

## Special Issue

# Methods and Applications of Uncertainty Quantification in Engineering and Science

### Message from the Guest Editors

In the last two decades, uncertainty quantification (UQ) methods have received increasing attention, as real-world problems in most science, technology, and engineering areas are affected significantly by uncertainty. When dealing with simulations of complex physical phenomena, uncertainty generally stems from physical modelling, environmental/operating conditions, and to some extent numerical discretization. To overcome the limitations due to the computational cost associated with UQ, several approaches have been investigated by researchers in different areas. The aim of this Special Issue is to collect state-of-the-art research on the topic of computationally-efficient UQ methods and on their applications to complex problems. The Special Issue is organized in collaboration with the Workshop on Frontiers of Uncertainty Quantification in Fluid Dynamics (FrontUQ 2019, <https://frontuq19.com/>). Contributions from FrontUQ are welcome, as well as papers from other fields of application of UQ and researchers outside the workshop.

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### Guest Editors

Dr. Matteo Diez

Dr. Lorenzo Tamellini

Prof. Dr. Maria Vittoria Salvetti

Dr. Alessandro Mariotti

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### Deadline for manuscript submissions

closed (31 July 2020)



## Algorithms

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## About the Journal

### Message from the Editor-in-Chief

Algorithms are the very core of Computer Science. The whole area has been considered from quite different perspectives, having led to the development of many sub-communities: Complexity theory (limitations), approximation or parameterized algorithms (types of problems), geometric algorithms (subject area), metaheuristics, algorithm engineering, medical imaging (applications), indicates the range of perspectives. Our journal welcomes submissions written from any of these perspectives, so that it may become a forum for exchange of ideas between the corresponding scientific subcommunities.

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### Editor-in-Chief

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