Special Issue

Artificial Intelligence and Numerical Simulation in Food Engineering

Message from the Guest Editors

The integration of Artificial Intelligence (AI) and numerical simulation is revolutionizing food engineering, enabling innovative solutions in process optimization, quality control, and supply chain management. AI-based methods such as machine learning, deep learning, and computer vision enable predictive modeling and real-time decision-making with improved efficiency and product uniformity. Also, numerical simulations, from FEA to CFD, enable accurate analysis of thermal, mechanical, and biochemical processes in food processing. This Special Issue is devoted to documenting state-of-the-art research at the intersection of AI and numerical simulation in food engineering for automating, optimizing, and making more sustainable food processing.

We are writing to invite you to make a contribution to the Special Issue titled "Artificial Intelligence and Numerical Simulation in Food Engineering". The issue aims to cover the latest advances in AI-driven modeling, machine learning techniques, and numerical simulation techniques such as computational fluid dynamics (CFD) and finite element analysis (FEA) in food processing and quality control.

Guest Editors

Dr. Mahdi Rashvand

Dr. Hongwei Zhang

Dr. Francesco Genovese

Deadline for manuscript submissions

31 October 2025

About the Journal

Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

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