

NUMERICAL MODELLING FOR SUSTAINABILITY

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ABSTRACT

The main purpose of this Minisymposium is to create an effective bridge between the numerical modelling of evolutive problems and their feasibility in facing sustainability problems. It is well known that mathematical modelling offers tools able to describe production systems with accuracy and robustness, as well as to follow their space-time evolution, even in the long term. Similarly, it is well known that numerical modelling assumes a role of absolute importance for the simulation and dynamical analysis of complex models from which qualitative and quantitative information is to be derived for a better understanding of the real processes described by these models. The scientific contributions characterizing this session will have a joint focus on both methodological and application-oriented aspects. A brief tentative list of topics covered in this session is given by the following items: numerical modelling for sustainable supply chains; pattern formation in battery and vegetation modelling; stochastic numerical modelling for sustainability; simulation of the dynamics of the deterioration of materials; numerical modelling in industrial processes for healthcare. This Minisymposium falls within the activities of PRIN-MUR 2022 project 20229P2HEA "Stochastic numerical modelling for sustainable innovation", CUP: E53D23017940001, granted by the Italian Ministry of University and Research within the framework of the Call relating to the scrolling of the final rankings of the PRIN 2022 call.