

## Preface

This special edition encompasses vital themes shaping the future of engineering and technology.

Chapter 1, "Structural Metals and Machining Processes," explores structural metal materials, emphasising advances in metalworking and precision machining.

Chapter 2, "Robotics," highlights the integration of intelligent automation, control systems, and mechanical design that is revolutionising industries from manufacturing to healthcare.

Chapter 3, "Engineering Research and Design," delves into computational methods and simulation techniques essential for optimising engineering research and design, as well as enhancing manufacturing accuracy.

The presented articles provide a comprehensive overview of the current state of developments in materials, machinery, energy, robotics and automation, serving as a valuable resource for researchers, engineers, and practitioners dedicated to advancing sustainable and innovative engineering solutions.