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MATHEMATICAL AND NUMERICAL MODELLING OF COVID-19 EPIDEMIC

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ABSTRACT

The COVID-19 outbreak in early 2020 has represented and it is still representing the biggest and widest challenge for the world in decades. In the past year and a half, the mathematical and computational mechanics communities had made significant efforts to develop novel reliable mathematical models, numerical methods and data analysis tools for the interpretation, understanding and control of the epidemic, for providing support to digital health [1], to understand infection mechanisms, and to improve medical treatment.

The objective of this minisymposium is to collect successful experiences of recent advances on mathematical and numerical models, as well as statistical methods, to tackle the multifaceted problematic related to the COVID-19 outbreak. This includes a wide range of topics, varying from epidemiological modeling and forecast [2], analysis of new clinical scenarios [3], study and control of spreading and infection mechanisms, as well as improvement of therapeutic interventions and medical treatment.

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