

**A Symposium on**  
**ADVANCED DISCRETIZATION TECHNIQUES IN**  
**COMPUTATIONAL MECHANICS**

Promoted by

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In Conjunction with

**M2D'2015**  
**6<sup>th</sup> International Conference on**  
**MECHANICS AND MATERIALS IN DESIGN**

**P. DELGADA (AZORES), PORTUGAL**

**July 26-30, 2015**

**(<http://paginas.fe.up.pt/clme/m2d2015/>)**

Today, the conventional numerical methods are not sufficient to solve the ever-increasing number of phenomena requiring simulation. The classical methods are not able to solve with efficient many of the new industrial and academic problems. The simulation of moulding and extrusion processes require a numerical method suited to deal with large deformations of the mesh, or capable of easily remeshing without a significantly extra computational cost. Also the explicit dynamic fracture analysis requires a numerical method capable of simulate the propagation of cracks with an arbitrary and complex path. Furthermore, the explicit analysis of fluid flow requires a numerical method that does not depend of a structured computational mesh. Recently, aiming to overcome some limitations of the classical methods, some advanced discretization techniques have become the focus of attention in the scientific community, such as: Discontinuous Galerkin Methods, efficient high-order computations, eXtended Finite Elements (X-FEM), meshless methods. This symposium focuses in the recent development and improvement of existent advanced discretization techniques, as well as in the presentation of new numerical approaches and application fields.

Extended abstracts of **two full pages** should be written in the same format as the full papers for the CD-ROM (no limitation in length for these):

<i>Paper Size:</i>	A4, single column
<i>Margins:</i>	Top page 3,0 cm; Bottom 2,5 cm, Left & Right 2,5 cm
<i>Font and line spacing:</i>	Times New Roman; single space
<i>First 3 lines:</i>	Should be left blank, size 10, reserved for the editors
<i>Title:</i>	Begins at the 4 <sup>th</sup> line, capital letters, size 14, bold, left alignment
<i>Authors Names:</i>	Size 10, left alignment, two lines interval from title above

*Authors affiliation:* Size 10, left alignment, two lines interval from text below  
*Main Text:* Size 12, full justification, 6 pt space after paragraph, no indentation  
*Headings:* Capital letters, size 12, bold, one line interval from text above  
*Legends (Figs & Tables):* Size 10, one line interval from text above and below  
*References:* References to cited literature should be identified in the text with author(s) name(s) and year of publication (ex: Mascarenhas, 1997). Full citations should be grouped at the end of the paper and in alphabetical order of first author's name. Always give inclusive page numbers for references to journal articles and a page range for books. Each reference must be cited in the text.

A sample abstract is available for download at:

[http://paginas.fe.up.pt/clme/m2d2015/abstract\\_sample.doc](http://paginas.fe.up.pt/clme/m2d2015/abstract_sample.doc)

which can also be used as template.

The ***Extended Abstracts*** are due by **15 DECEMBER 2014**, and those accepted will appear in a book which will be made available to delegates of ICEM5 during the event. Full papers will also be compiled in a CD-ROM and improved versions of ALL papers will be considered for publication in the International Journal of Mechanics and Materials in Design, (edited by S. A. Meguid and published by Springer)..

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