

MINISYMPOSIUM

PROBABILISTIC FATIGUE & FRACTURE APPROACHES APPLIED TO MATERIALS AND STRUCTURES

1. Thematic session title

Probabilistic Fatigue & Fracture Approaches Applied to Materials and Structures (PFFA)

2. Organizers, including affiliations

Shun-Peng Zhu (University of Electronic Science and Technology of China, China)

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4. Short description of the symposium including the scope and target public

The Thematic Session on Probabilistic Fatigue & Fracture Approaches Applied to Materials and Structures (C-ICMFM XX-PFFA) is organised within the 20th ICMFM - International Colloquium Mechanical Fatigue of Metals (ICMFM XX), which will take place in the beautiful city of Wrocław, Poland, on 2-4 September 2020. This Symposium is intended to be a forum of discussion of the recent advances in the domain of the probabilistic approaches or reliability methods for the fatigue and fracture characterization and design of materials (metals, polymers, composites among others) and structures (metallic, composite, joints, etc). It is expected contributions from engineers, metallurgists, material scientists, among others, allowing a very multidisciplinary discussion. The goal of the Thematic Session on Probabilistic Fatigue & Fracture Approaches Applied to Materials and Structures (C-ICMFM XX-PFFA) is to provide a platform to present the last research advances on:

- Fracture mechanics
- Fatigue reliability

- Probabilistic damage tolerance
- Physics of Failure modelling
- Multi-physics damage modelling and analysis
- Uncertainty quantification and propagation
- Structural reliability
- Scale/notch effects
- Probabilistic PoF modelling
- Reliability testing and statistics
- Life prediction
- Reliability-based design

The selected papers of the C-ICMFM XX-PFFA will be published in special issues of several Journals, including Applied Mathematical Modelling.

Please submit your work by email to **zspeng2007@uestc.edu.cn** or **icmfmx@pwr.edu.pl** with subject C-ICMFM XX-PFFA.