

Special Issue

Trends and Prospects in Artificial Intelligence and Mechanical Analysis

Message from the Guest Editor

Dear colleagues, In the field of structural and mechanical engineering, problems can be challenging when an engineering system is too complicated with non-linearity. Since Artificial Intelligence (AI) is able to capture complex non-linear relationships between inputs and predictions, it has been widely used to develop prediction models in many fields of mechanical engineering. It takes advantage of a large amount of measured data and as the amount of data keeps growing, AI algorithms learn to make more accurate predictions. For the prediction of mechanical behavior, a variety of AI models has been used in this area, e.g., PINN (Physical Informed Neural Network). Studies have shown that AI models generally have higher accuracy and robustness than those based on empirical or semi-empirical models. From previous studies, AI models demonstrate feasibility and accuracy for the mechanical prediction problem, which can serve as a valuable solution for engineering practice in the age of big data.

Guest Editor

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Message from the Editor-in-Chief

The journal *Mathematics* publishes high-quality, refereed papers that treat both pure and applied mathematics. The journal highlights articles devoted to the mathematical treatment of questions arising in physics, chemistry, biology, statistics, finance, computer science, engineering and sociology, particularly those that stress analytical/algebraic aspects and novel problems and their solutions. One of the missions of the journal is to serve mathematicians and scientists through the prompt publication of significant advances in any branch of science and technology, and to provide a forum for the discussion of new scientific developments.

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