



The Symposium entitled **“CRACK PATHS IN FATIGUE AND FRACTURE”** is organised by the TC03 “FATIGUE OF ENGINEERING MATERIALS AND STRUCTURES” of the European Structural Integrity Society -ESIS within the framework of the **5th International Conference on Structural Integrity (ICSI2023)**.

MAIN TOPIC

It is well known that many engineering structures and components, as well as consumer items, contain cracks or crack-like flaws. The Crack Path (CP) in critical components or structures, where crack propagation occurs under both static and fatigue loading, can determine whether failure is benign or catastrophic. Moreover, the knowledge of potential CPs is also needed for the selection of appropriate non-destructive testing procedures. It is widely recognised that complete solution of a crack growth problem includes determination of the CP, that must be considered both in design and in the analysis of failures. The macroscopic aspects of CPs have been of industrial interest for a very long time.

At the present state of the art the factors controlling the path taken by a crack are not completely understood.

Members of different industrial laboratories and scientists from all over the world are invited to contribute with presentations on any of the following topics (in the case of both static and fatigue loading): *Experimental Determination of CP; Theoretical Prediction of CP; Integrity Assessments based on CP Evaluation; Microscopic Aspects of CP; CP of Surface Cracks; CP of Short Cracks; Effect of Large Scale Yielding on CP; Effect of Material Inhomogeneities on CP; Effect of Non-Proportional Cyclic Loading on CP; Effect of Environmental Conditions on CP; CP in Advanced Materials; Laboratory Methods of Controlling CP; In-Service Inspection of CP; Application of CP Concepts and Data in Design; CP in Additive Manufacturing Processes; Industrial Application of CP Concepts and Data.*

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