MACHINE LEARNING AND DATA DRIVEN BASED ENGINEERING COMPUTATION

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MINISYMPOSIUM

With the steady development of computer science, machine learning and data science have made significant progress in recent decades. These techniques generally rely on a substantial amount of data samples to extract the abstract mapping hidden within the data. Hence, these technologies have gradually attracted the attention of researchers in the field of computational mechanics and computational engineering. This mini-symposium aims at bringing together mechanicians, computer scientists, and industrial researchers to promote research and application in big data analysis, data driving computing and artificial intelligence in engineering as well as the scientific exchanges among scientists, practitioners, and engineers in affiliated disciplines.

The topics of interest are, but not limited to:

- •Data-driven based constitutive modelling
- •Machine learning based solutions of PDEs
- •Big data for design and optimization
- •Data-driven simulation techniques
- •Data-driven techniques in multi-scale and multi-field simulations of materials
- •Data-driven modelling of geo- and environmental data
- •Visualization and visual analytics of geo-data
- •Data-driven techniques for continuous and discrete method