speaker Prof. Luca Susmel, the University of Sheffield, UK, for his interesting keynote speech entitled ‘Cracking behaviour and static assessment of notched additively manufactured polylactide’.

Special thanks go to members of the Scientific Committee of FFW 2022 for reviewing the articles published in this volume and for judging their scientific merits. Based on the comments of reviewers and the scientific merits of the submitted manuscripts, the articles were accepted for publication in the conference proceedings and for presentation at the conference venue. The accepted papers are of a very high scientific quality and contribute to the advancement of knowledge in all research topics relevant to FFW conference.

Finally, the organising committee would like to thank all the authors, who have contributed to this volume and to those who have presented their research work at the conference venue.

Zwijnaarde, Belgium

Prof. Magd Abdel Wahab
Chairman of FFW 2022

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About the Editor

Prof. Magd Abdel Wahab is Full Professor of Applied Mechanics in the Faculty of Engineering and Architecture at Ghent University, Belgium. He received his B.Sc., 1988, in Civil Engineering and his M.Sc., 1991, in Structural Mechanics, both from Cairo University. He completed his Ph.D. in Fracture Mechanics in 1995 at KU Leuven, Belgium. He was awarded the degree of Doctor of Science from the University of Surrey in 2008. He has published more than 600 scientific papers in solid mechanics and dynamics of structures and edited more than 30 books and proceedings. His research interests include fracture mechanics, damage mechanics, fatigue of materials, durability, and dynamics and vibration of structures.