



*Special Issue Reprint*

## **Mesh-Free and Finite Element-Based Methods for Structural Mechanics Applications**

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The problem of solving complex engineering problems has always been a major topic in all industrial fields, such as aerospace, civil and mechanical engineering. The use of numerical methods has increased exponentially in the last few years, due to modern computers in the field of structural mechanics. Moreover, a wide range of numerical methods have been presented in the literature for solving such problems. Structural mechanics problems are dealt with using partial differential systems of equations that might be solved by following the two main classes of methods: Domain-decomposition methods or the so-called finite element methods and mesh-free methods where no decomposition is carried out. Both methodologies discretize a partial differential system into a set of algebraic equations that can be easily solved by computer implementation. The aim of the present Special Issue is to present a collection of recent works on these themes and a comparison of the novel advancements of both worlds in structural mechanics applications.

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