

# Visual Computing Trends 2015

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## **“The Future of Shape Modeling “**

### Abstract

Thanks to technological advances and rising public interest, 3D content is gaining momentum and its popularity is rapidly increasing. Acquisition devices make it possible to build easily digital counterparts of physical objects and environments, and 3D televisions and head-mounted displays can now be bought at a fraction of the cost of a gramophone a mere 50 years ago. Emerging technologies are therefore leading us to a gradual but inescapable mix of the material essence of our reality with a *digital* one. But can digital reality fulfil the same expectations as those we have on our material life? While attaining visual realism is within the grasp of current research achievements, it is less clear whether the digital environments will be accommodating to the needs of human communication and interaction with digital 3D worlds. This talk will explore the role of shape modelling in this evolving scenario and discuss current research issues and future directions that indicates a shift of focus from the modelling of geometries to the description of objects.

### Curriculum Vitae

Michela Spagnuolo is Research Director at Institute of Applied Mathematics and Information Technology of the National Research Council of Italy, where she has been working since 2001.

Her research interest include geometric, structural and semantic modelling of 3D objects, with emphasis on computational topology methods for the analysis of shapes and for the evaluation of shape similarity. She is member of the steering committee of Shape Modeling International, EG Workshops on 3D Object Retrieval, and of the EG Workshop on Graphics and Cultural Heritage. She authored more than 130 reviewed papers in scientific journals and international conferences, edited two books, and is associate editor of international journals in Computer Graphics (currently, *Computers&Graphics* and *The Visual Computer*). She has been elected Eurographics Fellow in 2014.