

Preface

N.B.K.R. Institute of Science and Technology, Vidyanagar, SPSR Nellore (Dt.), Andhra Pradesh, India hosted an “International Conference on Advances in Material Science and Mechanical Engineering (ICAMSME - 2020)”. It was organized by the Department of Mechanical Engineering during 7-9, February 2020.

The conference provided a platform for academicians, researchers, scientists, industrial professionals, and students to unleash their research work and created a forum for effective sharing of ideas to face the future global challenges from the perspective of rising trends in Engineering and Technology. ICAMSME-2020 facilitated discussions in the areas of past, present, and future research works.

This three-day technical conference included keynote addresses, oral presentations, and poster presentations to create inspiration and encouraged fruitful discussions among the researchers. Total twelve eminent professionals delivered keynote and invited sessions on recent developments in materials and processing technologies in defense, aerospace and space applications, Nano Electro-Mechanical Systems (NEMS), Robust Quality Index (RQI) for manufacturing, advances in the digital twin, artificial intelligence, and machine learning in manufacturing, smart manufacturing, and cyber-physical systems. More than 200 papers were presented by researchers from various academic and research institutions and industries across the Globe. The conference also provided exhibition opportunities to showcase their research works and products. The participants rejuvenated their skills in the thrust areas.

This book deals with various advanced aspects of mechanical and materials engineering. It includes characterization of metal matrix composites, wear characteristics, tribological behavior, and surface engineering. It also deals with applications of simulation, modeling, analysis, and optimization in mechanical engineering.

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