

Preface

The articles of this special edition refer to various branches of modern engineering sciences. Still, they are united by one thing - the underlying principles of their research are diffusion phenomena and heat and mass transfer processes.

Modelling of the magnetohydrodynamic Casson flow passing over a non-linear convective inclined plate with incorporating a chemical reaction and Arrhenius activation energy, simulation of heat transfer phenomena during the cooling process of a lithium-ion battery pack, optimisation of technological parameters of laser beam welding of superalloy with the use of adaptive neuro-fuzzy inference system, and assessment of recent progress in the technology of physical vapour deposition of titanium nitride protective coating are topics of scientific and engineering research presented in this collection.

The special edition will be helpful to researchers and engineers from many branches of modern production and engineering science.