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Editorial

As time goes on, the relevance of the *Virtual and Physical Prototyping* journal increases. This Journal was submitted to Thomson Scientific to be accepted as an ISI Journal and the number of conferences asking for our endorsement is growing fast, such as the following:

- International Conference on Additive Technologies, IC AT2010, 22–24 September 2010, Nova Gorica, Slovenia
- Virtual Concept 2010, 20–22 October 2010, Bordeaux, France

Both conferences will be endorsed by *Virtual and Physical Prototyping*, as will the 5th International Conference on Advanced Research in Virtual and Rapid Prototyping (VRAP Conference), which will be held at Leiria by the Centre for Rapid and Sustainable Product Development of the Polytechnic Institute of Leiria, from 28 September to 1 October 2011.

The current issue of *Virtual and Physical Prototyping* is fully dedicated to virtual prototyping. It includes six papers, three of them are related to computational ergonomic studies, which are particularly important for product development.

In the first paper, Pontonnier and Dumont use motion capture data in order to determine muscle forces involved in the flexion/extension of the human elbow. The main goal is to improve the ergonomics of workstations. The second paper by Ma *et al.*, entitled "A new muscle fatigue and recovery model and its ergonomics application in human simulation" presents a new muscle fatigue and recovery model to evaluate joint fatigue level in manual handling operations. These models, which can be implemented in a commercially available software, simplify the ergonomic evaluation procedures and design efficiency. The third paper entitled "Ergonomic design of refrigerated display units", by Colombo *et al.* presents a methodological approach to evaluate ergonomic issues of refrigerated display units. The work is based on the use and integration of virtual human models with virtual prototyping techniques in order to support and optimize the product development process.

Briand *et al.* propose, in the paper "Multidisciplinary design process based on virtual prototyping for microsystem design", a virtual prototyping tool allowing the designer to be guided through a multidisciplinary design process. The tool was developed for detailed design of micro-accelerometers, improving collaboration and fast identification of satisfying solutions.

Mobach, in the paper "Virtual prototyping to design better corporate buildings", focuses on how modern visualization techniques can allow design of social architecture participants to develop new methods of inquiry, to connect functional areas and scientific disciplines, and to improve the relationship with practical application.

Finally, Sghaier *et al.,* in the paper "Model structuring for virtual prototype re-design", describes a surface recognition approach for virtual reverse engineering based on both surface segmentation and surface identification algorithms that identify all the surfaces' mathematical properties. Subsequently, a re-design module allows the user to modify the geometrical properties of the object using a haptic interface.

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