



1st Biennial ESIS-CSIC Conference on Structural Integrity (BECCSI 2025), in period November 25-28, 2025 (www.beccsi2025.com)

Title of the minisymposia:

'Numerical Methods for Solving Elastic Plastic Fracture Mechanics - TC01 and TC08 joint topic'

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Short description of the minisymposia:

Elastic Plastic Fracture Mechanics Problems have been in the focus of researchers for decades, including numerical methods as the most efficient way for their solution. Although well-developed nowadays, numerical methods still need verification by experiments or analytical solutions, which is not always a trivial task. On the contrary, 3D complex problems with complicated geometry often require huge effort and resources also for computation itself. Some years ago, it was published in the individual procedures and practices that short-term allowable stresses could exceed the yield strength, which requires detailed clarification, especially if the structure is then intended to be in service for a longer period. Thus, special attention will be given to the allowable stresses and their relationship to the yield strength of the material, leaving aside the various factors of the state of the material and the geometry of the structure, as well as the type and amount of service load. Therefore, TC01 and TC08 decided to make a joint effort in further development and application of numerical methods to solve elastic plastic fracture mechanics problems, including recently emerged topics such as AMM and other new materials.

Please, indicate on BECCSI registration and submission form (<https://www.beccsi2025.com/authorscenter/>) that you want to participate to this minisymposia and send an email to jacques.besson@minesparis.psl.eu and jacques.besson@minesparis.psl.eu.