

Congress on Numerical Methods in Engineering 2015

Thematic session proposal

Title:

Heat and mass transfer.

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Abstract:

Numerical approaches such as finite element, boundary element methods are widely used by engineers and scientists. With the use of high-performance computers, those tools have greatly widened the scope of engineering problems amenable to numerical analysis. In looking at trends, the need for numerical simulation is increasing because it is one of the most powerful tools in developing a deeper understanding of the effects of variables on a system. Empirical and experimental methods are expensive and considered as a complement or validate of the simulation.

The aim of this thematic session is to promote pedagogical, technical and practical advances in heat and mass transfer, improving and assessing new analytical and computational approaches. It will be focused on practical applications and innovative techniques used to create engineering solutions. This includes, but is not limited to, experimental observations and methods, analytical or computational methods linked to observations of physical phenomena, and non-deterministic analysis of experimental observations. We would also encourage the submission of works that describe approaches to education and training in processes involving heat and mass transfer.