

Preface

The rapid advancements in intelligent technologies have transformed the landscape of engineering and applied sciences. With the convergence of artificial intelligence (AI), machine learning (ML), Internet of Things (IoT), and automation, we are witnessing a paradigm shift in how industries and research domains are evolving. This book, *Next-Generation Intelligent Technologies for Engineering and Applied Sciences*, explores cutting-edge innovations that are shaping the future of engineering practices and scientific applications. It provides an in-depth analysis of the emerging technologies that are enabling smarter, more efficient, and sustainable solutions across various sectors. By examining the integration of AI, IoT, and data-driven approaches, this volume presents valuable insights into their role in revolutionizing manufacturing, infrastructure, healthcare, energy, and more. The chapters in this book offer practical knowledge, visionary concepts, and real-world examples to guide researchers, practitioners, and students towards harnessing the full potential of these intelligent technologies for advancing engineering and applied sciences.