Preface

Francesco Longo*

DIMEG,
University of Calabria,
87036 Arcavacata, Rende CS, Italy
Email: f.longo@unical.it
*Corresponding author

Letizia Nicoletti

CAL-TEK S.r.l.,
Contrada Cutura 240, 87036 Rende CS, Italy
Email: l.nicoletti@cal-tek.eu

Biographical notes: Francesco Longo obtained his PhD in Mechanical Engineering at the University of Calabria, specialisation in Modelling and Simulation in North America (Rutgers University). He is the CEO of CAL-TEK, Associate Professor at Mechanical Department of University of Calabria, Italy, and Director and scientific responsible of the Modelling and Simulation Center, Laboratory of Enterprise Solutions, MSC-LES (M&SNet Center). His research interests include the use of modelling and simulation in many different areas/sectors. He supervises several research projects as a scientific responsible (using virtual reality, mixed reality, knowledge navigators, etc.). He is an author of more than 150 scientific articles in international journals and conferences.

Letizia Nicoletti was the CEO of CAL-TEK from 2012 to 2014 and she is currently Senior Manager. She obtained her Bachelor's in Management Engineering, Summa cum Laude, Master's in Management Engineering, Summa cum Laude as well as PhD in Mechanical Engineering at the University of Calabria, Italy. She has been as a scientific responsible of research projects in many different areas, including logistics and distribution, defence and cultural heritage. Since 2009, she has acquired a strong experience in software development and modelling and simulation, including high level architecture and distributed real time simulation. Since 2011, she has been actively involved in the organisation of the International Multidisciplinary Modeling and Simulation Multiconference (I3M).

Year by year, technological enhancements and new paradigms come out following an unrelenting process of innovation and renewal. Research is an integral part of this context as a driving force in forward thinking. Here, an ever-increasing number of scientific approaches converge on modelling and simulation (M&S) as a powerful methodology for dealing with complexity. With its strong methodological foundations, M&S theories, paradigms, technologies and applications keep up with needs-driven research and on top of that foster a tide of breakthrough innovations across all sectors and application areas.

This is even confirmed by a basic context analysis. M&S has a prominent role in industry where it is considered an enabling technology within the Industry 4.0 framework. It is the first thing in people's minds when dealing with strategic, tactical or operational issues in defence. It is taken for granted when new approaches and procedures are to be tested and validated in the healthcare domain. It has gained recognition in education and training. It is used extensively when tests, trials and predictions are to be made before taking actions in real settings. The more the application domain gets complicated and the objectives ambitious, the greater the research effort and the challenge for the community is.

In this perspective, this special issue results from the joint efforts of authors and reviewers who are continuously involved in contributing to the actual body of knowledge with meaningful findings. Thus, our thanks go to all the people who have worked hard to ensure high quality contributions and above all to the Editor-in-Chief, Prof. Feng Qiao, who has made this possible.