Preface

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The papers in this special issue of Engineering with Computers were selected by the organizing committee among the 32 works presented at the 22nd International Meshing Roundtable held October 13–16, 2013 in Orlando, FL, USA.

The International Meshing Roundtable conference series was started in 1992 under the auspices of Sandia National Laboratories. The conference has since evolved into one of the most relevant and prestigious international meetings on mesh generation and related topics.

Spatial discretizations, represented by a mesh or a cloud of points, have been related with computational methods since the appearance of the first electronic computers. Later, the evolution of computer graphics capabilities has induced the use of meshes in new areas of application such as geometry modeling, medical imaging, scientific visualization and three-dimensional animation. Therefore, the links between these disciplines have become stronger during the last decades, posing more challenging problems from the scientific and industrial point of view.

Taking into account this trend, the theme for the 22nd IMR was “Mesh Modeling for Simulation and Visualization”, stating clearly that the core areas of the conference were geometry, mesh generation and visualization. On these three pillars, authors extend solid beams composed of core methods, improved algorithms, enhanced data structures and implementation details that make their papers a valuable contribution for scientific and technological applications. We hope that the papers included in this special issue are of interest to the Engineering with Computers community.

Finally, we would like to thank the authors who contributed to this volume, the anonymous reviewers of the papers, as well as the Engineering with Computers publishing staff for making this special issue possible.

Guest Editors: J. Sarrate and M. Staten. On behalf of the Organizing Committee of the 22nd International Meshing Roundtable.

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