

1. Record Nr.	UNINA9910488711703321
Titolo	Advances in mechanical engineering : select proceedings of CAMSE 2020 // Gaurav Manik [and four others], editors
Pubbl/distr/stampa	Singapore : , : Springer, , [2021] ©2021
ISBN	981-16-0942-X
Descrizione fisica	1 online resource (770 pages)
Collana	Lecture Notes in Mechanical Engineering
Disciplina	620.11
Soggetti	Materials Engineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Intro -- Organizing Committee -- Preface -- Contents -- About the Editors -- Study of Structural and Functional Properties of Graphene / Polyaniline Nanocomposites Synthesized via In Situ Polymerization -- 1 Introduction -- 2 Experimental Section -- 2.1 Reagents and Solutions -- 2.2 Synthesis of G/PANI Nanocomposites -- 3 Results and Discussion -- 4 Conclusions -- References -- Numerical Investigation of the Effect of Ball Bearing Geometry on Oil Film Damping Due to Lubricated Contact at Different Loads -- 1 Introduction -- 2 Mathematical Formulations -- 3 Result and Discussion -- 3.1 Varying the Number of Balls -- 3.2 Varying the Ball-Raceway Conformity Ratio -- 3.3 Varying the Diametral Clearance -- 4 Conclusion -- References -- Experimental Investigation on LHR Engine Modified Piston with YSZ Coating by Using Biodiesel -- 1 Introduction -- 2 Methodology -- 3 Fabrication -- 4 Experimental Set-up, Investigation Procedure and Data Calculation -- 4.1 Experimental Set-up -- 4.2 Investigation Procedure -- 4.3 Model Calculations -- 5 Results and Discussions -- 6 Conclusion -- References -- Fuzzy TOPSIS-Based Cloud Model to Evaluate Cloud Computing Services -- 1 Introduction -- 2 Cloud Computing: An Overview -- 2.1 Cloud Computing Architecture -- 3 Fuzzy Set Theory -- 4 Related Works -- 5 Proposed Method -- 5.1 Cloud Computing Service Selection: A Case Study -- 5.2 Final Outcomes of the Fuzzy TOPSIS Analysis -- 5.3

Results by Ranking of Sum of Weights -- 6 Conclusion and Future Directions -- References -- Seismic Analysis of Irregular Multi-storey Building with Bracing and Shear Wall Using Flat Slab -- 1 Introduction -- 2 Objective of the Present Study -- 3 Methodology -- 4 Results and Discussion -- 4.1 Displacement of Plan Irregularity -- 4.2 Base Shear -- 5 Conclusion -- References.

Seismic Behaviour of Twisted Tall Building with Different Angle of Rotation -- 1 Introduction -- 2 Objective of the Present Study -- 3 Methodology -- 3.1 Different Models Are Considered -- 4 Results and Discussion -- 4.1 Time Period -- 4.2 Base Shear -- 5 Conclusion -- 6 Future Scope -- Bibliography -- Efficient Techniques for Detecting Malignant Tumor in Breast at an Early Stage: A Conceptual and Technological Review -- 1 Introduction -- 2 Related Work -- 3 Methodology -- 3.1 Image Pre-processing -- 3.2 Image Segmentation -- 3.3 Feature Extraction Technique -- 3.4 Classification Technique -- 4 Results and Discussion -- 5 Observation Table -- 6 Conclusion -- References -- A Case Study: Haute Fashion Boutique e-Shopping -- 1 Introduction -- 2 State of the Art -- 3 Problem Definition -- 3.1 Aim and Objectives -- 3.2 Study Outcome and Social Implications -- 4 Methodology -- 4.1 Design and Flow of Website -- 4.2 Authentication of Website -- 5 Results -- 6 Conclusion and Future Scope -- References -- Monostatic Microwave Imaging for Breast Tumor Detection Using Two 'C' Shaped Dielectric Resonators (DR) -- 1 Introduction -- 2 Geometry of the Proposed Antenna Structure -- 3 Parametric Optimization of the Results -- 3.1 Effect of the Variation of Dielectric Resonator (DR)'s Shape -- 3.2 Ground Plane Variation -- 3.3 Optimization of the Width of Feed line (F1) -- 4 Simulated Results of the Proposed DRA -- 4.1 Radiation Pattern -- 4.2 Surface Current -- 5 Microwave Imaging Used for the Detection of Breast Tumor and Reconstruction of the 2D Image -- 6 Conclusions -- References -- Biodiesel a Substitution for Conventional Diesel Fuel: A Comprehensive Review -- 1 Introduction -- 2 Sources of Biodiesel -- 2.1 Production of Biodiesel -- 2.2 Edible and Non-edible Sources -- 2.3 Production of Biodiesel from Castor Oil -- 2.4 Transesterification Process. 2.5 Biodiesel Production from Waste Cooking Oil and Soap stock -- 3 Characterization of Biodiesel on the Basis of Physical and Chemical Properties -- 3.1 Viscosity -- 3.2 Flash Point, Cloud and Pour Points -- 3.3 Specific Gravity -- 3.4 Calorific Value, Ash Content and Cetane Number -- 4 Conclusion -- References -- Combined Regula-Falsi and Newton-Raphson Method -- 1 Introduction -- 2 Modified Regula-Falsi Method (RFM) -- 3 Rate of Convergence -- 4 Conclusion -- References -- Humans Versus Deep Learning: Detection of Face Morphing as a Peril -- 1 Introduction -- 2 Literature Review -- 2.1 Image Degradation Analysis -- 2.2 Detection Using Deep Learning -- 2.3 Science of Specular Reflection -- 2.4 Blind Detection Approach -- 2.5 Facial Landmark Shift -- 2.6 Image Processing Approach -- 2.7 PRNU Detection System -- 2.8 Detection of FS-SPN -- 3 About the Data set -- 4 Deep Learning Approach -- 5 Survey of Human Recognition Capability -- 6 Result -- 7 Conclusion -- References -- Effect and Use of 3D Printers Technologies -- 1 Introduction -- 2 How It Works -- 3 Applications of 3D Printing -- 3.1 Construction -- 3.2 Medicine -- 3.3 Manufacturing -- 3.4 Domestic Usage -- 3.5 Clothing -- 3.6 Academia -- 4 Benefits -- 5 Future Work -- 5.1 Manufacturing -- 5.2 Medicine -- 5.3 Commerce -- 6 Conclusion -- References -- Thickness Dependent Morphological, Structural, and Magnetic Studies of Nickel Ferrite Films -- 1 Introduction -- 2 Materials and Method -- 3 Result and Discussion -- 3.1 Morphological Studies -- 3.2 Structural Studies -- 3.3 Magnetic Studies -- 4 Conclusion -- References --

Comprehensive Review on Packed Bed Thermal Energy Storage Systems -- 1 Introduction -- 2 Sensible Heat Thermal Energy Storage -- 3 Latent Heat Thermal Energy Storage -- 4 Thermochemical Energy Storage Systems -- 5 Conclusion -- References.

Reimagining the Digital Twin: Powerful Use Cases for Industry 4.0 -- 1 Introduction -- 2 Effective Data Management -- 2.1 Predictive Analysis of Product Asset Lifecycle -- 2.2 Operational Quality -- 2.3 Converges Existing and Evolving Technologies -- 3 Applications of Digital Twin in Manufacturing -- 3.1 Build and Operate -- 3.2 Monitor -- 3.3 Numerical Twin Founded Creation Project -- 3.4 Computerized Twin in Smart Manufacturing -- 3.5 Computerized Twin as Enabler for Smart MRO -- 4 Computerized Twin for Product Utilization Monitoring -- 5 Use Cases of Computerized Twin in Industry 4.0 -- 5.1 Digital Wind Farm -- 5.2 Digital Twin in Smart Building -- 5.3 Digital Twin in Retail -- 5.4 Digital Twin in Automobile -- 5.5 Digital Twin in Healthcare -- 5.6 Industrial Digital Twin -- 5.7 Digital Twin Accelerate Business Transformation -- 6 Conclusion -- 7 Managerial Implication -- References -- Automated Sleep Staging of Human Polysomnography Recordings Using Single-Channel of EEG Signals -- 1 Introduction -- 2 Literature Survey -- 3 Experimental Data -- 4 The Methodology -- 4.1 Preprocessing -- 4.2 Feature Extraction -- 4.3 Feature Selection -- 5 Experimental Results and Discussion -- 6 Conclusion -- References -- Performance Parameter Optimization of MR Damper Piston Using Taguchi Method and Grey Relational Analysis -- 1 Introduction -- 2 Methodology -- 3 Design of Piston -- 3.1 Pre-processing of Data -- 4 Experimental Study -- 5 ANOVA -- 6 Conclusion -- References -- Deep Drilling of Stainless Steel-316L with Brass Electrode on Orbital EDM -- 1 Introduction -- 2 Material and Methodology -- 3 Experimentation -- 3.1 Selection and Procurement of Material -- 3.2 Cutting and Sample Preparation of Selected Alloys -- 3.3 Examination of Microstructure of the Material -- 3.4 Selection of Factors and Their Respective Levels -- 3.5 Confirmation Trials. 4 Results and Discussion -- 5 Conclusions -- References -- Electronic Structure Studies of $PbFeO_3$ Using Density Functional Theory Calculations -- 1 Introduction -- 2 Computational Methods -- 3 Results and Discussions -- 3.1 Optimization of k-points -- 3.2 Optimization of Energy Cut-Off -- 3.3 Optimization of Lattice Parameters of Cubic and Tetragonal Phases of $PbFeO_3$ -- 3.4 Structure Determination -- 3.5 Band Structure Studies of Cubic $PbFeO_3$ in the Nonmagnetic State -- 3.6 DOS Studies of Cubic $PbFeO_3$ in Nonmagnetic State -- 3.7 DOS Studies of Optimized Cubic Ferromagnetic $PbFeO_3$ -- 4 Conclusions -- References -- Optimizing Thermoforming of Refrigerator Liners to Reduce Liner Rejection Rate-A Case Study Using Fractional Factorial Design of Experiments -- 1 Introduction -- 1.1 Background -- 1.2 About Design of Experiments -- 1.3 Thermoforming and Refrigerator Liner -- 2 Methodology -- 2.1 Design Matrix -- 2.2 Regression Equation -- 3 Results and Analysis -- 3.1 DOE of the Thermoforming Process -- 3.2 Data Analysis Using ANOVA -- 3.3 Inferences from the Analysis -- 4 Conclusions and Future Scope -- References -- Effect of Curing Methods on the Properties of Green Concrete -- 1 Introduction -- 2 Materials and Specimens -- 2.1 Materials -- 2.2 Chemical Admixture -- 3 Experimental Investigation -- 3.1 Mix Design -- 3.2 Curing -- 3.3 Durability Test -- 4 Results and Discussion -- 4.1 Compressive Strength Test Result -- 4.2 Split Tensile Strength Test Result -- 5 Conclusions -- References -- Root Cause Analysis by Shainin Approach in Automotive Manufacturing Sector: A Case Study -- 1 Introduction -- 1.1 Six Sigma (6) Methodology -- 1.2 Shainin Approach -- 2

Methodology -- 2.1 Define Phase -- 3 Measure and Analysis Phase --
3.1 Product Process Search Tool -- 4 Improve -- 5 Control B Versus C
-- 5.1 Overlapping Analysis -- 5.2 Calculations.
5.3 How Much Improvement Has Taken Place?.
