3.3.2 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five year

CONTENTS

Preamble

Srinivas Institute of Technology, renowned for its knowledge and innovation, has consistently upheld a dedication to scholarly excellence. As we embark on the journey of evaluating the scholarly accomplishments of our esteemed faculty, it becomes imperative to delve into essential metrics that showcase their academic influence and research expertise. This section aims to provide a comprehensive overview of the scholarly contributions of our faculty members over the past five years. It focuses on the quantification of academic output, including the number of books and chapters in edited volumes/books published, as well as the number of papers published in national and international conference proceedings by each teacher. These metrics serve as indicators of the institution's commitment to research and knowledge dissemination, highlighting the intellectual engagement of our faculty members in their respective fields.

Srinivas Institute of Technology has been at the forefront of fostering knowledge and innovation through a series of remarkable conferences organized across various departments. These conferences, namely ICRICS (International Conference on Recent Innovations in Computer Science), RTIMES (International Conference on Recent Trends in Mechanical Engineering Sciences), ICTIR (International Conference on Technology for Industry 4.0 Revolution), and the International Conference on Sustainable Innovative Strategies for Business Development in the Current Scenario, have been instrumental in enriching the academic landscape for both our esteemed faculty and eager students. These conferences have served as vibrant platforms for the exchange of ideas, the exploration of cutting-edge trends, and the dissemination of knowledge.

Faculty members have had the opportunity to engage with peers and experts from around the world, gaining valuable insights to enhance their teaching and research endeavors. Simultaneously, our students have been exposed to the latest advancements in their respective fields, fostering a culture of innovation and academic growth. This initiative mirrors our steadfast dedication to educational excellence and the advancement of knowledge, underlining our vision to maintain a prominent position in academic accomplishments and research contributions

Summary Sheet

Summary of Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five year

Sl. No.	Name	Title of the book/chapters published	Title of the paper	Title of the proceedings of the conference	Name of the conference	National / International	Calendar Year of publication	ISBN number of the proceeding	Affiliating Institute at the time of publication	Name of the publisher
1	Ramakrishna N. Hegde	-	A comparative analysis of exergy using dual blends of Biodiesel in a DI engine	Elsevier's Materials Today: Proceedings	Second Global Conference on Recent Advances in Sustainable Materials(GC-RASM 2022)	International	2022	ISSN: 2214-7853	Srinivas Institute of Technology, Valachil, Mangaluru	Elsevier's Materials Today: Proceedings
2	Ramakrishna N. Hegde	-	A comparative Analysis of exergy using engine performance results based on a dual blend	2nd Virtual International Conference on Advanced Technologies and Research	2nd Virtual International Conference on Advanced Techno	International	2022	-	Srinivas Institute of Technology, Valachil, Mangaluru	MEA Engineering College

			of Cotton seed & Simarouba oil and Vateria Indica Blends in a four-stroke single cylinder Diesel engine	in Mechanical Engineering, VICATRME'22	logies and Research in Mechanical Engineering					
3	Ramakrishna N. Hegde	-	Performance And Emission Analysis of An IDI Diesel Engine With EGR	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
4	Ramakrishna N. Hegde	-	Data Analysis of Wind Energy	Proceedings of the International	International Conference on	International	2022	9-788195-	Srinivas Institute of Technolo	Srinivas Institute of

			Potential for Rooftop Mounted Horizontal Axis Small Wind Turbine at The Site Location Chikkolli, Kumta, Karnataka State	Conference on Recent Trends In Mechanical Engineering Sciences	Recent Trends in Mechanical Engineering Sciences RTIMES-2022			692279	gy, Valachil, Mangaluru	Technology Mangaluru
5	Ramakrishna N. Hegde	-	Investigation of a Vortex-Based Bladeless Small Wind Power Generator with External Agitators for enhanced VIV effect	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
6	Praveen Shenoy	-	A comparative analysis of exergy using dual blends of Biodiesel in a DI engine	Elsevier's Materials Today: Proceedings	Second Global Conference on Recent Advances in Sustainable Materia	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Elsevier's Materials Today: Proceedings

					ls(GC-RASM 2022)					
7	Praveen Shenoy	-	Investigation Of Field Dependent Variations of Torsional Stiffness Of Magneto Rheological Elastomer	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
8	Praveen Shenoy	-	Designing of Object Detection Drone	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
9	Praveen Shenoy	-	Designing of Voice Controlled Drone Using Bt-	Proceedings of the International Conference	International Conference on Recent	International	2022	9-788195-	Srinivas Institute of Technology,	Srinivas Institute of Techn

			Voice Control for Arduino	e on Recent Trends In Mechanical Engineering Sciences	Trends in Mechanical Engineering Sciences RTIMES-2022			692279	Valachil, Mangaluru	ology Mangaluru
10	Praveen Shenoy	-	Drone Utilization for Agriculture Purpose	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
11	LokeshK.S	-	3-D Printed Sounding Rocket for the Application of Cloud Seeding	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru

					RTIMES-2022					
12	LokeshK.S	-	Developing natural fiber based hybrid composite aircraft structure by utilizing single used waste plastic as a mould through 3d printing technique	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
13	LokeshK.S	-	A Review On "Systematic And Complete Proof Of The Collatz Conjecture	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
14	Srinidhi Kukkila	-	Robotic Arm Installed Fruit Plucking	Proceedings of the International Conference on	International Conference on Recent Trends	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil,	Srinivas Institute of Technology

			UAV – Based on AI	Recent Trends In Mechanical Engineering Sciences	in Mechanical Engineering Sciences RTIMES-2022				Mangaluru	Mangaluru
15	Srinidhi Kukkila	-	Computational Fluid Dynamics in Investigation of Propeller Slip Stream	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
16	Rajesh	-	Performance Evaluation of Multiple Coaxial Jet Nozzle System in Combustor of Gas Turbine in Aircraft Engine	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru

					RTIMES-2022					
17	Gangadhara Rao	-	A comparative analysis of exergy using dual blends of Biodiesel in a DI engine	Elsevier's Materials Today: Proceedings	Second Global Conference on Recent Advances in Sustainable Materials(GC-RASM 2022)	International	2022	ISSN: 2214-7853	Srinivas Institute of Technology, Valachil, Mangaluru	Elsevier's Materials Today: Proceedings
18	Gangadhara Rao	-	Flutter Analysis of An Aircraft Wing Over a Cruise Speed	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
19	Ramesh Kumar	-	Autonomous Quad Copter for Uplifting Agriculture	Proceedings of the International Conference on Recent Trends In	International Conference on Recent Trends in Mechan	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil,	Srinivas Institute of Technology

				Mechanical Engineering Sciences	ical Engineering Sciences RTIMES-2022				Mangaluru	Mangaluru
20	Gangadhara Rao	-	Quad Tilt Wing VTOL UAV	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
21	Gangadhara Rao	-	A comparative Analysis of exergy using engine performance results based on a dual blend of Cotton seed & Simarouba oil and Vateria Indica	2nd Virtual International Conference on Advanced Technologies and Research in Mechanical Engineering.	2nd Virtual International Conference on Advanced Technologies and Research in Mechanical	International	2022	-	Srinivas Institute of Technology, Valachil, Mangaluru	MEA Engineering College

			Blends in a four-stroke single cylinder Diesel engine	VICATRME'22	Engineering					
22	Jerome Anthony	-	Design And Development of Equipment for Agricultural Grains and Coffee Cherry	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
23	Prakash S T	-	Design And Fabrication of Automated Switching Headlight with Self-Charging System Using Wind Energy	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru

24	Prakash S T	-	Design And Fabrication of Automatic Tyre Inflation Pressure	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
25	Girish AR	-	Review on Electric Vehicle Technologies	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
26	Girish AR	-	Design And Fabrication of Solar Equipped Portable Electric Tiller Machine	Proceedings of the International Conference on Recent Trends In	International Conference on Recent Trends in Mechan	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru

				Mechanical Engineering Sciences	ical Engineering Sciences RTIMES-2022					
27	Varun N	-	Implementing Breath analyzer in Vehicle for People Safety	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
28	Jagadeesh Bantwal	-	A comparative analysis of exergy using dual blends of Biodiesel in a DI engine	Elsevier's Materials Today: Proceedings	Second Global Conference on Recent Advances in Sustainable Materials(GC-RASM 2022)	International	2023	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Elsevier's Materials Today: Proceedings

29	Jagadeesh B	-	Object detection and Drone trapping system	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
30	Jagadeesh B	-	Study and analysis of Aerogel material as a car roof insulator	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
31	Jagadeesh B	-	A comparative Analysis of exergy using engine performance results	2nd Virtual International Conference on Advanced Technolog	2nd Virtual International Conference on Advanced	International	2022	-	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru

			based on a dual blend of Cotton seed & Simarouba oil and Vateria Indica Blends in a four-stroke single cylinder Diesel engine	ies and Research in Mechanical Engineering, VICATRME'22	Technologies and Research in Mechanical Engineering					
32	Caroline D'Souza	-	The Heterogeneous Layered Urbanism of the Old Port of Mangaluru: Its significance withinhe Cultural Landscape of Tulunadu with a vision towards a sustainable urban future	Sustainable Resilient Built Environments	Sustainable Resilient Built Environments (SRBE) 2022	International	2022	978-981-99-8810-5	Srinivas Institute of Technology, Valachil, Mangaluru	Springer Singapore
33	Sumana V.S.	-	Poly(vinylidene Fluoride) and Gaur Gum Blend polymer	International conference on Recent trends in Applied	International conference on Recent trends	International	2022	978-81-956922-0-0	Srinivas Institute of Technology, Valachil,	Srinivas Institute of Technology

			Electrolyte for supercapacitor	science-2022 - Abstract	in Applied science -2022				Mangaluru	Mangaluru
34	Padmanayana	-	Identification of the nutrient defficient in plant using machine learning approach	Proceedings of International conference Recent Innovations in Computer science - 2022	International Conference on Recent innovations in Computer Science (ICRICS-2022)	International	2022	978-93-92537-06-6	Srinivas Institute of Technology, Valachil, Mangaluru	BONFRING
35	Ravishankara K	-	Classification of yakshagana images using machine learning Techniques	Proceedings of International conference Recent Innovations in Computer science - 2022	International conference Recent Innovations in Computer science -2022	International	2022	978-93-92537-06-6	Srinivas Institute of Technology, Valachil, Mangaluru	BONFRING
36	Nagaraja Hebbar N	-	Feature Based Stratification of Paddy Seeds of CoastalKarnataka Region Using	Proceedings of International conference Recent Innovations in Computer	International conference Recent Innovations in Computer	International	2022	978-93-92537-06-6	Srinivas Institute of Technology, Valachil, Mangaluru	BONFRING

			DenseNet model	science - 2022	science -2022					
37	Aravind Naik	-	Lung Cancer Detection Using Machine Learning	Proceedings of International conference Recent Innovations in Computer science - 2022	International conference Recent Innovations in Computer science -2022	International	2022	978-93-92537-06-6	Srinivas Institute of Technology, Valachil, Mangaluru	BONFRING
38	Sudarshan K	-	Tulu Character Data Set Creation and Recognition	Proceedings of International conference Recent Innovations in Computer science - 2022	International conference Recent Innovations in Computer science -2022	International	2022	978-93-92537-06-6	Srinivas Institute of Technology, Valachil, Mangaluru	BONFRING
39	Mohan K	-	A Survey on Blood Vessel Extraction Deep Learning Techniques From Fundus Images using	Proceedings of International conference Recent Innovations in Computer science - 2022	International conference Recent Innovations in Computer science -2022	International	2022	978-93-92537-06-6	Srinivas Institute of Technology, Valachil, Mangaluru	BONFRING

40	Dheeraj Hebri	-	Identification of Herbal PlantsUsing Machine Learning Approaches	Proceedings of International conference Recent Innovations in Computer science - 2022	International conference Recent Innovations in Computer science -2022	International	2022	978-93-9253 7-06-6	Srinivas Institute of Technology, Valachil, Mangaluru	BON FRING
41	Kavya Hegde	-	Detection of Tuberculosis using Chest X-RAYs	Proceedings of International conference Recent Innovations in Computer science - 2022	International conference Recent Innovations in Computer science -2022	International	2022	978-93-9253 7-06-6	Srinivas Institute of Technology, Valachil, Mangaluru	BON FRING
42	Mohan K	-	Survey on Exudates detection from fundus images using machine-learning	Proceedings of International conference Recent Innovations in Computer science - 2022	International conference Recent Innovations in Computer science -2022	International	2022	978-93-9253 7-06-6	Srinivas Institute of Technology, Valachil, Mangaluru	BON FRING
43	Shivaprasad B J	-	English font and word recognition	Proceedings of International conference	International conference Recent	International	2022	978-93-9253	Srinivas Institute of Technology,	BON FRING

				Recent Innovations in Computer science - 2022	Innovations in Computer science -2022			7-06-6	Valachil, Mangaluru	
44	Chandira prakash N	-	Mango Classification for Agro-Based Industries Using CNN Technique	Proceedings of International conference Recent Innovations in Computer science - 2022	International conference Recent Innovations in Computer science -2022	International	2022	978-93-92537-06-6	Srinivas Institute of Technology, Valachil, Mangaluru	BONFRING
45	Nagaraj Hebbar	-	AI-Enabled Analysis Of Climate Change On Agriculture And Yield Prediction for Coastal Karnataka	Proceedings of International conference Recent Innovations in Computer science - 2022	International conference Recent Innovations in Computer science -2022	International	2022	978-93-92537-06-6	Srinivas Institute of Technology, Valachil, Mangaluru	BONFRING
46	Mamatha Salian	-	Smart Cradle for Baby Monitoring	Proceedings of International conference Recent Innovations in Computer	International conference Recent Innovations in Computer	International	2022	978-93-92537-06-6	Srinivas Institute of Technology, Valachil, Mangaluru	BONFRING

				science - 2022	science -2022					
47	Arvind Naik	-	Big mart sales prediction	Proceedings of International conference Recent Innovations in Computer science - 2022	International conference Recent Innovations in Computer science -2022	International	2022	978-93-92537-06-6	Srinivas Institute of Technology, Valachil, Mangaluru	BONFRING
48	Alwyn Edison Mendonca	-	Providing Unbiased data to the people using AI	Proceedings of International conference Recent Innovations in Computer science - 2022	International conference Recent Innovations in Computer science -2022	International	2022	978-93-92537-06-6	Srinivas Institute of Technology, Valachil, Mangaluru	BONFRING
49	Deepthi Dsouza	-	A New Approach to Trace and Identify Lost People Using Artificial Intelligence	Proceedings of International conference Recent Innovations in Computer science - 2022	International conference Recent Innovations in Computer science -2022	International	2022	978-93-92537-06-6	Srinivas Institute of Technology, Valachil, Mangaluru	BONFRING

50	Kavya Hegde	-	Spinal cord tumour segmentation	Proceedings of International conference Recent Innovations in Computer science - 2022	International conference Recent Innovations in Computer science -2022	International	2022	978-93-92537-06-6	Srinivas Institute of Technology, Valachil, Mangaluru	BONFRING
51	Padmanayana	-	Iris Recoginiton System Using Machine Learning	Proceedings of International conference Recent Innovations in Computer science - 2022	International conference Recent Innovations in Computer science -2022	International	2022	978-93-92537-06-6	Srinivas Institute of Technology, Valachil, Mangaluru	BONFRING
52	Dheeraj Hebri	-	Securing Biometric Authentication System Using Blockchain	Proceedings of International conference Recent Innovations in Computer science - 2022	International conference Recent Innovations in Computer science -2022	International	2022	978-93-92537-06-6	Srinivas Institute of Technology, Valachil, Mangaluru	BONFRING
53	Shivaprasad B J	Studies in Computational	Signature Extraction from Bilingual Document	Modern Approaches in Machine Learning	-	International	2022	978-3-030-	Srinivas Institute of Technology,	Springer

		Intelligence	Images Using Blobs Method	& Cognitive Science: A Walkthrough				96634-8	Valachil, Mangaluru	
54	Shivaprasad B J	-	Segmentation of Tumor Region from Mammogram Images Using Deep Learning Approach	Advanced Informatics for Computing Research	ICAICR 2021	International	2022	978-3-031-09468-2	Srinivas Institute of Technology, Valachil, Mangaluru	Springer
55	Shivaprasad B J	-	Extraction of Logo from Real Time Document Images Using Masking and Median Filter Approaches	2022 3rd International Conference for Emerging Technology (INCET)	INCET-2022	International	2022	978-1-6654-9500-49	Srinivas Institute of Technology, Valachil, Mangaluru	IEEE
56	Soorya Krishna K	-	Design Of 32 Bit Adder Using Carry Look Ahead Adder	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International	2022	ISSN: 2320-2882	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru

57	Gourish Hegde	-	Remote Control Of A Three Phase Motor Using GSM	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International	2022	ISSN: 2320-2882	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
58	Sathish Kumar	-	IOT Based Smart Solar Pooja Lamp And Adaptive Mantra Chanting Model	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International	2022	ISSN: 2320-2882	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
59	Marina Chandy	-	Skin Cancer Detection Using Machine Learning And Image Processing	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International	2022	ISSN: 2320-2882	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru

60	Clitus	-	IOT Based Health Monitoring System	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International	2022	ISSN: 2320-2882	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
61	Clitus	-	Deep Learning Techniques for Diabetic Retinopathy :A Survey	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International	2022	ISSN: 2320-2882	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
62	Rakesh Mallya	-	Voice And Hand Gesture Control ROBOT	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International	2022	ISSN: 2320-2882	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru

63	Sahana Girish	-	Line Following Hexapod Robot	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International	2022	ISSN: 2320-2882	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
64	Nagalakshmi B Naik	-	Agri Monitoring System For Estimation Of Npk And Ph In Soil Along With Crop Recommendation	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International	2022	ISSN: 2320-2882	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
65	Flavita	-	Augmentative Communication for Deaf and Dumb	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International	2022	ISSN: 2320-2882	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru

66	Bheema Shastry	-	IOT based Quadcopter for Farm Surveillance with Object and Face Recognition	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International	2022	ISSN: 2320-2882	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
67	Jose Alex Mathew	-	Detection of Plant Disease Using Image Segmentation and Support Vector Machine	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International	2022	ISSN: 2320-2882	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
68	Jose Alex Mathew	-	Deep Learning Techniques for Diabetic Retinopathy :A Survey	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International	2022	ISSN: 2320-2882	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru

69	Jose Alex Mathew	-	A Review on Breast Cancer Detection Approaches for Various Image Data Sets	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International	2022	ISSN: 2320-2882	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
70	Jose Alex Mathew	-	Outdoor Air Filtration System	A Review on Breast Cancer Detection Approaches for Various Image Data Sets	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International	2022	ISSN: 2320-2882	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
71	Harshith K	-	Implementation of Agrovoltaics	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International	2022	ISSN: 2320-2882	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru

72	Harshith K	-	Smart Water Agro-voltaic	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International	2022	ISSN: 2320-2882	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
73	Harshith K	-	E-MOB Suncruiser	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International	2022	ISSN: 2320-2882	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
74	Harshith K	-	On-Road Charging Electric Vehicle	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International	2022	ISSN: 2320-2882	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru

75	Bheema Shastry	-	Farmland Surveillance and Protection with Smart Irrigation System	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International	2022	ISSN: 2320-2882	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
76	Ganapathi Sharma	-	Pesticide Sprayer Quad copter with Bomb Defusing Robot	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International	2022	ISSN: 2320-2882	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
77	Lokesh B	-	Energy Generation Using Flywheel and Magnets	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International	2022	ISSN: 2320-2882	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru

78	Lokesh B	-	Sentiment Analysis and Text Analytics Using Deep Learning	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International	2022	ISSN: 2320-2882	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
79	Lokesh B	-	Hand Written digit Recognition using Convolutional Neural Networks	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International	2022	ISSN: 2320-2882	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
80	Lokesh B	-	Image Recognition and Identification using Convolution Neural Network	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International Conference on Technology for Industry 4.0 Revolution-ICTIR-2022	International	2022	ISSN: 2320-2882	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru

81	Anoop Balakrishnan Kadan	-	ASR for Tulu Language	Proceedings of International conference Recent Innovations in Computer science - 2022	International conference Recent Innovations in Computer science -2022	International	2022	978-93-92537-06-6	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
82	Athmaranjan K	-	Leaf disease detection using CNN	Proceedings of International conference Recent Innovations in Computer science - 2022	International conference Recent Innovations in Computer science	International	2022	978-93-92537-06-6	Srinivas Institute of Technology, Valachil, Mangaluru	BON FRING
83	Sowmya	-	Pneumonia Detection Using AI & ML Techniques	Proceedings of International conference Recent Innovations in Computer science - 2022	International conference Recent Innovations in Computer science	International	2022	978-93-92537-06-6	Srinivas Institute of Technology, Valachil, Mangaluru	BON FRING
84	Madhusudan S	-	Review on Machine Learning Method to Detect	Proceedings of International conference	International conference Recent	International	2022	978-93-9253	Srinivas Institute of Technology,	BON FRING

			Diabetic Retinopathy	Recent Innovations in Computer science - 2022	Innovations in Computer science			7-06-6	Valachil, Mangaluru	
85	Ajoy s.Joseph	-	change in m-shopping behaviour & future behavioural intention-covid 19 impact in india	Managing Business tansformation in the Digital Era	International conference on Managing business transformation in digital era	International	2022	978-93-92537-44-8	Srinivas Institute of Technology, Valachil, Mangaluru	Saravanakumar V
86	Ajoy s.Joseph	-	Digital Transformation in Mars Incorporated-A Case Study	Managing Business tansformation in the Digital Era	International conference on Managing business transformation in digital era	International	2022	978-93-92537-44-8	Srinivas Institute of Technology, Valachil, Mangaluru	Saravanakumar V
87	Ajoy s.Joseph	-	Hi Tech Banking & Its Impact on Customer Relationshi	Managing Business tansformation in the Digital Era	International conference on Managing	International	2022	978-93-92537-44-8	Srinivas Institute of Technology, Valachil,	Saravanakumar V

			p Managemen t (CRM)		busines s transfor mation in digital era				Mangalu ru	
8 8	Ajoy s.Joseph	-	Digital Transformat ion in Education - A Case Study based on Experiential Learning in MBA	Managing Business tansformat ion in the Digital Era	Internat ional confere nce on Managi ng busines s transfor mation in digital era	Intern ationa l	2022	978-93-9253 7-44-8	Srinivas Institute of Technolo gy, Valachil, Mangalu ru	Sarav anaku mar V
8 9	Ajoy s.Joseph	-	A pilot study on work life balance of employee satisfaction in hospitals|: astudy with special ref., to DK District	Managing Business tansformat ion in the Digital Era	Internat ional confere nce on Managi ng busines s transfor mation in digital era	Intern ationa l	2022	978-93-9253 7-44-8	Srinivas Institute of Technolo gy, Valachil, Mangalu ru	Sarav anaku mar V
9 0	Ajoy s.Joseph	-	A Pilot study on Micro finance schemes of	Managing Business tansformat	Internat ional confere nce on Managi	Intern ationa l	2022	978-93-9253	Srinivas Institute of Technolo gy,	Sarav anaku mar V

			SKDRDP on Self help groups(SHG) of econmomic empowerment in rural areas of Mysore division district in Karnataka	ion in the Digital Era	ng business transformation in digital era			7-44-8	Valachil, Mangaluru	
91	Ajoy s.Joseph	-	We are what we consume: An Assesment of Characters and Charecterizations in web series	Managing Business tansformation in the Digital Era	International conference on Managing business transformation in digital era	International	2022	978-93-92537-44-8	Srinivas Institute of Technology, Valachil, Mangaluru	Saravanakumar V
92	Hariprakash U.P	-	Changing Shopper's experience due to technological Changes	Managing Business tansformation in the Digital Era	International conference on Managing business transformation in digital era	International	2022	978-93-92537-44-8	Srinivas Institute of Technology, Valachil, Mangaluru	Saravanakumar V

93	Hariprakash U.P	-	Digital Transformation in Education: A Case study based on experiential learning in MBA	Managing Business tansformation in the Digital Era	International conference on Managing business transformation in digital era	International	2022	978-93-92537-44-8	Srinivas Institute of Technology, Valachil, Mangaluru	Saravanakumar V
94	Veena Santhosh Rai	-	A comparative analysis of Digital Transformation of E-Commerce on Technophobic and Tech Savvy Community	Managing Business tansformation in the Digital Era	International conference on Managing business transformation in digital era	International	2022	978-93-92537-44-8	Srinivas Institute of Technology, Valachil, Mangaluru	Saravanakumar V
95	Rashmi	-	change in m-shopping behaviour & future behavioural intention-covid 19 impact in india	Managing Business tansformation in the Digital Era	International conference on Managing business transformation in	International	2022	978-93-92537-44-8	Srinivas Institute of Technology, Valachil, Mangaluru	Saravanakumar V

					digital era					
96	Mallika	-	High tech banking and its impact on Customer Relationship Management(CRM)	Managing Business tansformation in the Digital Era	International conference on Managing business transformation in digital era	International	2022	978-93-92537-44-8	Srinivas Institute of Technology, Valachil, Mangaluru	Saravanakumar V
97	Ajoy S Joseph	-	We Are What We Consume: An Assessment of Characters and Characterizations in Web Series	Managing Business tansformation in the Digital Era	International conference on Managing business transformation in digital era	International	2022	978-93-92537-44-8	Srinivas Institute of Technology, Valachil, Mangaluru	Saravanakumar V
98	Hariprakash U.P	Logistics and Supply chain management	-	-	-	National	2022	978-93-5480-569-1	Srinivas Institute of Technology, Valachil, Mangaluru	Thakur Publication Pvt.Ltd., Bengaluru

99	Sathyaprakash A	-	Implementation Of Japanese Manufacturing Methodology And Plant Modification	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
100	Sathyaprakash A	-	A study on correlation of different factors and its effect on agility of micro and small-scale manufacturingÂ industries	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
101	Sathyaprakash A	-	Investigation on Rate of Digitalization and its Effect in Micro and Small - Scale	Managing Business tansformation in the Digital Era	International conference on Managing business	International	2022	978-93-92537-44-8	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru

			Production Industries		transformation in digital era					
102	Sandesh K S	-	Comparative Study on Temperature Measurement of a Coated and Uncoated Tool Insert In Turning Process by Using Tool Work Thermocouple	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
103	Sandesh K S	-	Intelligent fire fighting robot with Android application	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru

104	Jayaram Thumbe	-	Design and CFD Analysis of Kaplan Turbine by Changing the Wicket Gate Angle	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
105	Jayaram Thumbe	-	Enhancement of Heat Transfer Rate in Concentric Heat Exchanger by the Use of Fin	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
106	Shrinivasa Mayya D	-	A study on correlation of different factors and its effect on agility of micro and small-scale	Proceedings of the International Conference on Recent Trends In	International Conference on Recent Trends in Mechan	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru

			manufacturing industries	Mechanical Engineering Sciences	ical Engineering Sciences RTIMES-2022					
107	Shrinivasa Mayya D	-	Investigation Of Field Dependent Variations of Torsional Stiffness Of Magneto Rheological Elastomer	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
108	Shrinivasa Mayya D	-	Change in M-shopping behaviour & future behavioural intention-covid 19 impact in india	Managing Business tansformation in the Digital Era	International conference on Managing business transformation in digital era	International	2022	978-93-92537-44-8	Srinivas Institute of Technology, Valachil, Mangaluru	Saravanakumar V

109	Shrinivasa Mayya D	-	A Pilot study on Micro finance schemes of SKDRDP on Self help groups(SHG) of econmomic empowerment in rural areas of Mysore division district in Karnataka	Managing Business tansformation in the Digital Era	International conference on Managing business transformation in digital era	International	2022	978-93-92537-44-8	Srinivas Institute of Technology, Valachil, Mangaluru	Saravanakumar V
110	Shrinivasa Mayya D	-	Investigation on Process flow route and manufacturing culture in underground storage tank manufacturing Small scale industry and proposing agile manufacturing layout to improve process flow and	Proceedingd of Recent Advances In Mechanical, Robotics & Automation Technology (Ramrat 2022)	Recent Advances In Mechanical, Robotics & Automation Technology (Ramrat 2022)	International	2022	-	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas University Mukka

			manufacturing culture							
111	Shrinivasa Mayya D	-	Investigation on Rate of Digitalization and its Effect in Micro and Small - Scale Production Industries	Managing Business tansformation in the Digital Era	International conference on Managing business transformation in digital era	International	2022	978-93-92537-44-8	Srinivas Institute of Technology, Valachil, Mangaluru	Saravanakumar V
112	Shrinivasa Mayya D	-	Fe3+Doped Triglycine Sulphate Single Crystals-Electrical, Dielectric, Structural and Optical Properties	International conference on Recent trends in Applied science-2022 - Abstract	International conference on Recent trends in Applied science -2022	International	2022	978-81-956922-0-0	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
113	Shrinivasa Mayya D	-	Sustained Drug Release Studies of Xanthan Gum/Carboxymethyl Cellulose Blend - Zinc Oxide Nanocomposites	International conference on Recent trends in Applied science-2022 - Abstract	International conference on Recent trends in Applied science -2022	International	2022	978-81-956922-0-0	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru

114	Shrinivasa Mayya D	-	Sustained Drug Release Studies of Guar Gum/Hydroxypropylmethyl Cellulose Blend - Zinc Oxide Nanocomposites	International conference on Recent trends in Applied science-2022 - Abstract	International conference on Recent trends in Applied science -2022	International	2022	978-81-956922-0-0	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
115	Shrinivasa Mayya D	-	Agricultural Micronutrient Release Studies of Xanthan Gum/Methyl Cellulose Blend - Zinc Oxide Nanocomposites	International conference on Recent trends in Applied science-2022 - Abstract	International conference on Recent trends in Applied science -2022	International	2022	978-81-956922-0-0	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
116	Shrinivasa Mayya D	-	Agricultural Micronutrient Release Studies of Xanthan Gum/Methyl Cellulose Blend - Zinc Oxide Nanocomposites	International conference on Recent trends in Applied science-2022 - Abstract	International conference on Recent trends in Applied science -2022	International	2022	978-81-956922-0-0	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru

			Zinc Oxide Nanocompo sites	Abstract	science -2022				ru	aluru
117	Shrinivasa Mayya D	-	We Are What We Consume: An Assessment of Characters and Characterizations in Web Series	Managing Business tansformation in the Digital Era	Managing Business tansformation in the Digital Era	International	2022	978-93-92537-44-8	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
118	Shrinivasa Mayya D	-	Sustained Drug Release Studies of Guar Gum/Hydroxypropylmethyl Cellulose Blend - Zinc Oxide Nanocompo sites	International conference on Recent trends in Applied science-2022 - Abstract	International conference on Recent trends in Applied science -2022	International	2022	978-81-956922-0-0	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
119	Shrinivasa Mayya D	-	Hybridization effect on water absorption and flexural properties of E-glass/banana fibre/epoxy	Materials Today Proceedings	Smart and sustainable developments in materials-2022	International	2022	ISSN:2214-7853	Srinivas Institute of Technology, Valachil, Mangaluru	Elsevier's Materials Today: Proceedings

120	Shankar K S	-	CFD analysis of a diesel generator exhaust system to reduce back pressure	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
121	Shankar K S	-	Enhancement of Heat Transfer Rate in Concentric Heat Exchanger by the Use of Fin	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
122	Shankar K S	-	Design fabrication and analysis of hybrid solar banana dryer	Proceedings of the International Conference on Recent Trends In	International Conference on Recent Trends in Mechan	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru

				Mechanical Engineering Sciences	ical Engineering Sciences RTIMES-2022					
123	Sudheendra H N	-	Design and Fabrication of Areca Nut Climbing and Spraying Machine	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
124	Sudheendra H N	-	Comparative Study on Temperature Measurement of a Coated and Uncoated Tool Insert In Turning Process by Using Tool Work Thermocouple	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru

125	Sudheendra H N	-	Analysis of Composite Material for Industrial Robotic Arm	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
126	Raghavendra M J	-	Comparative Study on Temperature Measurement of a Coated and Uncoated Tool Insert In Turning Process by Using Tool Work Thermocouple	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
127	Raghavendra M J	-	Design and Fabrication of Earth Auger with trolley	Proceedings of the International Conference on Recent Trends In	International Conference on Recent Trends in Mechan	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru

				Mechanical Engineering Sciences	ical Engineering Sciences RTIMES-2022					
128	Raghavendra M J	-	Comparative Study on Temperature Measurement of a Coated and Uncoated Tool Insert in Turning Process by Using Tool Work Thermocouple	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
129	Mohamed Gowspeer	-	CFD Analysis of Draft tube	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru

130	Sandesh Prabhu M	-	Optimisation of heat treatment parameters to facilitate machining operation without compromise on mechanical properties for SAE4340 steel	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
131	Sandesh Prabhu M	-	Design and Fabrication of Pick and Place Robot for Shaping Machine Application	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
132	Lokesh K S	-	Hybridization effect on water absorption and flexural properties of E-glass/banan	Materials Today Proceedings	Smart and sustainable developments in	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Elsevier's Materials Today: Proceedings

			a fibre/epoxy composites		materials-2022					
133	Lokesh V	-	Study of Mechanical and Tribological Properties of Hybrid Composite Material E-glass/Epoxy with Carbon Powder	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
134	Lokesh V	-	Green Synthesis Of Aluminum Oxide Nano Particles By Mimosa Pudica Plant Extract	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
135	Vasudeva Bhat P	-	Experimental Investigation Of High Speed	Proceedings of the International Conferenc	International Conference on Recent	International	2022	9-788195-	Srinivas Institute of Technology,	Srinivas Institute of Techn

			Turning Using Minimum Quality Lubrication	e on Recent Trends In Mechanical Engineering Sciences	Trends in Mechanical Engineering Sciences RTIMES-2022			692279	Valachil, Mangaluru	ology Mangaluru
136	Uday Shankar B	-	Fabrication of Hybrid of Human Transporter (Segway) And Forklift	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
137	Nithin Joshuva	-	Study of Mechanical and Tribological Properties of Hybrid Composite Material E-glass/Epoxy with Carbon Powder	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru

					RTIMES-2022					
138	U N Baipadithaya	-	Design And Fabrication of Pesticide Sprayer with Rotary Mechanism Using Solar Energy	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
139	Venkatesh Rao	-	Study of Mechanical and Tribological Properties of Hybrid Composite Material E-glass/Epoxy with Carbon Powder	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
140	Tony K Sebastian	-	Advanced Robot Prototype for Underwater	Proceedings of the International Conference on	International Conference on Recent Trends	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil,	Srinivas Institute of Technology

			Applications	Recent Trends In Mechanical Engineering Sciences	in Mechanical Engineering Sciences RTIMES-2022				Mangaluru	Mangaluru
141	Tony K Sebastian	-	A study on correlation of different factors and its effect on Agility of micro and small-scale manufacturing industries	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
142	Sathisha KG	-	Enhancement of Heat Transfer Rate in Concentric Heat Exchanger by the Use of Fin	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru

					RTIMES-2022					
143	Sathisha KG	-	Detection Of Flaws In Ship Hull Using Underwater ROV	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
144	Vivek V Kumar	-	Implementation Of Water Management In Agriculture Using IoT For Small Farms	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
145	Vivek V Kumar	-	IoT-Based Smart Dehydrator For Cocoa Seeds	Proceedings of the International Conference on	International Conference on Recent Trends	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil,	Srinivas Institute of Technology

				Recent Trends In Mechanical Engineering Sciences	in Mechanical Engineering Sciences RTIMES-2022				Mangaluru	Mangaluru
146	Sunil Prakash Rodrigues	-	Enhancement of Heat Transfer Rate in Concentric Heat Exchanger by the Use of Fin	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
147	Sunil Prakash Rodrigues	-	Automatic Valve Operation For Bunkering	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru

					RTIMES-2022					
148	Chandra Jogi	-	Condition Based Maintenance Of CODLAG NPS With Supervised Data Analysis	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
149	Nithin Joshuva	-	Condition Based Maintenance Of Gearbox	Proceedings of the International Conference on Recent Trends In Mechanical Engineering Sciences	International Conference on Recent Trends in Mechanical Engineering Sciences RTIMES-2022	International	2022	9-788195-692279	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
150	Nithin Joshuva	-	Managing Business Transformation in	Managing Business tansformation in the Digital Era	International conference on Managing	International	2022	978-93-92537-44-8	Srinivas Institute of Technology, Valachil,	Saravanakumar V

			Digital Era – A Review		business transformation in digital era				Mangaluru	
151	Prasad P	-	Sustained Drug Release Studies of Guar Gum/Carboxymethyl Cellulose Blend - Zinc Oxide Nanocomposites	International conference on Recent trends in Applied science-2022 - Abstract	International conference on Recent trends in Applied science -2022	International	2022	978-81-956922-0-0	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
152	Prasad P	-	Sustained Drug Release Studies of Xanthan Gum/Carboxymethyl Cellulose Blend - Zinc Oxide Nanocomposites	International conference on Recent trends in Applied science-2022 - Abstract	International conference on Recent trends in Applied science -2022	International	2022	978-81-956922-0-0	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru
153	Prasad P	-	Sustained Drug Release Studies of Guar Gum/Hydroxypropylme	International conference on Recent trends in Applied science-	International conference on Recent trends in	International	2022	978-81-956922-0-0	Srinivas Institute of Technology, Valachil,	Srinivas Institute of Technology

			thyl Cellulose Blend - Zinc Oxide Nanocompo sites	2022 - Abstract	Applied science -2022				Mangalu ru	Mang aluru
154	Prasad P	-	Agricultural Micronutrie nt Release Studies of Guar Gum/Methy l Cellulose Blend - Zinc Oxide Nanocompo sites	Internation al conference on Recent trends in Applied science-2022 - Abstract	Internat ional confere nce on Recent trends in Applied science -2022	Intern ationa l	2022	978-81-9569 22-0-0	Srinivas Institute of Technolo gy, Valachil, Mangalu ru	Sriniv as Institu te of Techn ology Mang aluru
155	Prasad P	-	Agricultural Micronutrie nt Release Studies of Xanthan Gum/Methy l Cellulose Blend - Zinc Oxide Nanocompo sites	Internation al conference on Recent trends in Applied science-2022 - Abstract	Internat ional confere nce on Recent trends in Applied science -2022	Intern ationa l	2022	978-81-9569 22-0-0	Srinivas Institute of Technolo gy, Valachil, Mangalu ru	Sriniv as Institu te of Techn ology Mang aluru
156	Suryanar ayana K	-	Fe3+Doped Triglycine Sulphate Single Crystals-Electrical, Dielectric, Structural	Internation al conference on Recent trends in Applied science-2022 - Abstract	Internat ional confere nce on Recent trends in Applied	Intern ationa l	2022	978-81-9569 22-0-0	Srinivas Institute of Technolo gy, Valachil, Mangalu ru	Sriniv as Institu te of Techn ology Mang aluru

			and Optical Properties		science -2022					
157	Sahana G.K	-	Impact of Sr2+ on structural .optical and photocatalytic properties of ZnO Nanoparticles	International conference on Recent trends in Applied science-2022 - Abstract	International conference on Recent trends in Applied science -2022	International	2022	978-81-956922-0-0	Srinivas Institute of Technology, Valachil, Mangaluru	Srinivas Institute of Technology Mangaluru

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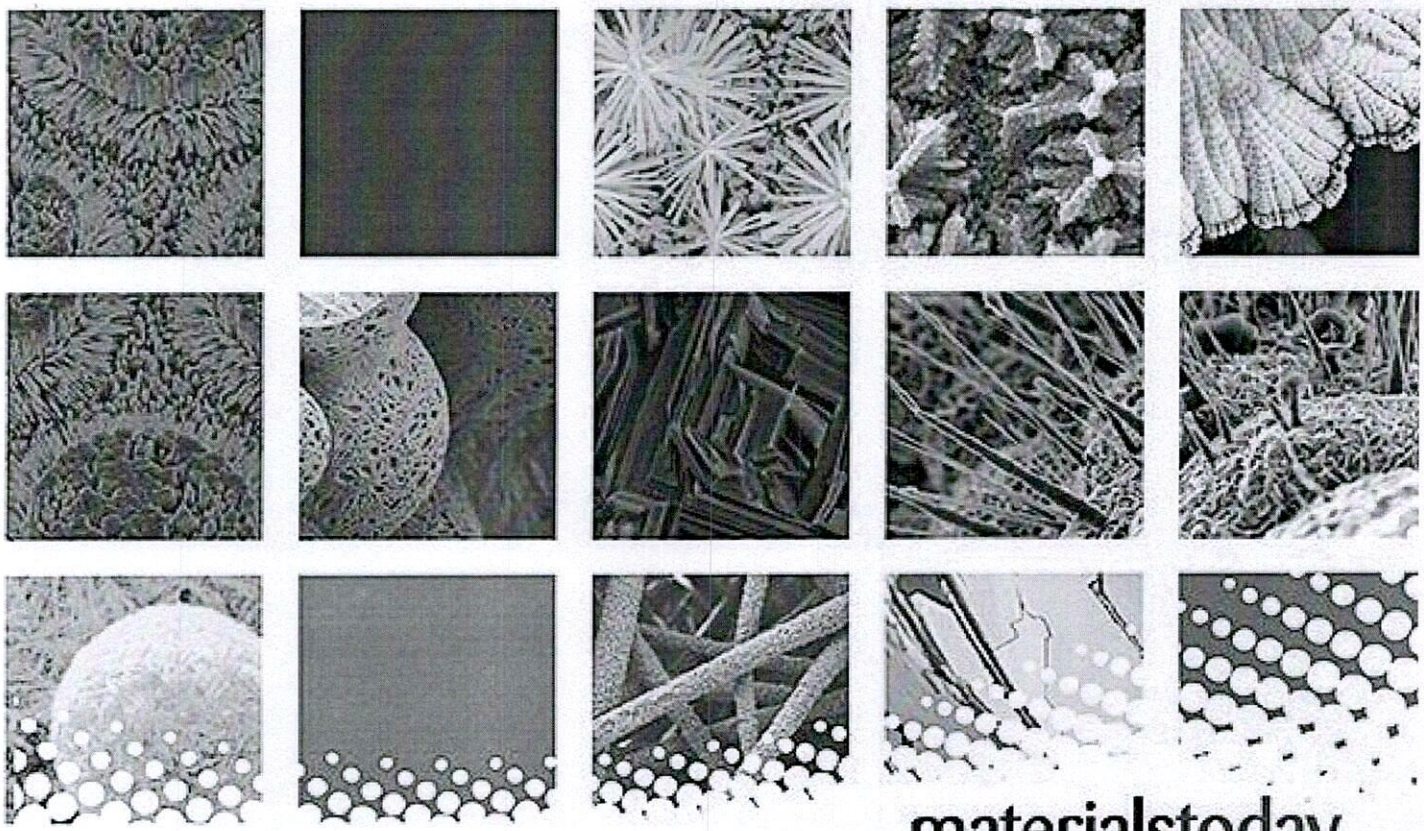

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Article preview

Research article ○ Abstract only

A comparative analysis of exergy using dual blends of biodiesel in a DI engine

Ramakrishna N. Hegde, Gangadhara Rao, Jagadeesh Bantwal, Praveen Shenoy

Pages 517-524

Article preview

Research article ○ Abstract only

Sound radiation of a GLARE panel at elevated temperature

Arul Raj Vaiduriyam, Lenin Babu Mailan Chinnapandi

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Article preview

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A comparative analysis of exergy using dual blends of Biodiesel in a DI engine

Ramakrishna N. Hegde, Gangadhara Rao, Jagadeesh Bantwal and Praveen Shenoy

Department of Aeronautical Engineering, Srinivas Institute of Technology, Mangalore, 574143, India
E-mail address: rkhegderk@gmail.com

Abstract : The scarcity of petroleum fuels and pollution concerns has led to the search for alternate fuels. In this investigation, cottonseed and Simarouba oils are transesterified to produce the corresponding biodiesels. The esterification and transesterification were carried out in the presence of heterogeneous catalyst MgPO4. The various properties of the biodiesel are determined in the laboratory. Vateria indica is a species endemic to India that belongs to the Dipterocarpaceae family. The oil of Vateria indica is obtained by an aqueous extraction method. This oil is transesterified to obtain the biodiesel by a two-step process of esterification followed by transesterification. This biodiesel is blended with diesel in 10% and 20% volumetric proportions. The cottonseed and Simarouba biodiesels are blended in equal proportions with diesel and tested for performance and exergy analysis along with Vateria indica blends. It is found from performance and exergy analysis that biodiesel blends performed better than diesel.

Keywords: Trans-esterification; Cottonseed oil; Simarouba oil; Vateria indica oil, Blend; Biodiesel; Exergy

4034

To Study the Strength Assessment of No-Fine Concrete Pavement

Hemant Kumar Sain, Pankaj Singh Jat, Aman Raj Sahariya

Department of Civil Engineering, Arya College of Engineering and Research Centre, Kukas, Jaipur, Rajasthan

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Abstract : No-fine concrete has been being used in numerous nations over a century. Its higher porosity helps in permeating precipitation water straightforwardly to ground and in this manner helps in re-energizing groundwater spring. In this review, 3 clusters of no-fine concrete each with two distinct sizes of total were ready to observe the blend that produced high compressive strength and study the impact of level of fine total on the compressive strength of no-fine concrete. The reason for this undertaking is to investigate the achievability of delivering profoundly manageable no-fine substantial blends and assessing the impact of fine total on their properties. No-fine concrete is delivered by utilizing standard Portland concrete, coarse totals, and water. This substantial is tried for its properties, for example, droop worth, porosity and compressive strength. The outcomes showed that porosity has critical impact on compressive strength of no-fine concrete.

Keywords: No-Fine Concrete; Compressive Strength; Flexural Strength; Slump Test; Cement; Aggregate; Fiber.

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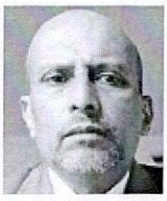

RASM 4033

Ramakrishna N. Hegde
Professor and Head,
Department of Aeronautical Engineering,
Srinivas Institute of Technology,
Mangalore, 574143, India.

for presenting the research paper entitled "**A comparative analysis of energy using dual blends of Biodiesel in a DI engine**" in the 2022 Second Global Conference on Recent Advances in Sustainable Materials (GC-RASM 2022) held at A.J. Institute of Engineering & Technology, Karnataka, India during 28 - 29, July 2022. The conference has been organized jointly by the departments of Civil Engineering and Mechanical Engineering.

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About the Department

Since its inception in 2007, the Department of Mechanical Engineering has been thriving to achieve academic excellence by molding quality mechanical engineers with emphasis on comprehensive learning techniques. The department is NBA accredited and well equipped with adequate facilities and aims to produce quality Mechanical Engineers nurtured with professional skills and innovative spirit.

About the Conference

The first edition of the conference was conducted in 2020 which included 240+ authors from various parts of the world during 2020. Best papers were published in CARE Journals (Revised Version of Full length paper after peer review). The main purpose of the conference is to disseminate and popularize the recent advancements in the field of Design, Manufacturing, Energy and Environmental Engineering to our budding engineers and researchers so as to intensify their research levels. Participants are provided with a platform to get their doubts clarified with subject experts and top academicians/researchers.

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To create graduate Mechanical engineers having excellence and competence in addressing the needs in the disciplines of Mechanical Engineering and allied areas at both National and International levels with a deep commitment to serving the society for bettering the standard of living.

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Date for Regn. (Final Paper)	:	16/05/2022

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Proceedings of the 2nd Virtual International Conference on Advanced Technologies and Research in Mechanical Engineering, VICATRME'22, 24-26 May, 2022

A comparative Analysis of exergy using engine performance results based on a dual blend of Cotton seed & Simarouba oil and Vateria Indica Blends in a four-stroke single cylinder Diesel engine

*[1]Ramakrishna N. Hegde, [2]Jagadeesh Bantwal, [3]Gangadhara Rao

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Abstract

Scarcity in petroleum fuels along with pollution concerns has led to the search for alternate fuels. In this present work, an attempt is made to transesterify cotton seed and Simarouba oils to produce the corresponding biodiesels. The esterification and transesterification was carried in the presence of heterogeneous catalyst MgPO4. The various properties of the biodiesel are determined in the laboratory. Vateria indica is a species endemic to India belongs to Dipterocarpaceae family. The oil of Vateria indica is obtained by aqueous extraction method this oil is transesterified to obtain the biodiesel by two step process of esterification followed by transesterification. This biodiesel is blended by the volumetric proportions of 10% and 20% with diesel. The cotton seed and Simarouba biodiesels are blended in equal proportions with petro diesel and tested for performance and exergy analysis along with Vateria indica blends. It is found from performance and exergy analysis blends of biodiesels performed better compare to diesel.

Keywords: Trans-esterification; Cotton seed oil; Simarouba oil; Vateria indica oil; Blend; Exergy

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About Mangaluru

Mangaluru, is the chief port city of the Indian state of Karnataka. It is located about 352 km west of the state capital Bangalore, between the Arabian Sea and the Western Ghats mountain range. It is known as the *Gateway of Karnataka* and the *Rome of the East*. It is the largest city in the Tulu Nadu region of Karnataka. Mangaluru is well connected by air, road and rail. The Bajpe, International airport is around 13 km northeast of Mangaluru city. The city is extensively connected by railways and roadways to all major parts of India.

Places to visit in and around Mangaluru

Mangaluru offers a lot to its tourists from its amusement parks, boating clubs, zoological parks, museums and art galleries, historic monuments including temples, churches, forts. Famous temple towns Udupi, Kolluru, Dharmasthala and Kukke Subrahmanya are within 130km radius from Mangaluru.

Important Dates

Last date for submission of Abstract	**20, April, 2022**
Last date for submission of full-length papers	**30, April, 2022**
Notification of Final Acceptance after review	**20 May 2022**
Final Submission of revised full-length paper - camera ready	**25 May, 2022**
Early Bird Registration	**15 May, 2022**
Last Date of Registration	**1 June, 2022**
Date of Conference	**10 & 11 June, 2022**

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About Srinivas Institute of Technology

Srinivas Institute of Technology (SIT) is one of the premier engineering colleges of the coastal region aiming towards high standards of education with holistic approach. SIT is recognised by AICTE, affiliated to VTU and accredited by NAAC. The Institute started in the year 2006, is a unit of A. Shama Rao Foundation, Mangaluru, and is located at the Srinivas Campus spread over 15 acres of land at Valachil, Arkula Village, about 10kms from Mangaluru city, adjacent to NH66. The institute hosts 3000 plus students studying under 9 UG, 5 PG programmes and 6 Research Centres.

About the Departments

Department of Mechanical Engineering was started in the year 2006. The Department offers B.E in Mechanical Engineering, M.Tech in Industrial Automation and Robotics, VTU R&D centre for M.Sc (Engg) and Ph.D. The Department Infrastructure fulfils the requirements of academics, supports research and learning skills on the latest technology in the industry.

The Department of Marine Engineering was established in the year 2012 to impart technical skills of highest and contemporary quality to the blooming marine engineers who can work on shore and on-board ships.

The department of Aeronautical Engineering established in the year 2011. At present, the department is fully equipped with state of the art laboratories; research facilities such as wind tunnel (Low speed & Cascade), propeller test rig, flow visualization apparatus to name a few.

The Department of Automobile Engineering aims to be a center of excellence in education and research in the field of Automobile Engineering by imparting knowledge and professional skills and active involvement in Research & Development activities. The department has various research facilitates such as Multi-fuel test rig, and heat transfer equipments.

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The conference intends to have deliberations on various topics belonging to Mechanical Engineering Sciences. The theoretical topics together with real time research from various streams are expected to be presented and discussed in the conference. Deliberations of the conference shall be done but not limited to, in the following four track themes. The conference will be conducted in hybrid mode of online and offline.

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All selected papers will be published in conference proceedings with valid ISBN number. Based on the quality assessment by blind peer review, selected papers will be published in SCOPUS indexed book chapters or Journals with additional publication charges.

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https://forms.gle/PXB3paVCND25KYR39

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RTIMES22156

Performance And Emission Analysis of an IDI Diesel Engine With EGR

Manjunath S[1], Ramakrishna N. Hegde[2]
[1] *Shri Madhwa Vadiraja Institute of Technology and Management, Bantakal, India-574115*
[2]*Srinivas Institute of Technology, Valachil, India-574143*

Abstract
With the population explosion, demand for energy has increased exponentially. Diesel engine is one such prime mover which can meet the demand. Diesel engines have high efficiency, but, releases large quantity of harmful exhaust emissions. In this regard, present experimental investigation, performance and emission characteristics of redesigned swirl chamber (RSC) of indirect injection diesel engines were studied. Exhaust gas recirculation (EGR) is one of the methods which can be effectively utilized to curb the NOx emissions. The result shows brake thermal efficiency of 10%, 14% and 17% of EGR using the RSC are 3.18%, 4.21% and 6.19% lesser. Brake specific fuel consumption of 10% EGR, 14%EGR, 17%EGR with RSC are 3.56%, 8.38% and 12.95% higher compared to 0%EGR. NOx emissions for 0%EGR, 10% EGR, 14%EGR, 17% EGR are 9.47%, 18.41%, 6.98% and 1.67% respectively less at 75% load with RSC. From the performance and emission characteristics 10% EGR may be recommended as an effectual tool to curb NO emission.

Keywords; *IDI diesel Engine, EGR, Performance & Emission analysis*

RTIMES22186

Data Analysis of wind energy potential for rooftop mounted horizontal axis small wind turbine at the site location Chikkolli, Kumta, Karnataka State

Ratan U. Gaonkar [1] Ramakrishna N.Hegde[2]

Principal[1], Professor and Head[2]

Research Scholar, Srinivas Institute of Technology, Shree Vidyadhiraj Polytechnic, Kumta, Uttara Kannada, Karnataka, India[1]

Department of Automobile Engineering, Srinivas Institute of Technology, Valachil, Mangaluru, Karnataka, India[2]

Abstract

Renewable energy, particularly wind energy, is the focus of investment from the industries owing to the drastic policy shift and support by the Indian Government. With a clear-cut policy and mission on rural electrification, India's ministry of renewable energy is looking for rural electrification at an affordable cost. This has ignited a lot of research interest in locational studies and wind data analysis. In this study, to ensure and estimate the suitability of the location for rooftop testing, wind data analysis was made for three years (daytime, 6 am to 6 pm) from 2018 to 2020. The measurement included wind velocity, humidity, and temperature. The site for the present work was selected on the rooftop of the building at location Chikkolli, Kumta. Latitude, longitude where the wind is reasonably available throughout the year. The site is 4.5 km away from the seashore. The wind parameters like wind velocity, temperature, and Relative humidity are recorded for the years 2018, 2019, and 2020. All data are recorded for the year at 4 hours, at 6 am, 10 am, 2 pm, and 6 pm. for this, a digital anemometer is chosen. The graphs were plotted by various parameters like temperature, humidity, and wind velocity against the week. The Weibull probability distribution function is employed to calculate the region's wind power density and energy.

Keywords: *wind energy, Weibull probability distribution, horizontal axis small wind turbine*

RTIMES22103

Investigation of a Vortex-Based Bladeless Small Wind Power Generator with External Agitators for enhanced VIV effect

Ramakrishna N Hegde [1], Shweta Iragar[2], Sneha K M[3], Bharani G[4], Devegouda[5],
UG Scholars [2,3,4,5], Professor & Head[1],
Department of Aeronautical Engineering, Srinivas Institute of Technology, Mangaluru, Karnataka, India

Abstract

Nowadays, electricity, which is supplied from non-renewable sources, is expensive. Alternatively, one needs to extract energy from a renewable source. The major requirement for a windmill is a wind velocity sufficient to rotate the blades or induce vibration. Bladeless wind turbines working on the vortex principle were already an option tested. In this work, a modified vortex-based small wind turbine was designed, fabricated, and tested for power generation by attaching external mechanical leaves (multi-blades) to a tapered cylindrical mast. These external multi-blades are expected to disturb the smooth wind flow across the mast, giving more oscillation or vibration. A piezo-electric conversion system uses this induced vibration for wind energy conversion. The power could be generated from the blade for domestic purposes (on a larger scale). The fabricated Model was tested for performance with a wind speed ranging from 2 m/s to 5 m/s. The cut-in velocity was 2.7 m/s, at which a 0.16μW power was generated and reached a maximum of 0.9 μW at 4.5 m/s.

Keywords: *modified vortex-based small wind turbine, renewable energy, piezo-electric*

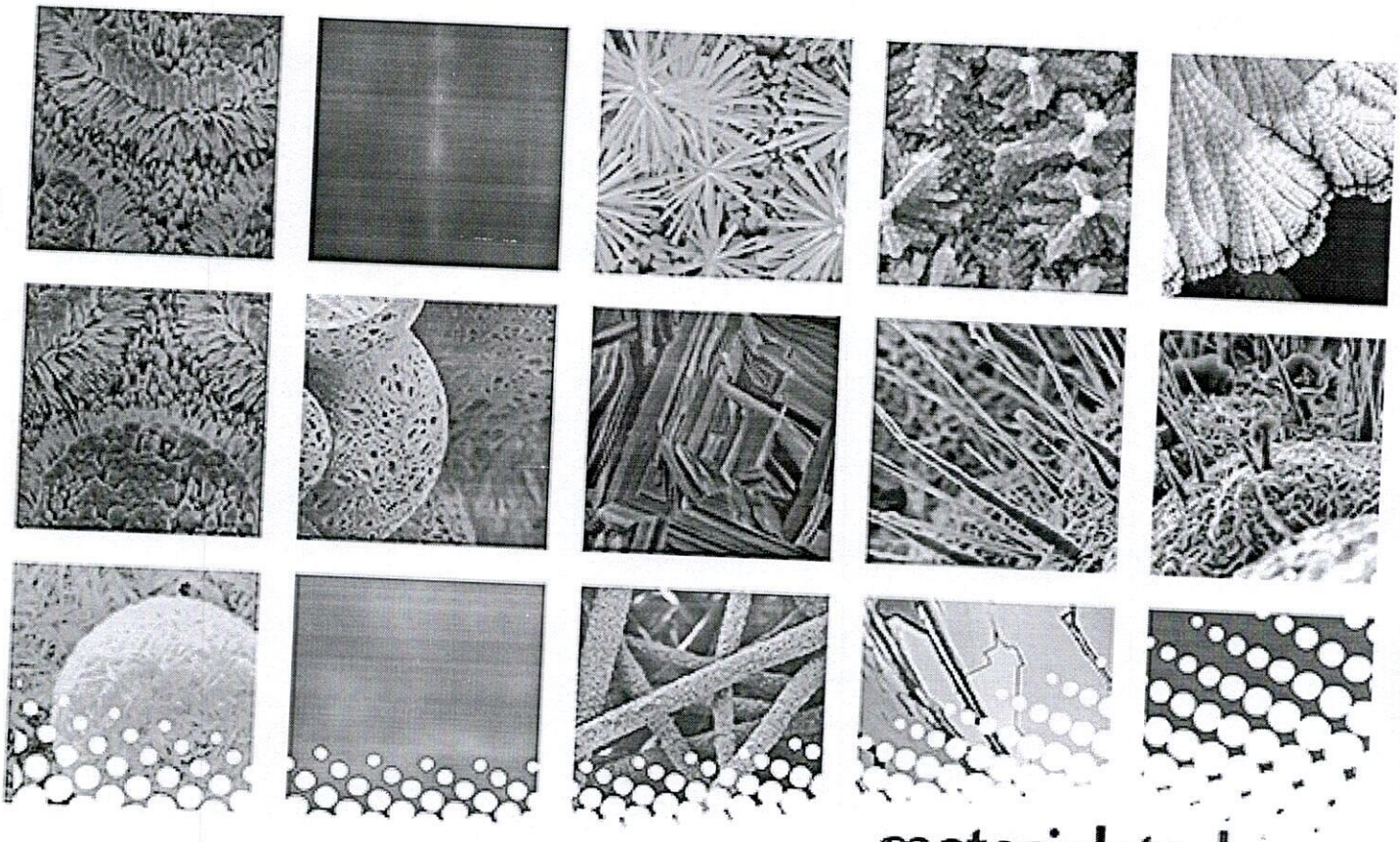
Volume 98 • 2024

ISSN 2214-7853

materialstoday: PROCEEDINGS

Second International Conference on Advances in Mechanical Engineering and Material Science

Guest Editors: Pankaj Tambe, Paul Chiarot, Suyog Jhavar and Ambuj Sharma



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Research article ○ Abstract only

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A comparative analysis of exergy using dual blends of Biodiesel in a DI engine

Ramakrishna N. Hegde, Gangadhara Rao, Jagadeesh Bantwal and Praveen Shenoy

Department of Aeronautical Engineering, Srinivas Institute of Technology, Mangalore, 574143, India
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Abstract : The scarcity of petroleum fuels and pollution concerns has led to the search for alternate fuels. In this investigation, cottonseed and Simarouba oils are transesterified to produce the corresponding biodiesels. The esterification and transesterification were carried out in the presence of heterogeneous catalyst MgPO4. The various properties of the biodiesel are determined in the laboratory. Vateria indica is a species endemic to India that belongs to the Dipterocarpaceae family. The oil of Vateria indica is obtained by an aqueous extraction method. This oil is transesterified to obtain the biodiesel by a two-step process of esterification followed by transesterification. This biodiesel is blended with diesel in 10% and 20% volumetric proportions. The cottonseed and Simarouba biodiesels are blended in equal proportions with diesel and tested for performance and exergy analysis along with Vateria indica blends. It is found from performance and exergy analysis that biodiesel blends performed better than diesel.

Keywords: Trans-esterification; Cottonseed oil; Simarouba oil; Vateria indica oil, Blend; Biodiesel; Exergy

4034

To Study the Strength Assessment of No-Fine Concrete Pavement

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Abstract : No-fine concrete has been being used in numerous nations over a century. Its higher porosity helps in permeating precipitation water straightforwardly to ground and in this manner helps in re-energizing groundwater spring. In this review, 3 clusters of no-fine concrete each with two distinct sizes of total were ready to observe the blend that produced high compressive strength and study the impact of level of fine total on the compressive strength of no-fine concrete. The reason for this undertaking is to investigate the achievability of delivering profoundly manageable no-fine substantial blends and assessing the impact of fine total on their properties. No-fine concrete is delivered by utilizing standard Portland concrete, coarse totals, and water. This substantial is tried for its properties, for example, droop worth, porosity and compressive strength. The outcomes showed that porosity has critical impact on compressive strength of no-fine concrete.

Keywords: No-Fine Concrete; Compressive Strength; Flexural Strength; Slump Test; Cement; Aggregate; Fiber.

RTIMES22183

Investigation Of Field Dependent Variations of Torsional Stiffness Of Magneto Rheological Elastomer

Praveen Shenoy[1], Susheel Kumar[2], KV Gangadharan[3], Shrinivasa Mayya D[4]
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Abstract
Isolation of torsional vibrations in shafts is one of the most important aspects of a sound design system. Though existing systems such as the centrifugal pendulum absorber and the flywheels reduce the effects to a certain extent, the system fails to comply when the natural frequency of the torsional system changes. To counteract such instances, smart materials are used which can tune their parameters based on the variations in the system variables. Magnetorheological Elastomers offer a viable solution to the dynamic vibrations as they can adhere to variations in system properties. To properly implement the MRE, it is mandatory to characterize the mechanical properties under dynamic loading conditions under varying magnetic fields. The present paper focuses on characterizing the torsional stiffness of the MRE under varying magnetic fields. The characterization methodology is discussed with the building of the measurement system, followed by the results and discussions of varying hysteresis loop for different magnetic fields. Variations in the properties are discussed, highlighting the role of the dipole mechanism

Keywords: *Magnetorheological Elastomers, Torsional vibrations, Dipole Mechanism, Magnetic field dependent variations, torsional stiffness*

RTIMES22154

Designing of Object Detection Drone

Sachin[1], Rakesh A P[2], Manoja Kumar Km[3], Mohamed Aftab[4], Praveen Shenoy[5]
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Abstract
The aim of this manuscript is to show the implementation of object detection on drone. The function of the research is detecting and recognizing people, trees, cars and buildings from real-world videos taken from drones. Here, the selected regions from the image will be considered. Further, the classes and bounding box are predicted from the whole image from the run of the algorithm. Also, the images are detected from using a single neural network. The accuracy and speed are also comparable to the standard algorithm.

Keywords: *Object detection, drones, Python language*

RTIMES22153

Designing of Voice Controlled Drone Using Bt-Voice Control for Arduino

Ambika S N[1], K Renuka[2], Shifa Farook Badiuddin[3], Sneha P[4] And Dr. Praveen Shenoy[5]

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Abstract:

In recent days, the application of drones has been increased to a great extent. These UAVs (unmanned aerial vehicles), or drones can be controlled remotely by a pilot or by gestures that enable them to fly. Drone have their own applications which are adapted by humans for different purposes such as military, civilian surveillance, photography, gaming etc. The main aim of this project is to build a hand free drone which is rather operated by voice commands. The system is provided with the voice commands to control it autonomously. It is completely directed by voice input. The input voice commands are sensed through the control system and the control system acts accordingly through the coding given to the software to run the motors which achieves the desired aim.

Keywords; *Voice Controlled Drone, Voice Control for Arduino*

RTIMES22114

Drone Utilization for Agriculture Purpose

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Abstract

Production of agriculture is very important for the stability of one's country's economy. There are several new techniques involved in agriculture today, spritz of pesticides with the use of drones are some of the current emerging techniques. Sprinkling of pesticides manually has a number of negative effects for those in hand during the procedure. The defects can start as a mild skin irritation-birth defects, blood, nerve disorders, tumor and sometimes death. The WHO (Organization) estimation as of today there are 1 million cases of people falling sick due to the spritz of these pesticides in the fields. This led to the design of a drone mounted with sprinkling/injection mechanism. A First-Person View camera can be installed in the drone for additional monitoring purposes and the sprinkling process and to patrol certain insect attacks on plants. The aerial surveying feature scans the entire field and quickly catches the presence of bugs/insects. This type of pesticide spraying drones reduce time, labour and cost which can be an added plus-point. These kinds of drones are used to inject liquids used for disinfections. Therefore, the major aim was to develop an accurate system that would recognize important areas for spraying, which is of tremendous importance for UAV based sprayers

Keywords: *Quadcopter, Pesticide sprayers, UAV, FPV*

RTIMES22115

3-D Printed Sounding Rocket for the Application of Cloud Seeding

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Abstract
Despite the increase of rainfall globally with the climate change, the large rivers are drying out. Less water in the river means fewer water supplies to the cities and agricultural land, and indeed need more water for the dry soil for the farm. Eventually there is a need for more water than available. Cloud seeding has become one of the appealing methods across the globe for countries to accomplish the need of water. The cost involved in cloud seeding is gigantic. The implementation of cloud seeding with the 3D Printed Sounding Rocket can reduce ample amount of cost. This can also be used concurrently for agricultural surveying, in supplementary can help in research field on farm. Cloud seeding is enhancing the natural precipitation in clouds with the help of seeding agent, i.e., dry ice and silver iodide. Silver iodide is used for its similar molecular structure with water. 3D Printed Sounding Rocket is built with biodegradable material, PLA (Poly Lactic Acid), which contribute in reducing average cost of the cloud seeding process. On the basis of the experiment, the thrust requirement for 50 kg of rocket would be around 4521.3 N. Rocket travelling range is up to 48 to 145Km and carries payload of 10 to 100Kg as per the capability of designed rocket. Being first in India to evolve cloud seeding process with complete 3D Printed Sounding Rocket can have a great impact on Indian Economy.

Keywords: *3D Printed Sounding Rocket, cloud seeding, agricultural survey.*

RTIMES22117

Developing natural fiber based hybrid composite aircraft structure by utilizing single used waste plastic as a mould through 3d printing technique

Dinanth J R[1], Kavya K[2], Rakshitha B N[3], Yashaswini A S[4] Lokesh KS[5]
UG Scholars [1,2,3,4], Assistant professor[5]
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Abstract
Use of single used plastic (SUP's) has been increasing day by day due to the convenient and desirable features to use and carry with comfort. However, non-degradability and methods to reuse of the same product once used are seldom practiced. Keeping this in mind, the present research aims to Recycle the single used plastic into a sustainable and primary component to develop cost effective, light weight possible type of aircraft structure with the help of mould prepared from this SUP's. The mould is developed with the help of 3-D printing technology where the shape of the mould is geometrically defined with included intricate design. The desired contour of the mould is the replica of the tiny aircraft structure which was modelled using CATIA to direct the 3-D printing device by feeding the design data to build the mould structure. The present research also aims to prepare the possible type of tiny aircraft structure which is the combination of hybrid natural fibres and with the potential binder with quick curable and long term sustainable thermoset polymer.

Keywords: *Hybrid composite, SUP*

RTIMES22121

A Review On "Systematic And Complete Proof Of The Collatz Conjecture"

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Abstract

This paper deals with the proof of Collatz conjecture where the infinite series has been considered in various steps.

The problem statement states consider the following operation on an arbitrary positive integer:

- (Process 1) If the number is even, divide it by two.
- (Process 2) If the number is odd, triple it and add one. (Then divide by 2)

At the end of each process, it ends to 1.

Well, the solution to this conjecture has been discussed in this article with a mathematical and logical proof. This proof breaks down the Collatz conjecture in various steps by considering various infinite series and shows the proof of each step and at the end collects all to get the complete proof of the conjecture.

Keywords: *Collatz conjecture*

RTIMES22118

Robotic Arm Installed Fruit Plucking UAV – Based on AI

Navneet Soni[1], Naveen Kumar T M[2], Nithin Kumar H K[3], Vardhaman Ravindra Vasawade[4], Srinidhi Kukkila[5]

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Abstract

The world's economy dominatingly relies upon agriculture. Natural product culling during the reaping time frame includes work escalated and tedious advances. Natural product culling drones must be created to stay away from work shortages and consume less time. The fruit has to be detected and classified properly using real-time object detection. An automated arm with a 3D-printed gripper has been planned. The arm has to be attached to the drone to pluck or detach the fruit from the tree and hold the fruit. Harvesting the fruits from the trees in hilly region and mountains are also very troublesome. So, this project could be implemented to harvest varieties of fruits in groves like apples, bananas, citrus, etc.

Keywords: *Catia V5, Design and 3D printing of gripper, Raspberry Pi, Object-Detection using Mat lab and Python.*

RTIMES22105

Computational Fluid Dynamics in Investigation of Propeller Slip Stream

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Abstract
This venture targets utilizing CFD to more readily comprehend the slipstream behind a propeller, within the sight of a free stream, with a wing situated behind the propeller. A CFD examination will be performed to assess what the lift and drags of the wing are meant for by the propeller slipstream, at various push yields. This data will later be utilized for airplane configuration studies and in airplane elements and control reproductions. The utilization of conveyed electric drive of airplane permits uncommon wing propeller setups to be utilized. One progressively normal design is one in which numerous little propulsors are set at the main edge of the wing with the end goal that the propeller slipstream (the wind current behind a propeller) can work on the controllability or the streamlined proficiency of the airplane

Keywords: *Catia V5, Ansys 2021 R2, Design and Modal Analysis of Propeller, Work Fench, Fluent Flow,*

RTIMES22142

Performance Evaluation of Multiple Coaxial Jet Nozzle System in Combustor of Gas Turbine in Aircraft Engine

Rajesh [1], Jeevan P N[2], Phalguni Prabhu[3], Pushpa[4], Rajeshwari M[5]
UG Scholars [2,3,4,5], Assistant Professor[1],
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Abstract
Co-axial nozzle is the nozzle where pipe and nozzle are having or being mounted on a common axis. Coaxial jet nozzle is an integral part of many engineering system where mixing of streams of different fluids are required. They are widely used to mix the fuel and oxidizers inside the combustors of gas turbine power plant of aircraft. Characteristics of non-circular co-flow jet shave been analyzed for different types of orifices. The objective of project is to evaluate Pressure, Velocity and Mass flow rate of circular, hexagon, and square orifices.

Key words: *Co-axial nozzle, Pressure, Velocity, Mass flow rate*

Volume 98 • 2024

ISSN 2214-7853

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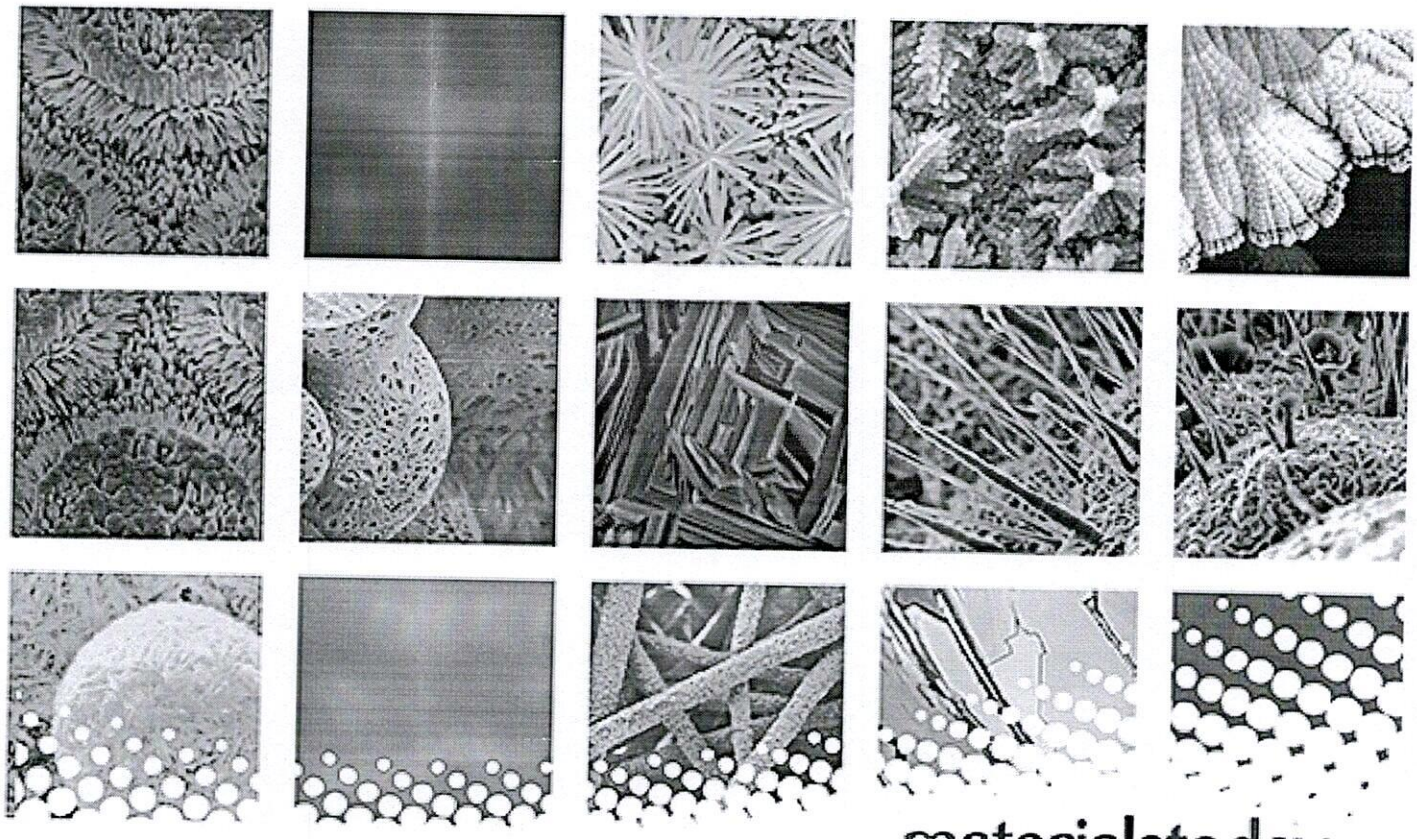

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A comparative analysis of exergy using dual blends of Biodiesel in a DI engine

Ramakrishna N. Hegde, Gangadhara Rao, Jagadeesh Bantwal and Praveen Shenoy

Department of Aeronautical Engineering, Srinivas Institute of Technology, Mangalore, 574143, India
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Abstract : The scarcity of petroleum fuels and pollution concerns has led to the search for alternate fuels. In this investigation, cottonseed and Simarouba oils are transesterified to produce the corresponding biodiesels. The esterification and transesterification were carried out in the presence of heterogeneous catalyst MgPO4. The various properties of the biodiesel are determined in the laboratory. Vateria indica is a species endemic to India that belongs to the Dipterocarpaceae family. The oil of Vateria indica is obtained by an aqueous extraction method. This oil is transesterified to obtain the biodiesel by a two-step process of esterification followed by transesterification. This biodiesel is blended with diesel in 10% and 20% volumetric proportions. The cottonseed and Simarouba biodiesels are blended in equal proportions with diesel and tested for performance and exergy analysis along with Vateria indica blends. It is found from performance and exergy analysis that biodiesel blends performed better than diesel.

Keywords: Trans-esterification; Cottonseed oil; Simarouba oil; Vateria indica oil, Blend; Biodiesel; Exergy

4034

To Study the Strength Assessment of No-Fine Concrete Pavement

Hemant Kumar Sain, Pankaj Singh Jat, Aman Raj Sahariya

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Abstract : No-fine concrete has been being used in numerous nations over a century. Its higher porosity helps in permeating precipitation water straightforwardly to ground and in this manner helps in re-energizing groundwater spring. In this review, 3 clusters of no-fine concrete each with two distinct sizes of total were ready to observe the blend that produced high compressive strength and study the impact of level of fine total on the compressive strength of no-fine concrete. The reason for this undertaking is to investigate the achievability of delivering profoundly manageable no-fine substantial blends and assessing the impact of fine total on their properties. No-fine concrete is delivered by utilizing standard Portland concrete, coarse totals, and water. This substantial is tried for its properties, for example, droop worth, porosity and compressive strength. The outcomes showed that porosity has critical impact on compressive strength of no-fine concrete.

Keywords: No-Fine Concrete; Compressive Strength, Flexural Strength; Slump Test; Cement; Aggregate; Fiber.

RTIMES22147

Flutter Analysis of An Aircraft Wing Over a Cruise Speed

Gangadhara Rao[1], Manoj S[2], Suhana khanum[3], Mohammed Zulfiqar[4], Mohammed Zubair Kazi[5]

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Abstract

Every object has its own natural frequency. When source natural frequency is equal to natural frequency of object then the object will tend to vibrate. These vibrations may result in flutter for an aircraft during its cruise speed. Flutter is nothing but an unstable oscillatory aerodynamic condition with high frequency and high amplitude ensuing from fluid structure interactions is of precise interest for many aeroelastic researches. This results in failure of structures rapidly there is an immense requirement of predicting the flutter speed accurately considering other uncertain conditions. Flutter problems has been of great interest since early years of flight. so, these leads to the aerodynamic instability and life reductions of aircraft wings and its components. While designing of an aircraft this flutter has to be considered through this way, we can be able to predict accurately the nature of an aircraft during the flutter. The structural deformation and stress distribution should be calculated at various conditions.

Keywords; *Catia V5, Ansys 2021 R2, Design and Modal Analysis of Wing, Flutter vibrations.*

RTIMES22157

Autonomous Quad Copter for Uplifting Agriculture

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Abstract

Climate change introduces challenges that can affect multiple sectors. One of the most important sectors is agriculture. Agriculture sector plays major role in the Indian economy. On top most of the Indian population depends on the agriculture and allied activities for their livelihood. Among UAV's drones are the commonly used ones. Drones not just helps in the military and other surveillance applications; it also helps in the agricultural purpose. Utilisation of information and communication technology (ICT) services, Internet of things and other wireless sensor networks (WSNs) along with autonomous drone can lead to valuable, at the same time economic precision agriculture (PA) application. The aim of the project is to design an autonomous quadcopter drone that help in monitoring crops and analysing it. Using artificial intelligence, Internet of thing and other WSNs in the drone we used multispectral imaging drone that make visual inspection simpler and more accurate.

Keywords; *Autonomous Drone, Quad Copter*

RTIMES22137

Quad Tilt Wing VTOL UAV

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Abstract
Ariel unmanned Vehicles are becoming more helpful every day and are poised to move the aerospace sector in a new direction. Vertical takeoff and landing is also becoming a new era necessity. There are several contemporary UAV designs that can give VTOL, hovering, and faster speed and manoeuvrability. The major goal of this project is to research and develop a UAV that can be controlled by a wireless communication system. Couple slant wings with propellers situated in the midspan of each wing are one of the most encouraging UAV setups, as they offer both VTOL and high journey execution. This covers material and electronic part decisions.Testing and performance are also addressed in the project. Flight testing is used to identify difficulties with flying and balancing. This design focuses on enhancing performance characteristics by drawing inspiration from existing VTOL aircraft and UAV designs, and combining all of them to get the desired result. A successful design will contribute to a broader range of commercial and military applications.

Keywords: *Catia V5, Design and 3D printing of gears, Object-Detection using ultrasonic radar.*

Proceedings of the 2nd Virtual International Conference on Advanced Technologies and Research in Mechanical Engineering, VICATRME'22, 24-26 May, 2022

A comparative Analysis of exergy using engine performance results based on a dual blend of Cotton seed & Simarouba oil and Vateria Indica Blends in a four-stroke single cylinder Diesel engine

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Abstract

Scarcity in petroleum fuels along with pollution concerns has led to the search for alternate fuels. In this present work, an attempt is made to transesterify cotton seed and Simarouba oils to produce the corresponding biodiesels. The esterification and transesterification was carried in the presence of heterogeneous catalyst MgPO4. The various properties of the biodiesel are determined in the laboratory. Vateria indica is a species endemic to India belongs to Dipterocarpaceae family. The oil of Vateria indica is obtained by aqueous extraction method this oil is transesterified to obtain the biodiesel by two step process of esterification followed by transesterification. This biodiesel is blended by the volumetric proportions of 10% and 20% with diesel. The cotton seed and Simarouba biodiesels are blended in equal proportions with petro diesel and tested for performance and exergy analysis along with Vateria indica blends. It is found from performance and exergy analysis blends of biodiesels performed better compare to diesel.

Keywords: Trans-esterification; Cotton seed oil; Simarouba oil; Vateria indica oil; Blend; Exergy

RTIMES22119

Design and Development of Equipment for Agricultural Grains and Coffee Cherry.

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Abstract
Coffee is one of the most widely consumed beverages on the planet. Drying is a key post-harvest technological step that results in the production of the distinctive colour, flavour, and taste of coffee drink. In the coffee processing industry, there are two types of drying techniques: (sun drying and mechanical drying). The initial moisture percentage of harvested coffee is roughly 55-60%, however after drying; the moisture content drops to around 12 percent (wb). To achieve appropriate colour, size, and pest eradication for extended safe storage, drying should be uniform. Traditional sun drying is difficult since coffee output is seasonal. Unpredictable weather might increase the moisture content and length of time required. Parchment apparatus for coffee cherry is designed and developed to reduce time required to dry them naturally and reduce wastage which is commonly caused due to changing weather conditions. This unit consists of stirrer, hot air blower and heating bulbs. The parchment device for coffee cherries was invented and developed to shorten the time it takes to dry them naturally and to prevent wastage caused by changing weather conditions. Stirrer, hot air blower, and heating bulbs make up this unit. We are utilising coffee as a primary example in our study. Freshly picked and cleaned coffee beans are delivered to this unit and unloaded into a container tank, where the coffee is stirred, absorbing heat and removing moisture. This is accomplished using heating bulbs and a hot air blower. This technique is carried out at a temperature of 43-44°C. Exhausts are utilised to manage the temperature since continuous temperature input can induce roasting of beans. To avoid these conditions, exhausts are used. This is a single step procedure that takes around 1-1.5 days to change coffee fruits into quality and healthy beans with the right aroma.

Keywords: *mechanical drying, coffee cherry*

RTIMES22141

Design And Fabrication Of Automated Switching Headlight With Self-Charging System Using Wind Energy

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Abstract

There are around huge number of mishaps occurring on our street day to day and a large portion of them happens around evening time. Front lamp of the vehicle is intrinsic for late evening riding. These headlamps help the vehicle operator for eyesight, while driving around evening time, represent an incredible danger to the next street clients coming from the other way. The brilliant light of the vehicle distresses as glare to the approaching driver. When in doubt, in evening driving, each driver ought to change their lights from high beam to low once they identify a automobile inside one fifty meters to diminish glare, yet this training is scarcely stuck to. This is one of the significant reasons for mishaps during the evening. This work plans to keep away from glare in view of high light emission consequently to lessen mishaps, by manufacturing programmed exchanging light. Likewise, this work stressed on wind energy recovery which can be utilized for Headlight. In this exploration work, manufacture of programmed exchanging of light was finished with different parts like Arduino, LDR, transfers and resisters. The framework has been customized to detect and switch the headlights in less measure of slack and this lessens the pressure of constantly exchanging radiates physically, thus giving the driver more fixation out and about while driving around evening time. To create model of wind energy recovery framework, acrylic sheets, BLDC engine and high velocity turbine impeller sharp edges. The model is an circuit that integrates the utilization of 12V DC supply which is an extra battery and charged by the breeze turbine. That's what the outcome showed, this programmed exchanging light framework changes the high bar light to low radiate when it detects a vehicle's light drawing closer from the contrary side and changes its direction back to high radiate when the vehicles pass one another. The model constructed, which utilizations wind energy to turn turbine sharp edge, was delivered adequate measure of electric energy to charge extra battery.

Keywords; *Automated Switching Headlight, Self-Charging System, Wind Energy*

RTIMES22148

Design And Fabrication of Automatic Tyre Inflation Pressure

Prakash S T[1], Jovin Manoj[2], Mohammed Faris[3], Jince James[4], Vibhusreedeep[5]
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Department of Automobile Engineering, Srinivas Institute of Technology, Mangalore

Abstract
As it's known that vehicle is the most important part of our life, because it helps in traveling miles in a few minutes. Tires in vehicle are one of the great discoveries of human beings. Since the discovery of tires, modification is being done in tires of a vehicle on a regular basis for its improved life and its role in increasing vehicular safety. The air pressure of the tires needs to be maintained at ideal level for better running of vehicle and for its safety purposes. Inadequate tire inflation can shorten the life of vehicle's tires, negatively affect the performance, and maybe even cause a tire to fail. The tire's sidewalls flex more, when air pressure gets too low and heat builds up within the tire. If the overheating gets severe, a blowout can result. A blowout can cause a loss of control that leads to an accident. So, this work aims at Automatic tire pressure inflation system. The main objective of the system was to improve life of tire by maintaining optimum tire pressure, thus safety of both vehicle and passengers. The methodology used in the system is, by regular monitoring of tire pressure by a pressure gauge. The tire was kept in dynamic condition by an AC motor. There is a circuit with 12 V battery which is mutually connected by a 2-way solenoid pressure valve and DC compressor. These components coupled by a coupling and air loss will connected between this coupling and rotary joint on the tire. Pressure switch is the key component that holds tire pressure in preset value, say 30 PSI. then the tire pressure reduced below 20 PSI will begin the pressure inflation by the system.

Keywords: *Tyre Inflation, Inflation pressure*

RTIMES22181

Review on Electric Vehicle Technologies

Deepak Vishnu Mandal[1], Girish A R[2]
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Abstract
Society is more concern by the causes and effect of Internal Combustion (IC) engine emission on the climate and environment. The major reason due to which the automobile sector had to conceive, discover, design, build, and bring the Electric vehicle (EV) technology into existence. Electric vehicle has the potential to address greenhouse emission and also it acts as an emerging tool for reducing air pollution and providing a clean transportation system. Just in few numbers of years the rapid rise in EV technology has been observed with a huge growth and demand of public. Keeping the advantages and disadvantages in mind of EV from environmental point of view has been discussed. The most important factor for EV technology used is the batteries, hence a thorough study of battery technology- from Lithium batteries to lead acid batteries is analysed. The charging method, standards, and optimization techniques is also been discussed with the essential characteristics of EV technology used in vehicle. Further future trends, demand, supply in EV technology is provided.

Keywords: *IC engines, electric vehicle, demand analysis, charging method, Batteries-lithium ion and lead acid*

RTIMES22109

Design and Fabrication of Solar Equipped Portable Electric Tiller Machine

Girish A R[1] , Shubha K H[2], Ujwal Kiran[3], Deekshith[4] , Midhun R[5]
UG Scholars [2,3,4,5], Assistant Professor [1]
Department of Automobile Engineering, Srinivas Institute of Technology, Mangaluru, Karnataka, India

Abstract
Agriculture has been an integral part of the human ecosystem. However, traditional farming methods require a lot of human effort and take a long time. Tilling is one of the most labour-intensive operations in agriculture. Manually tiling fields is a very tiring task, while tractors involve a high investment along with high fuel consumption costs. This low-cost battery-powered portable electric cultivator is a modern all-round solution to improve conventional farming methods, as it reduces human effort, at very little cost, by using a motorized tillage mechanism. The electric cultivator helps reduce processing time and costs by using a smart portable design, increasing productivity and efficiency in agriculture. The machine uses a wheel with welded corners to provide an efficient grip on the ground. The wheel design was developed to provide a firm grip on the ground strong enough to drag the cultivator forks during the tillage process. A switch provided on the handle is used to turn off the machine. The machine is powered by an electric motor which uses a toothed chain to drive the drive wheel. A battery runs the motor in such a way that it pulls the forks from the ground. The 3 forks of the cultivator allow for smooth working exactly as needed for agriculture. Lightweight and portable design makes it easy to control the direction of the machine during use. It can also be easily transported by vehicle or by hand for the transport of machines. Thus, the electric tiller provides a smart and innovative fuel-free mechanism for tilling farmland and gardens.

Keywords: *Portable Electric Tiller Machine, fuel-free*

RTIMES22180

Implementing Breath analyzer in Vehicle for People Safety

Manjunath pattar[1], Neelkanth Aralimatti[2], Ahmad Nawaz [3], Jain Hemanth[4], Varun Narayan[5]
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Abstract
This work presents the improvement of a breathalyzer to be utilized inside a vehicle. The breathalyzer continually screens the liquor level in the encompassing into a vehicle, which is delivered by the breath of the driver, mainly. The breathalyzer utilizes a liquor sensor MQ-3, a shut regularly electromagnetic transfer to hinder the start of the vehicle, a worldwide position system (GPS) module; this is a worldwide framework for versatile correspondences (GSM) module and a PIC18F25K50 miniature regulator. The GPS module is utilized to realize the position directions of the vehicle while the GSM module is utilized to make an impression on the security branch of where is the left vehicle. The liquor sensor, the electromagnetic hand-off and the two modules are constrained by the microcontroller. The proposed framework was executed and assessed on five vehicles and tried with various liquor level suggested by the driver, showing a decent presentation in all cases. Comes about because of testing the proposed framework sufficiently paired the prerequisites for turning over a motor once the degree of liquor recognizes.

Keywords: *Breathalyzer,Safety and Electromagnetic Transfer*

Volume 98 • 2024

ISSN 2214-7853

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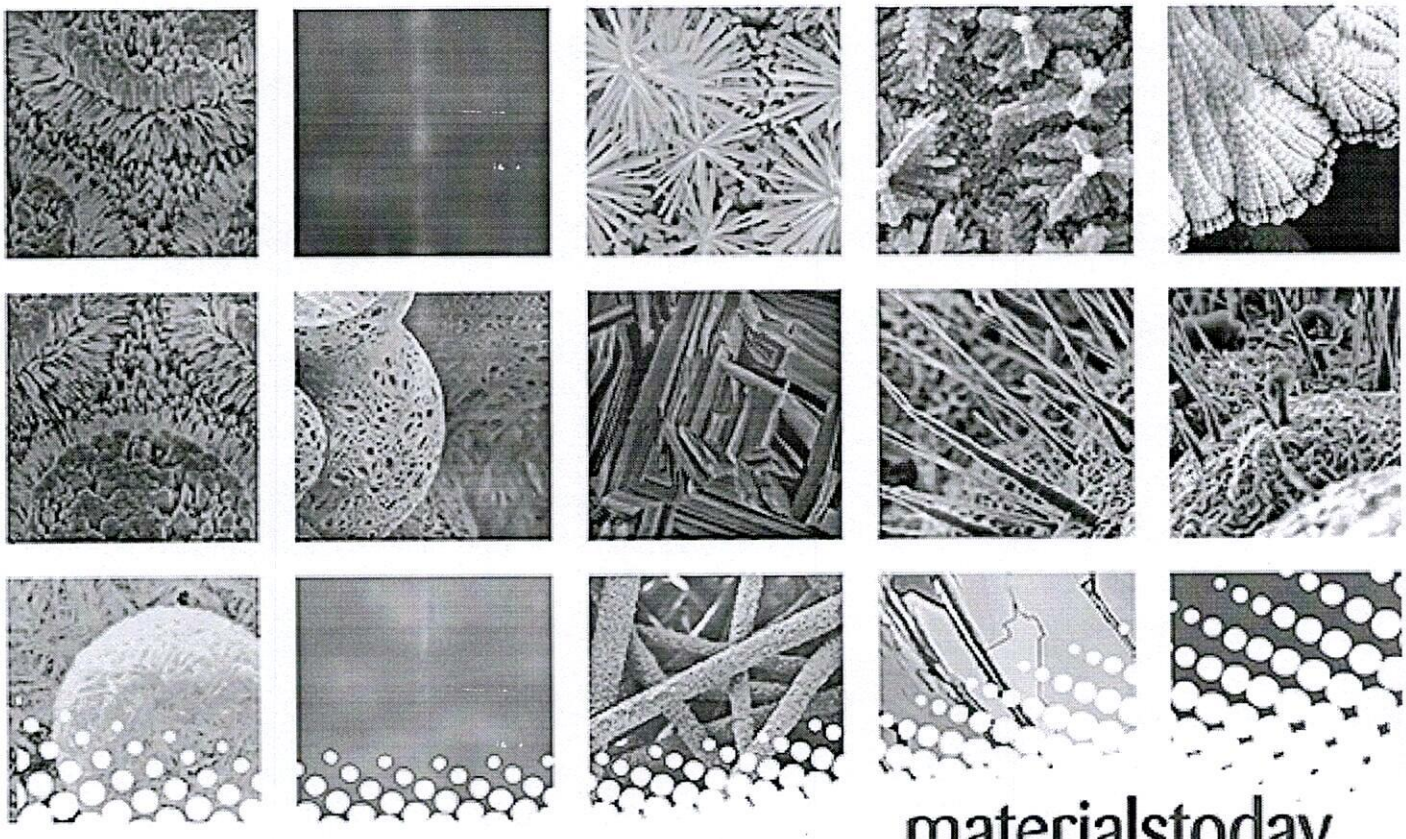

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A comparative analysis of exergy using dual blends of biodiesel in a DI engine

Ramakrishna N. Hegde, Gangadhara Rao, Jagadeesh Bantwal, Praveen Shenoy

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Sound radiation of a GLARE panel at elevated temperature

Arul Raj Vaiduriyam, Lenin Babu Mailan Chinnapandi

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Article preview

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A comparative analysis of exergy using dual blends of Biodiesel in a DI engine

Ramakrishna N. Hegde, Gangadhara Rao, Jagadeesh Bantwal and Praveen Shenoy

Department of Aeronautical Engineering, Srinivas Institute of Technology, Mangalore, 574143, India
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Abstract : The scarcity of petroleum fuels and pollution concerns has led to the search for alternate fuels. In this investigation, cottonseed and Simarouba oils are transesterified to produce the corresponding biodiesels. The esterification and transesterification were carried out in the presence of heterogeneous catalyst MgPO4. The various properties of the biodiesel are determined in the laboratory. Vateria indica is a species endemic to India that belongs to the Dipterocarpaceae family. The oil of Vateria indica is obtained by an aqueous extraction method. This oil is transesterified to obtain the biodiesel by a two-step process of esterification followed by transesterification. This biodiesel is blended with diesel in 10% and 20% volumetric proportions. The cottonseed and Simarouba biodiesels are blended in equal proportions with diesel and tested for performance and exergy analysis along with Vateria indica blends. It is found from performance and exergy analysis that biodiesel blends performed better than diesel.

Keywords: Trans-esterification; Cottonseed oil; Simarouba oil; Vateria indica oil, Blend; Biodiesel; Exergy

4034

To Study the Strength Assessment of No-Fine Concrete Pavement

Hemant Kumar Sain, Pankaj Singh Jat, Aman Raj Sahariya

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Abstract : No-fine concrete has been being used in numerous nations over a century. Its higher porosity helps in permeating precipitation water straightforwardly to ground and in this manner helps in re-energizing groundwater spring. In this review, 3 clusters of no-fine concrete each with two distinct sizes of total were ready to observe the blend that produced high compressive strength and study the impact of level of fine total on the compressive strength of no-fine concrete. The reason for this undertaking is to investigate the achievability of delivering profoundly manageable no-fine substantial blends and assessing the impact of fine total on their properties. No-fine concrete is delivered by utilizing standard Portland concrete, coarse totals, and water. This substantial is tried for its properties, for example, droop worth, porosity and compressive strength. The outcomes showed that porosity has critical impact on compressive strength of no-fine concrete.

Keywords: No-Fine Concrete; Compressive Strength; Flexural Strength; Slump Test; Cement; Aggregate; Fiber.

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RTIMES22106

Object Detection and Drone Trapping System

Jagadeesh B[1], Nitesh Biradar[2], Yallappa R K[3]Suraj K[4], Kiran onarotti[5]
UG Scholars [2,3,4,5], Assistant Professor [1]
Department of Aeronautical Engineering, Srinivas Institute of Technology, Mangaluru, Karnataka, India

Abstract
The study deals with designing and modelling of Vertical Take-off and Landing (VTOL) aircraft. Just within few years the Unmanned Aerial Vehicle (UAV's) are being utilized for various applications but on the other hand, they are also utilized for intervening or harassing the restricted airspace to capture sensitive information which would directly/indirectly pose a threat to any domestic organization. Therefore, to combat these issues we have designed a VTOL aircraft that is equipped with object detection and a net thrower system mounted on VTOL. The principle behind our drone trapping system is inspired from fish and net method, wherein we target to trap the foreign drone propellers in our net system mid-air and seize the incoming foreign drone.

Keywords: *VTOL, UAV, net thrower.*

RTIMES22108

Study and Analysis of Aerogel Material as Car Roof Insulation

Jagadeesh B[1], Ajith Borkar[2], Akash Shett[3], Jumaan Muzain Habee[4], Karthik S M[5]
UG Scholars [2,3,4,5], Assistant Professor [1]
Department of Aeronautical Engineering, Srinivas Institute of Technology, Mangaluru, Karnataka, India

Abstract
Aerogels are special class of porous gel materials in which the liquid part is replaced by gas without shrinking the shape of it. Most of the Aerogel are based on polysaccharide origins, for example, cellulose, chitosan, alginate, starch, agar Aerogels. In terms of biomedical applications, Aerogels can also be used for loading and diffusion of antimicrobial drugs and to further control the release of drugs. Silica and cellulose have been widely used in the biomedical field. The Aerogels and its composite display-controlled drug release behavior and efficient antibacterial performance, thus confirming their potential for biomedical applications. This chapter focuses on bio-Aerogels from the viewpoints of loading of antimicrobial agent cellular uptake, toxicity, biodegradability, and the biomedical application perspectives. The first commercialization of silica Aerogel was blanket for thermal insulation. After that several researchers around the world are searching applications of Aerogel other than insulation. Aerogels can be organic, inorganic, and composites with other materials. Although Aerogels are expensive, chemists are still carrying out tests to brand it tougher, inexpensive, and less harmful. This chapter describes the introduction of Aerogels material and summary of their applications and their future aspects.

Keywords: *Aerogel, Insulation, car Roof and Thermal Conductivity*

Proceedings of the 2nd Virtual International Conference on Advanced Technologies and Research in Mechanical Engineering, VICATRME'22, 24-26 May, 2022

A comparative Analysis of exergy using engine performance results based on a dual blend of Cotton seed & Simarouba oil and Vateria Indica Blends in a four-stroke single cylinder Diesel engine

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Abstract

Scarcity in petroleum fuels along with pollution concerns has led to the search for alternate fuels. In this present work, an attempt is made to transesterify cotton seed and Simarouba oils to produce the corresponding biodiesels. The esterification and transesterification was carried in the presence of heterogeneous catalyst MgPO4. The various properties of the biodiesel are determined in the laboratory. Vateria indica is a species endemic to India belongs to Dipterocarpaceae family. The oil of Vateria indica is obtained by aqueous extraction method this oil is transesterified to obtain the biodiesel by two step process of esterification followed by transesterification. This biodiesel is blended by the volumetric proportions of 10% and 20% with diesel. The cotton seed and Simarouba biodiesels are blended in equal proportions with petro diesel and tested for performance and exergy analysis along with Vateria indica blends. It is found from performance and exergy analysis blends of biodiesels performed better compare to diesel.

Keywords: Trans-esterification; Cotton seed oil; Simarouba oil; Vateria indica oil; Blend; Exergy

Advances in 21st Century Human Settlements

Nandineni Rama Devi
Susan Ang
Norwina Mohd Nawawi *Editors*

Sustainable Resilient Built Environments

Proceedings of SRBE 2022, India

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IMPORTANT date

Last date for submission of Abstract	30 June 2022
Last date for submission of full- length paper	10 July 2022
Notification of Final Acceptance after review	25 July 2022
Final Submission of revised full length paper	30 July 2022
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Last Date of Registration	10 July 2022
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The Department of Physics, Chemistry and Mathematics is started in 2006. It has well-established laboratories equipped with sophisticated instruments, which fulfill the needs of UG and Ph.D. students. Now, the Department is offering Ph.D in Physics and Chemistry. Based on the facilities available, the Department had been recognized as a Ph.D. research center by Visvesvaraya Technological University, Belagavi.

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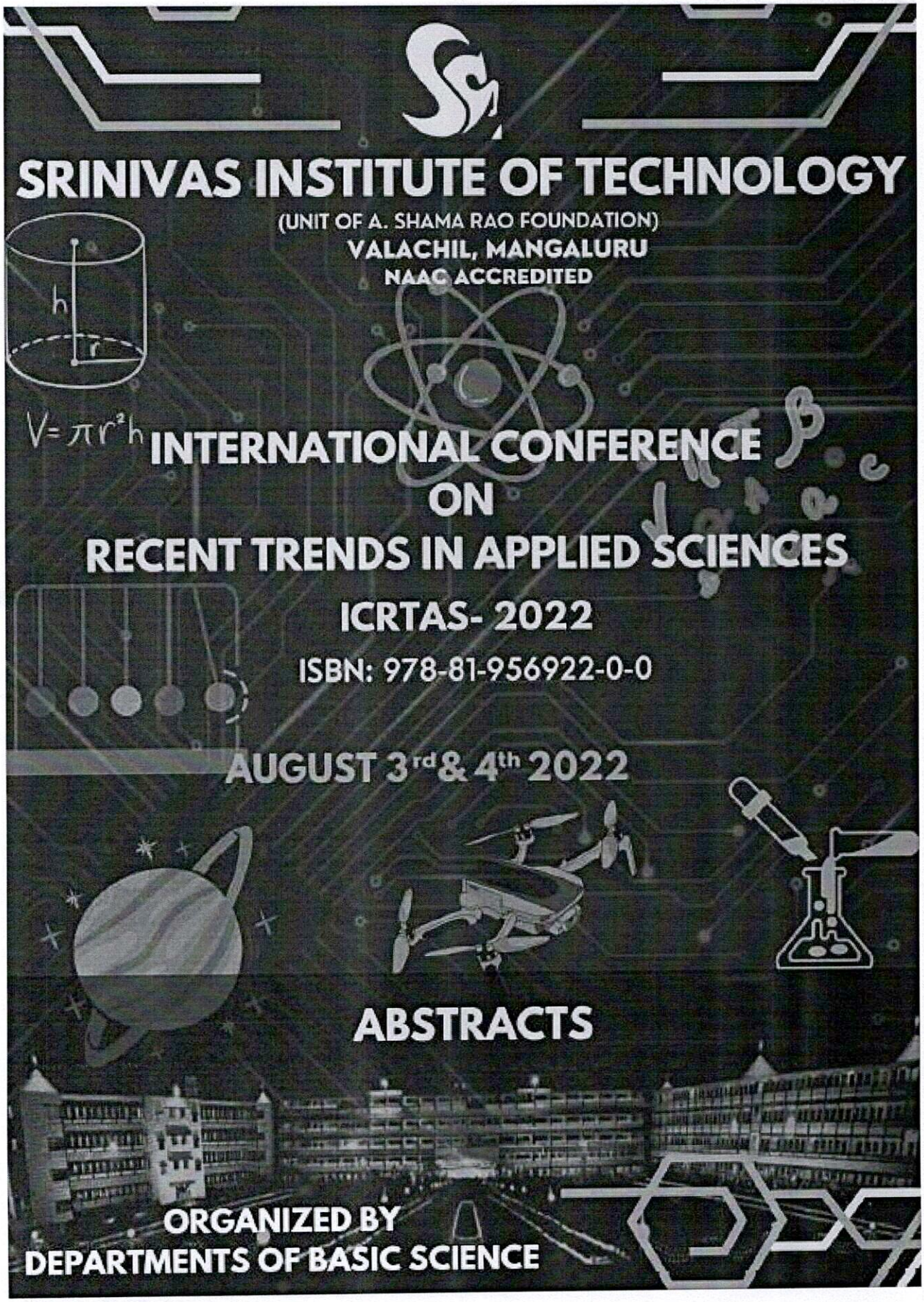
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CHEMISTRY

C-26

POLY (VINYLIDENE FLUORIDE) AND GAUR GUM BLEND POLYMER ELECTROLYTE FOR SUPERCAPACITOR

Sumana V. S.[1], Sudhakar Y.N. [2], Nagaraja G K[3]

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In the present work, gel polymer electrolyte (GPE) a novel gel composite was prepared using poly(vinylidene fluoride) (PVdF) and guar gum (GG). Combined DSC-TGA data for GPE showed that PVdF provides the mechanical support and jelly guar gum occupies the interstitial spaces. The ionic conductivity, activation energy, dielectric studies were studied to understand the electrode/electrolyte interface mechanism. Dielectric studies revealed that the unique pathway of proton transfer within the guar gum structures reduces the charge transfer resistance significantly at the interface. Optimized GPE was used in the fabrication of supercapacitor and specific capacitance was found to be 237 Fg -1. The time constant was 0.4s and showed consistent cyclic pattern during galvanostatic charge/discharge studies with 97% Columbic efficiency.

KEYWORDS: gel polymer electrolyte, PVdF-guar gum, supercapacitor.

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Srinivas Institute of Technology is a unit of A. Shama Rao Foundation, Mangaluru. Srinivas group of institutions with more than 30 years of existence has about 12,000 students in the 18 colleges spread across three campuses in Pandeshwar, Valachil, and Mukka. SIT is located at Merlapadavu, Valachil, a calm, serene, and eco-friendly environment of 15 acres of green campus. It is affiliated to Visveswaraya Technological University, Belagavi, recognized by the All India Council for Technical Education(AICTE), New Delhi and Accredited by NAAC.

The college established in the year 2006 with 4 Engineering streams has grown exponentially over the last decade and is currently offering 10 UG courses, 5 PG courses, and Ph.D. in 6 departments. Presently, more than 2500 students are studying at SIT Valachil campus. The mission of the institution is to achieve academic excellence through innovative teaching-learning practice, by providing a conducive research environment, industry-institute interaction, and skill development, leading to professionals with ethical values and social responsibilities. The core values of the institution is to impart to students to uphold Professionalism, Integrity, Teamwork, Loyalty, and Empowerment.

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The Departments have state-of-the-art infrastructure and computing equipment supported by high speed Ethernet and wireless networks. Various student organisations are active throughout the year. Departments have MoUs for Research, Internship and training with various companies and government agencies. Students are encouraged to take up interdisciplinary research and project work in various domains of Computer Science and are placed in reputed companies. Experienced and dedicated teaching faculty members with various specializations aim at delivering top class education blending their rich research experience with classroom teaching.

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The aim of the ICRICS-2022 is to create a platform to foster thinking and innovation in technology and maintain the competence of the profession. The conference intends to have deliberations on advanced topics belonging to the field of Computer Science and its applications in different Engineering domains. The theoretical topics together with real-time research from various streams are expected to be presented and discussed in the conference. The conference will be conducted in a hybrid mode i.e. online & offline mode.

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* Big Data and Data Analytics
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IMPORTANT DATES

Last date for submission of Abstract	: 09-05-2022
Notification of Abstract Acceptance after review	: 18-05-2022
Submission of Full length paper - camera ready	: 27-05-2022
Last Date of Registration	: 08-06-2022
Date of Conference	: 17-06-2022 and 18-06-2022

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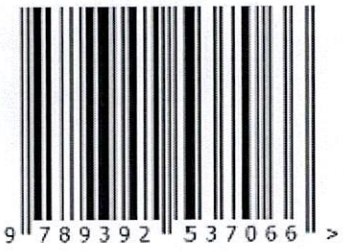
International Conference on Recent Innovations in Computer Science



ISBN 978-93-92537-06-6

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Identification of the Nutrient Defficient in Plant Using Machine Learning Approach

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ABSTRACT: Agriculture, which entails the cultivation of specific plants for the production of food and a variety of other desirable items, as well as the keeping of domesticated animals, is the backbone of the Indian economy. Agriculture and crop production rely heavily on nutrients. Crop yields are declining for a variety of reasons. Nutrient in sufficiency is one of the factors at play. The effective detection of nutrient deficit and the use of adequate fertilizer to correct the deficiency are two important issues that many farmers encounter. As a result, in order to increase production, agricultural automation has advanced dramatically in recent years. This type of nutritional deficiency is typically detected by agricultural laboratory and knowledgeable individuals (farmers). Due to a variety of environmental factors, manual nutrient deficiency predictions may be incorrect. Nutrient deficit in crops can manifest itself in the leaves, stems, flowers, and fruits, among other places. The leaf is being used to identify nutrient deficiencies in crops. A plant's growth should necessitate almost twelve nutrients. In most cases, the first signs of nutrient deficiency can be seen in either new or very old leaves.

KEYWORDS: Deep Learning, Macronutrient, Micronutrient, Deficiency, Symptoms.

Classification of Yakshagana Images Using Machine Learning Techniques

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ABSTRACT: Yakshagana is a historic Indian theatre form in which actors enact poetry epics on stage using a distinct style and form that mixes costume, make-up, music, dance, conversation and stage tactics. Yakshagana is thought to have originated between the 11th and 16th centuries, according to experts. People who have been watching it for a long time may be able to classify the various Veshas, but others who are new to it will have a difficult time doing so. We have a simple and effective technique to classify them based on their characteristics to solve this problem. Also, the human ability to classify the Veshas through images is more understandable than the ability to classify through audio. Machine learning techniques have been proven efficient in computer vision and image processing. This technique-based classification of Veshas is applied on dataset collected from various social media. This system has been shown to achieve satisfactory results in practise by building this dataset and using the Machine learning techniques.

KEYWORDS: Yakshagana, Vesha, Computer Vision, Machine Learning, Convolution Neural Network, Image Processing.

Feature based Stratification of Paddy Seeds of Coastal Karnataka Region Using DenseNet Model

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ABSTRACT: Identification of paddy seeds is tedious work for untrained farmers. Computer vision and machine learning techniques, helped to identify and classify paddy seed for untrained user. In this paper, we adopt Dense Convolution Network classification method to classify paddy seeds. In this paper we develop machine learning based model along with computer image which uses RGB images of paddy seeds to predict the paddy seed variety. Samples of paddy were collected from agriculture research center. The proposed model is experimented on the large image dataset of paddy seeds image and the experimental results show the better accuracy.

KEYWORDS: Digital Image Processing, Neural Network, Paddy Seeds, Image Classification, Machine Learning Dense Net.

Lung Cancer Detection Using Machine Learning

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ABSTRACT: Entire World is completely automating everything in this computer era, and the medical sector is no exception. Image processing and data analytics are used to automate the medical industry. Early detection is the most effective way to prevent cancer-related death. On a medical image or a CT scan image, pre-processing is used. With the CLAHE Equalization process, the visual contrast is boosted. After that, it's segmented using the random walk segmentation approach. Three processes will occur during segmentation: The ROI of the image will be segmented, followed by border correction. The continuous pixel change is segmented as the third portion. The major component is categorized, where malignant and non-cancerous cells are detected using a pre-trained model. All of the approaches mentioned above deal with standard image processing and data analysis.

KEYWORDS: SVM, CNN, KNN, K-Means.

Tulu Character Data Set Creation and Recognition

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ABSTRACT: In the fields of pattern recognition and image processing, handwritten character recognition is constantly a frontier area of research, and there is a high need for OCR on handwritten materials. Despite the fact that numerous studies have been conducted on foreign scripts such as Chinese, Japanese, and Arabic characters, just a few studies have been conducted on handwritten character identification in Indian scripts, particularly in South Indian scripts. This study gives an overview of Tulu language handwritten character data set creation and recognition.

KEYWORDS: Hand Written Character Recognition, Deep Convolution Neural Network, Thresholding, Binarisation, Data Set Creation.

A Survey on Blood Vessel Extraction from Fundus Images Using Deep Learning Techniques

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ABSTRACT: Visual sense is one of the most important sense among others for us humans. There are several number of diseases that could damage our eye permanently. One of the most common causes is due to diabetes. The condition is called Diabetic Retinopathy. It is caused as a result of damaging that occurs to the blood vessels of the light sensitive tissues at the back of retina. This disease can be identified from the fundus images of the eye called retinal fundus images. These tasks although are challenging as it is symptomless. Many algorithms were deployed and analyzed to check the abnormalities in the images. The ones that are going to be discussed in this paper are cluster based methods, data mining techniques, binary filters, screening techniques and convolution neural networks (CNN).

KEYWORDS: Deep Learning, Blood Vessel Extraction, Segmentation, Neural Nets, Fundus, Images, Classification.

Identification of Herbal Plants Using Machine Learning Approaches

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ABSTRACT: We designed a type of herbal medicine identification system for our mobile terminal based on the Android platform in order to recognize Indian herbal medication from our side and give assistance to Indian herbal medicine fans. We achieve the Indian herbal medicine recognition application by using the application software in our mobile terminal to match the criteria of Indian herbal medicine. The programmer focuses on the functions of storing Indian herbal medicine information in a database and accessing that information to recognize Indian herbal medication via comparison. The Android platform and Java programming are used to create the system. We may easily detect Indian herbal medication by using the programmer on our mobile terminals.

KEYWORDS: SVM, Medicinal Plant, Image Processing Identification, Automatic, Ayurveda.

Detection of Tuberculosis Using Chest X-RAYs

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ABSTRACT: Chest Radiograph is the main requirement for identifying lung diseases. Pneumonia, Tuberculosis, Lung cancer is the major lung diseases. Due to the increase in lung diseases the rate of people dying is in millions. Computer Aided Diagnosis Techniques are in need these days due to the lack of qualified radiologists to interpret the CXR. CAD based diagnosis will help number of patients to get recovered from tuberculosis. CAD-based diagnosis help in improving the number of diagnosed and treated patients every year. This System involves many steps like preprocessing, segmentation, feature extraction and Classification using many methods like CLAHE method, Euler method and using features like GLCM. The segmentation carries out the process of extracting the Region of Interest (ROI), and thereafter important features are extracted and are given to the classifier [11]. These features are extracted from GLCM using SVM classifier that will classify the CXR images into normal TB suspect in the result part of this Tuberculosis Detection.

KEYWORDS: CAD, Pre-processing, Segmentation, GLCM, SVM, Euler Method.

Survey on Exudates Detection from Fundus Images Using Machine-learning

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ABSTRACT: Diabetes is the most prevalent chronic condition, characterized by low insulin production and high blood sugar levels in people of all ages. Diabetes, if left untreated, may lead to a variety of ailments throughout the body parts. Diabetic Retinopathy (DR) is a symptomless eye condition caused by diabetes, where vessels present in retina of the eye are destroyed. Many of the automatic diagnostic approaches are based on traditional handmade features have been created in the literature. Because Deep Learning (DL) does automate feature extraction, it produces more accurate and potentially useful findings, especially in medical imaging. Convolution neural network are one of the most widely used deep learning approach in the medical field. For a better understanding, numerous Deep Learning methods are used for classification and detection of diabetic retinopathy disease approaches are examined and discussed in this work.

KEYWORDS: Diabetic Retinopathy, Convolution Neural Networks, Deep Learning.

English Font and Word Recognition

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ABSTRACT: English font and word recognition in natural image could be a research area which tends to develop a computing system to automatically read the characters and word from natural images. Nowadays the need is increasing for reading the text from images and storing it to disk, so later reusing this information for further use. The first task to store information from these natural images is to first scan the images. But toreuse this information it's very difficult to read the individual contents and searching the contents form these images line-by-line and word – by - word. The main factor affecting the characteristics is the quality of images, because of these challenges system is unable to detect the characters while reading them. So there's a format for images that transforms text into a system readable format. In this paper we've discus method for text and word recognition from images. The goal of this paper is to recognize the text form image by using various processing modules.

KEYWORDS: Photo OCR, Multi-lingual OCR.

Mango Classification for Agro-based Industries Using CNN Technique

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ABSTRACT: Mango (Mangiferaindica), the "king of fruits," is the most sought-after natural product for both direct and indirect use around the world. Because it has such a high culinary value, it is necessary to develop a strategy that will allow the mangoes to be classified fairly. Pictures of various quality classes are acquired, pre-prepared, and textural features are obtained for each color picture while considering each aspect separately and in combination Computer vision is used to automate the detection and classification of fruits. Traditional methods of fruit recognition have relied on manual operations dependent on visual ability, which are difficult, time-consuming, and incompatible. The appearance of the fruit's outer form is the primary source of classification. In the fruit sector, computer machine vision and image processing technologies have become increasingly useful over time, particularly for applications like as quality assessment, breed detection, and form sorting.

KEYWORDS: Quality Grading, Computer Vision, Convolution Neural Networks, Transfer Learning, Classification, Sorting, Image Processing Technology.

AI-Enabled Analysis of Climate Change on Agriculture and Yield Prediction for Coastal Karnataka

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ABSTRACT: The main goal of this work is to examine climate change using climatic variables such as rainfall and temperature. There are two primary components to this work: weather prediction for the region and yield prediction for the district. The weather forecast is done using the LSTM algorithm using weather data crop can grow or not, and obtain the expected yield if the crop can grow in that region. The model is intended to suggest an alternate crop for the chosen region using the Random Forest algorithm. The LSTM algorithm is used to forecast yield for Uttara Kannada and Dakshina Kannada districts. From 1983 to 2019. We predict the crop yield for the selected region, and a conclusion is made.

KEYWORDS: LSTM, Random Forest, Weather Forecast, Yield Forecast.

Smart Cradle for Baby Monitoring for Specialized Person

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ABSTRACT: The current number of working mothers has greatly increased. Subsequently, baby care has become a daily challenge for many families. Thus, most parents send their babies to their grandparents' house or to baby care houses. To overcome this challenge, an Internet of Things based Baby Monitoring System is proposed as an efficient and low-cost IoT based system for monitoring in real time. The system architecture consists of a baby cradle that will automatically swing using motor when the baby cries. Parents can also monitor their babies' condition remotely via the Blink application. The proposed system is tested to prove its effectiveness in terms of cost and simplicity. Proposed system ensures safe operation to enable the baby - parenting anywhere and anytime through the network. Proposed system includes a baby monitoring system for a smart cradle which is designed using Adriano IDE toolkit and Node MCU as the microcontroller.

KEYWORDS: Cradle, Node MCU, ESP 8266, Blynk Application, FTTT Application.

Big Mart Sales Prediction

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ABSTRACT: In big-box store sales, exploratory machine learning approaches are used. In general, sales forecasting is critical in marketing, retailing, wholesale, and manufacturing, and it is performed in a wide range of businesses. This proposed system will enable companies to plan better strategies, achieve revenue sales, and provide better growth for future company growth. When compared to other learning methods, this machine learning method produces consistent results. Data transformation and data exploration is the crucial step in the overall system of feature selection and provide effective output in terms of accuracy.

KEYWORDS: Linear, Regression, SVM, Machine Learning.

Providing Unbiased Data to the People Using Ai

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ABSTRACT: Creating result as per people's interest by highlighting the idea to show unbiased news to the people. We are providing proper information to the people without taking any payment and without showing them any advertisements. As per people's judgment and their utilization, our results will be generated and highlighted. As per the priority of people creating category using Artificial Intelligence, in such a way that more liked information should be appeared on top and considering as best information without any biased as per its popularity. Much technological advancement led to newer ways of delivering information about various aspects. Since the advent of technological developments such as Artificial Intelligence in various fields. Our goal is creating idea or AI engine which helps us to bring news which people had in their mind without any biased. Newspaper, student information, online ticket booking is just a tool to show our idea. Creating tool such a way that everybody will get an opportunity to mark the good information in very category so that we can have better result.

KEYWORDS: AI Engine, AI Algorithm.

A New Approach to Trace and Identify Lost People Using Artificial Intelligence

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ABSTRACT: A missing person is the one who has been mentioned as disappeared having status as either alive or dead. A person may go missing through voluntary disappearance or else due to accident, crime or some other reasons. The missing person's category ranges from small children to old aged people including Alzheimer's etc. Kidnapping cases are also being rapidly increasing these days. This paper offers a system which will help police to find missing people within a short period of time regarding the person's public appearance. The searching is been carried out by artificial intelligence. When any person is found missing, his/her relative can register the case in the application and the photographs are stored in the database. When the missing person enters into any public surveillance area like railway station, ATM, Airports the real time camera identifies the missing person using a recognition model in our system. With the help of facial encodings, a match is been found between the faces. If a match is found, it is notified to the relative through the web application.

KEYWORDS: Artificial Intelligence, KNN Algorithm, Face Modeling, Face Detection.

Spinal Cord Tumour Segmentation

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ABSTRACT: Tumors of the spinal cord cause neurological morbidity and mortality. The ability to obtain morph metric measurement of the tumor (size, position, growth rate) can lead to better treatment planning and monitoring. This type of quantification necessitates the division of these structures into three distinct types. Three - dimensional structure segmentation by hand, on the other hand, takes a long time, repetitive, and prone to intra - and inter - rater variability, which has prompted the creation of automated approaches. Here, we create a model that is tailored to our needs. The suggested method is a two-stage technique that uses to segment tumors, a cascaded architecture is used, which is based on 2D models. The model starts by locating the spinal cord and calculating coordinates of the bounding box. The photos are preprocessed to match this output, resulting in a narrower field of vision and a reduction in class disparity. After then, the tumor is segmented. we can perform the preferred algorithm (CNN, RNN) and according to the training done on the datasets accuracy also will be calculated and plotted in a graph.

KEYWORDS: Spinal Cord, Segmentation, MRI.

Iris Recogniton System Using Machine Learning

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ABSTRACT: One of the most important modules of computer systems is the one that is responsible for user safety. It was proven that simple passwords and logins cannot guarantee high efficiency and are easy to obtain by the hackers. The well-known alternative is identity recognition based on biometrics. In recent years, more interest was observed in iris as a biometrics trait. It was caused due to high efficiency and accuracy guaranteed by this measurable feature. The consequences of such interest are observable in the literature. There are multiple, diversified approaches proposed by different authors. However, neither of them uses discrete fast Fourier transform (DFFT) components to describe iris sample. In this work, the authors present their own approach to iris-based human identity recognition with DFFT components selected with principal component analysis algorithm. For classification, three algorithms were used k-nearest neighbors, support vector machines and artificial neural networks. Performed tests have shown that satisfactory results can be obtained with the proposed method.

KEYWORDS: Machine Learning, ConvNet, Transfer Learning, Iris Recognition, KNN, SVM, DFFT.

Securing Biometric Authentication System Using Blockchain

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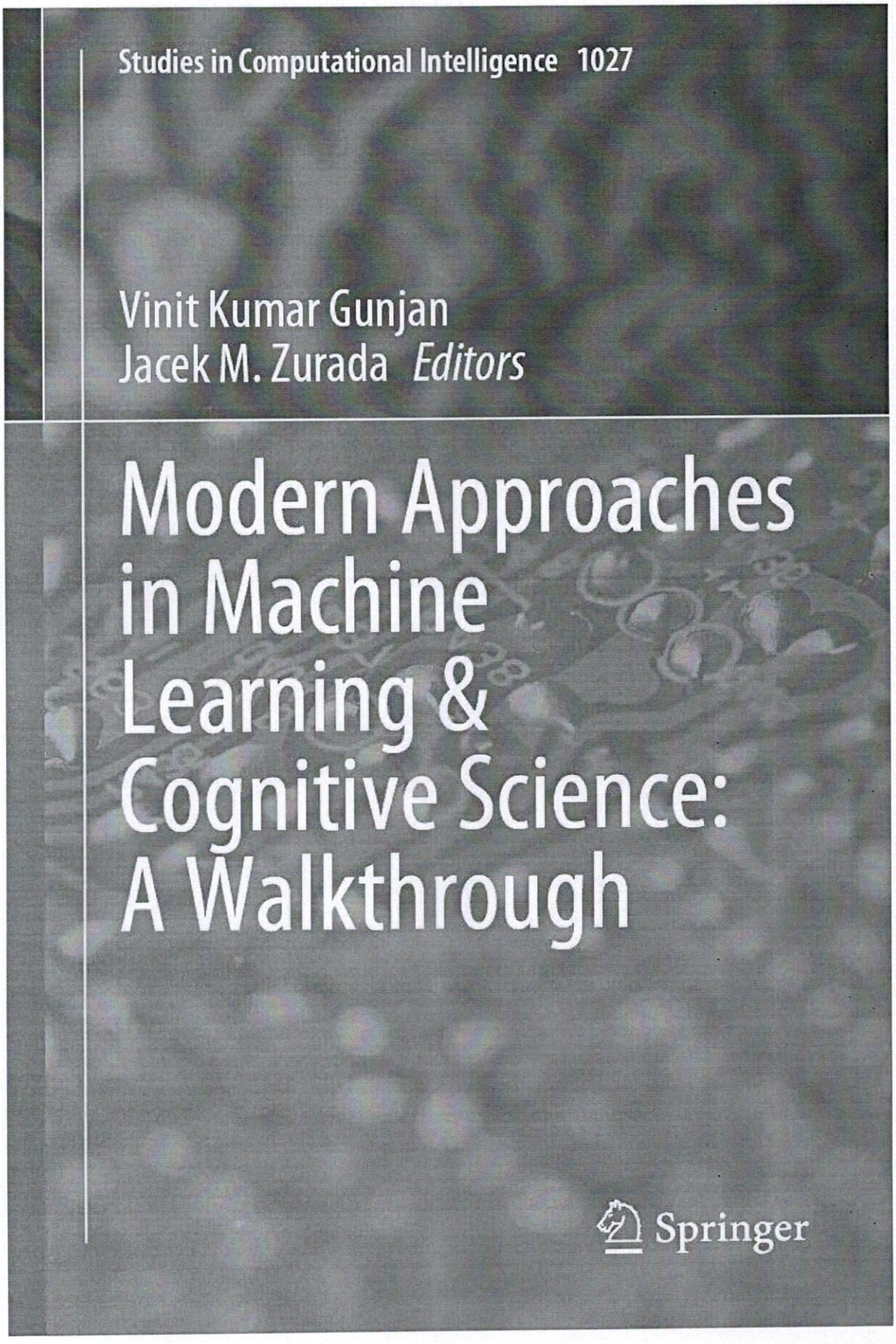
ABSTRACT: Biometric authentication systems have major security weaknesses: risk of biometric information leakage, unreliability of authentication modules, and non-transparency of biometric information management. This paper presents BDAS, a new biometric authentication system using block chain, which provides a decentralized and distributed mechanism for processing biometric authentication and an auditable mechanism for managing biometric information. BDAS's evaluation demonstrates that it provides reliable and secure authentication compared to existing methods while introducing negligible performance overhead in real-world scenarios.

KEYWORDS: BDAS, Block Chain Biometric Authentication Decentralized Systems.


Studies in Computational Intelligence 1027
Vinit Kumar Gunjan
Jacek M. Zurada Editors
Modern Approaches in Machine Learning & Cognitive Science: A Walkthrough
Springer

Modern Approaches in Machine Learning & Cognitive Science: A Walkthrough pp 283–294 | Cite as

Signature Extraction from Bilingual Document Images Using Blobs Method

G. Shivakumar ✉, M. Ravikumar, B. J. Shivaprasad & D. S. Guru

Chapter | First Online: 21 April 2022

527 Accesses

Part of the Studies in Computational Intelligence book series (SCI,volume 1027)

Abstract

In this paper, we present an effective method for signature extraction from bilingual (Kannada

Ashish Kumar Luhach · Dharm Singh Jat ·
Kamarul Bin Ghazali Hawari ·
Xiao-Zhi Gao · Pawan Lingras (Eds.)

Communications in Computer and Information Science 1575

Advanced Informatics for Computing Research

5th International Conference, ICAICR 2021
Gurugram, India, December 18–19, 2021
Revised Selected Papers

Springer

ICAICR

Computing Methodologies

International Conference on Advanced Informatics for Computing Research

↳ ICAICR 2021: **Advanced Informatics for Computing Research** pp 30–42 | Cite as

Segmentation of Tumor Region from Mammogram Images Using Deep Learning Approach

M. Ravikumar, P. G. Rachana & B. J. Shivaprasad

Conference paper | First Online: 25 June 2022

Part of the Communications in Computer and Information Science book series (CCIS,volume 1575)

Abstract

Breast cancer is most common among different cancers that affect women and it is the second

Extraction of Logo from Real Time Document Images Using Masking and Median Filter Approaches

Shivakumar G ; Ravikumar M ; Shivaprasad B J ; Guru D. S. All Authors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ON
TECHNOLOGY FOR INDUSTRY 4.0
REVOLUTION
(ICTIR-2022)
ISBN 978-81-956922-6-2
8-9, JUNE 2022
ORGANISED BY
DEPARTMENT OF
ELECTRONICS AND COMMUNICATION ENGINEERING &
ELECTRICAL AND ELECTRONICS ENGINEERING

INDEX

P-02

Design of 32-Bit Adder Using Carry Look Ahead Adder

Lakshminayana, Nidhishree, LahariG.R, Nireeksha, Soorya Krishna K Department of ECE,Srinivas Institute of Technology,Mangaluru.

ABSTRACT: Adders are an essentially universal component of today's integrated circuits. The constantly developing computing industry demands not just faster arithmetic units, but also smaller and less power consumption arithmetic circuits. The adder must be quick and also efficient in chip area to meet its requirements. In order to construct an adder of 32-bit using eight 4-bit adder for our project, we used the Carry look ahead adder. It is also known as fast adders because it consumes less time over other adders by propagating carry before the sum output is obtained, resulting in brilliant performance. We designed the schematic and layout of CLA using LT spice simulation programmed in Electric binary using 45nm technology.

Keywords: Adder, CMOS, Electric, CLA.

P-10

Remote Control of a Three Phase Motor Using GSM

Gourish S Hegde, Abhishek L R, Jishnu Prakash C, Parikshith H P, Karthik M B, Department of ECE, Srinivas Institute of Technology, Mangaluru.

ABSTRACT: Every system is now automated in order to meet new problems in today's environment. Automated systems require fewer manual procedures, allowing for more flexibility, reliability, and accuracy. As a result, in order to give superior performance, every industry chooses automated control systems, particularly in the field of electronics. Mobile phones are being utilized as a remote control for a three-phase motor pump that is used in agriculture. Due to India's frequent power outages and irregular voltage levels, efficient water distribution to the fields is required in all-weather circumstances. This is accomplished by transferring information in the form of messages between the user phone and GSM. This system is made up of a microcontroller that is linked to a GSM phone and a motor. This method can be used to operate any gadget in regions where there is no access to the internet. However, in this new architecture, the system does not need to be reprogrammed to manage a different appliance without modifying the microcontroller's program. The user will be able to operate the appliance by making a call or sending a message from his phone. The system created with the Microcontroller in this work incorporates over-current protection, dry running, and single phasing. It is predicted that this application will facilitate motor access to a large extent.

Keywords: GSM, RELAY, ARDUINO.

P-09

IOT Based Smart Solar Pooja Lamp and Adaptive Mantra Chanting Model

Sathish Kumar K, Ahammed Aamir A, Krithika, Manoj Kumar P, Rakshitha K,Rahul Dalawai, Department of ECE,Srinivas Institute of Technology, Mangaluru

ABSTRACT: This paper presents an "IOT Based SMART SOLAR POOJA LAMP AND ADAPTIVE MANTRA CHANTING MODEL" that focuses on power conservation, energy efficiency, automation and intelligence. The main consideration in the present field technologies is automation, power consumption and cost-effectiveness. Automation is intended to reduce man power with the help of intelligent systems. The use of renewable source of energy is crucial because sources of energy are limited whereas energy consumption has increased. By use of solar energy, massive energy savings are envisioned and also it can facilitate higher power demand. The project aims to describe a method for modifying the costume of lighting Diya by using minimum electrical energy consumption. Specially the system is a standalone solar PV system which is self-powered. It automatically switches the Pooja lamp and adaptive mantra chanting model ON and OFF utilizing the real time data via RTC (DS1307) module. Arduino Uno serves as the brain of the system also LED strips are used for lighting. Solar panel of 40w or 20w will be used to supply the power to the project model. Pooja lamp is lit based on the timings (Morning 5:30am to 7 am &also evening 6 pm to 8 pm). Real time is used by the Arduino. The required real time is read by the RTC chip and the lamp is controlled by the Arduino programming. Devotional songs and chanting mantras are stored in SD card which is interfaced with Arduino UNO. The Arduino UNO will read the devotional songs and chanting mantras and play using TMRpcm player and speaker. The user has to store the required songs in the memory card. These songs are played automatically in the morning and evening hours.

Keywords:Solar panel, RTC, Arduino Uno, IOT.

P-08

Skin Cancer Detection Using Machine Learning and Image Processing

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ABSTRACT: Skin cancer is considered as one of the most dangerous types of cancer and there is a drastic increase in the rate of deaths due to the lack of knowledge on the symptoms and its prevention. In this paper, a dataset which includes two types of cancerous lesion images i.e. melanoma and nevus and also non-cancerous lesion images are collected. Then these images are put through pre-processing and segmentation. These processed images are then classified as melanoma, nevus or non-cancerous by using three types of deep learning algorithm i.e. CNN (Convolution Neural Network), RNN (Recurrent Neural Network) and LSTM (Long Short-Term Memory) and their accuracy is compared.

Keywords: melanoma, nevus, Convolution Neural Network, Recurrent Neural Network, Long Short-Term Memory

P-11

IOT Based Health Monitoring System

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ABSTRACT: In any pandemic situation it is very important to quarantine or to keep the patients under isolation, but during same time doctors are need to check health conditions of patients too. The major problems are, doctors are needed to check patient's physical condition regularly, and the doctors will have risk to get the information from monitoring process. In order to solve this issue we are required to design a remote IOT based health monitoring system which can be used to remotely monitoring of many patients through the internet. The system checks patient's heartbeat, temperature, oxygen proportion and blood pressure by sensors. This system used to send the data over the internet using Wi-Fi broadcast by connecting to Wi-Fi internet connection. In order to display the data remotely on thing speak platform data transmission and reception done over internet. Through node MCU based circuit whole system will be running, in that process if any irregularity happens in patients' health, a buzzer can be used as alarm. The designed system will be kept near to the patient and sensors will be in contact with patients body and remotely data used to send. Hence for doctors it is possible to check much number of patients remotely and to attend desired patient necessary.

Keywords: IOT, Node MCU , sensors.

P-22

Deep Learning Techniques for Diabetic Retinopathy:A Survey

Clitus Neil DSouza, Department of ECE, Srinivas Institute of Technology, Mangaluru.
Jose Alex Mathew, Department of EEE, Srinivas Institute of Technology, Mangaluru.

ABSTRACT: Diabetes is a common type of constantly recurring illness observed with various people with varying age segments resulting from low insulin generation, resulting in generating high glucose content in the body. If Diabetes is not treated in proper manner, it will lead to several diseases affecting different organs of the body. One such organ which gets affected with diabetes, if not treated properly is the Eye. Diabetes Retinopathy (DR) is one kind of Eye disease which is caused by overtime diabetes. Lots of people around the world suffer from this disease that would result in blindness if not cured on time. Many automated diagnostic systems is observed from literature that makes use of traditional extracted features. With the advent of Deep Learning, more precisely in the field of medical imaging, very specific and excellent results are obtained as the model learns to extract features by itself. Convolutional Neural Networks (CNN's) are prominent methods in deep learning in detection of DR through large datasets. In this paper, various traditional and deep learning based DR detection and classification methodologies are analyzed.

Keywords: Convolutional Neural Networks (CNN), NPDR,PDR, Deep Learning, DR.

P-07

Voice and Hand Gesture Control Robot

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ABSTRACT: A robot is a sort of automated machine that can-do specified jobs quickly and precisely with little or no human assistance. This is a two-in-one project that allows you to control a robot using either voice commands or simple gestures. It basically describes how to operate a robot with speech or gestures. Separate portions of the robot control circuit are dedicated to voice and gesture. Each part has its own set of sensors. An electret microphone serves as the sound sensor in the voice part, while an accelerometer serves as the sensor in the gesture mode.

Keywords: Arduino, ESP, Gyroscope, Camera, Robot, Motor drivers.

P-03

Line Following Hexapod Robot

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Department of ECE,Srinivas Institute of Technology,Mangaluru.

ABSTRACT: Hexapod Robotics built with six legs so it is capable of performing basic mobility tasks. A Line Following Hexapod Robot is an autonomous robot which is able to follow a black line that is drawn on a contrasting color surface. It is designed in such a manner so as to move automatically and follow the line. The robot uses signals from the IR module to identify the line, thus assisting the robot to stay on the track. The code written based on the sensor input makes its movement precise and flexible. The robot is driven by servo motors to control the movement of the legs.

Keywords: Raspberry Pi, Robotics, Hexapod

P-05

Agri Monitoring System for Estimation of Npk and Ph in Soil Along With Crop Recommendation and Leaf Disease Detection

Nagalakshmi B Naik,Keerti Mudasi,Poorvi Kulkarni,Pranil Shetty,Sushma
Department of ECE,Srinivas Institute of Technology,Mangaluru.

ABSTRACT: Agriculture is the backbone of Indian economy. Scientists are tirelessly striving to improve the cultivation of crops. This system combines all the factors like nutrient requirements, moisture content monitoring, animal intrusion and early crop disease detection methods to alert farmers. Soil nutrients play a vital role in the getting good yield for crops and to get quality product. This system is used to design and develop a working system that uses Ph sensor to monitor the Ph values and to maintain the amount of alkalinity and acidity in soil for the efficient plant growth. It uses soil moisture sensor to regulate the moisture levels of the soil preventing less yield due to inadequate and nutrients erosion due to excess soil moisture. It gives an effective suggestion system for the crops using NPK sensor to prevent crop dehydration due to excess and stunted growth, discoloring on the edges to leaves due to insufficient supply of nutrients. It uses camera module to avoid the animal intrusion using alarm alert system using computer vision algorithms, which also monitors growth and ripening of fruits. Identification of the plant diseases is the key to prevent the losses in the yield and quantity of the agricultural product using deep learning algorithms. The early detection of diseases is important in agriculture for an efficient crop yield. Automatic methods for classification of plant diseases also help taking action after detecting the symptoms of leaf diseases. And also to create a user friendly mobile application for easy access to all the information required and deploy it on cloud so that it can be accessible from anywhere. Hence, Automatic detection and monitoring is very much important for the sustainable agricultural revenue.

Keywords: Agriculture, NPK, Ph, CNN, crop recommendation

P-01

Augmentative Communication for Deaf and Dumb

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ABSTRACT: People get to know one another through sharing their ideas, thoughts, and experiences with others around them. There are several ways to accomplish this, the best of which is the gift of "Speech." It will be unjust if we overlook those who are denied this priceless gift: the deaf and dumb. The usage of "Sign Language" is the only mode of communication available to the deaf and dumb. Mute people can make hand gestures with their fingers, which will be transformed into speech so that regular people can understand them. The deaf and dumb communicate through sign language, which is difficult to decipher for those who are not familiar with it. As a result, software for the phone that can translate motions into text and speech is required. This will be an innovative step toward allowing deaf and dumb people to communicate with the general population without the use of a secondary device other than a Smartphone. We'll be working on an app that will make it easier for people who are deaf or hard of hearing to communicate. Flutter is used for the front end, and Python script is used for the backend. It attempts to provide dumb people with an effective and economical means to express them by converting motions to text and deaf people's speech to text and gestures. This application will create a better society where community sees them as one and people will look into their abilities than disabilities. This application will create a better society where community sees them as one and people will look into their abilities than disabilities.

Keywords: Flutter, Python, Decipher.

P-06

IOT based Quadcopter for Farm Surveillance with Object and Face Recognition

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ABSTRACT: Surveillance is monitoring of the activities, behavior, or other changing information, usually done for the purpose of influencing, directing, managing or protecting the living beings. This can be done by a Quadcopter equipped with artificial vision to recognize faces and objects. Moreover, the copter will be controlled by an IOT device using cellular signals which means that the drone can be controlled from a distance of hundreds of kilometers. A separate IOT platform will be developed for flight controls, real time drone video streaming, to monitor the recognition process and to monitor other flight data. This drone will be equipped with four brushless DC motor powered by a Lithium polymer battery which can give a flight time of 15-25 minutes (will solely depend on the battery capacity), apart from that this Quadcopter is intended to have accelerometer, GPS for a smooth functioning. This drone is intended to be built under micro category which doesn't require license in order to fly as of the new drone policy 2021 and will be of less than or equal to 2.5 kg. With the use of facial recognition, this Quadcopter can also help us find the person we are in search of. This Quadcopter can be used as an aerial surveillance in college campus, schools etc. to monitor student's activity in order to direct or protect them.

P-21

Detection of Plant Disease Using Image Segmentation and Support Vector Machine

Manjunatha Badiger, Department of ECE, Sahyadri College of Engineering and Technology, Mangaluru.
Jose Alex Mathew, Department of EEE, Srinivas Institute of Technology, Mangaluru

ABSTRACT: Agriculture is a major source of income for the country. Leaf diseases in agriculture are a major concern for many countries, as food consumption is increasing rapidly owing to population growth. The early and precise detection and diagnosis of leaf diseases are critical to preventing their spread. Image processing techniques including mathematical equations and mathematical transformations can be employed for disease identification. For human eyes, an image is a mixture of RGB colors from which we can extract the features. Modern computers, on the other hand, store images in a mathematical structure, which means the computer views the image as numbers. After evaluating the image as a numerical array or matrix, we may apply various transforms to it to extract specific features. However, before the picture can be transformed, it must first go through different procedures such as transformation. K-Means Clustering and the Support Vector Machine Algorithms are used in MATLAB to identify and classify several forms of leaf diseases.

Keywords: Algorithm, Classification, Feature extraction, Plant Leaf Diseases, Segmentation, Training.

P-22

Deep Learning Techniques for Diabetic Retinopathy:A Survey

Clitus Neil DSouza, Department of ECE, Srinivas Institute of Technology, Mangaluru.
Jose Alex Mathew, Department of EEE, Srinivas Institute of Technology, Mangaluru.

ABSTRACT: Diabetes is a common type of constantly recurring illness observed with various people with varying age segments resulting from low insulin generation, resulting in generating high glucose content in the body. If Diabetes is not treated in proper manner, it will lead to several diseases affecting different organs of the body. One such organ which gets affected with diabetes, if not treated properly is the Eye. Diabetes Retinopathy (DR) is one kind of Eye disease which is caused by overtime diabetes. Lots of people around the world suffer from this disease that would result in blindness if not cured on time. Many automated diagnostic systems is observed from literature that makes use of traditional extracted features. With the advent of Deep Learning, more precisely in the field of medical imaging, very specific and excellent results are obtained as the model learns to extract features by itself. Convolutional Neural Networks (CNN's) are prominent methods in deep learning in detection of DR through large datasets. In this paper, various traditional and deep learning based DR detection and classification methodologies are analyzed.

Keywords: Convolutional Neural Networks (CNN), NPDR,PDR, Deep Learning, DR.

P-23

A Review on Breast Cancer Detection Approaches for Various Image Data Sets

Gurusiddayya Hiremath, Department of ECE, Sahyadri College of Engineering and Technology, Mangaluru.
Jose Alex Mathew, Department of EEE, Srinivas Institute of Technology, Mangaluru.

ABSTRACT: According to global statistics, deaths among women due to breast cancer (BC) are the leading cause out of all the several types of cancers. Hence treating breast cancer as early as possible, and even relatively complicated to detect and analyze at the beginning stage. The conventional method is time-consuming and not efficient and very less accurate. Henceforth an efficient technique to diagnose the cancerous cell, not including human association close to accuracy. CT scan is a particular case of Mammography, which adopts the X-ray technique & uses superior-resolution pictures such that, it perceives fine tumors in the breast. The review paper elaborates on the recognition of the BC by employing various image processing (IP) application and techniques.

Keywords: Cancer, Breast Cancer, Machine Learning, Mammogram, Histopathology image, Pre-Processing, Segmentation

P-29

Outdoor Air Filtration System

Jose Alex Mathew,Mahammad Inaz Ali,Mohammad Safaf,Department of EEE,Srinivas Institute of Technology,Mangaluru.

ABSTRACT: Urbanization and industrialization increased population density in cities and consequently leads to severe indoor and outdoor air pollution. As a result of these trends, the issue of sustainable and healthy indoor and outdoor environment has received increasing attention. Various air filtration techniques have been adopted to optimize indoor and outdoor air quality. Air filtration technique can remove air pollutants and effectively alleviate the deterioration of indoor and outdoor air quality. A comprehensive review on the synergistic effect of different air purification technologies, air filtration theory, materials and standards. It evaluated different air filtration technologies by considering factors such as air quality improvement, filtering performance, energy and economic behavior, thermal comfort and acoustic impact. Current research development of air filtration technologies along with their advantages, limitations and challenges are discussed. Air pollution has become the world's single biggest environmental health risk, linked to around 7 million deaths in 2012 according to a recent World Health Organization (WHO) report. The new data further reveals a stronger link between, indoor and outdoor air pollution exposure and cardiovascular diseases, such as strokes and ischemic heart disease, as well as between air pollution and cancer. This project aims to drive the future of air filtration technology research and development in achieving sustainable and healthy building ventilation.

P-25

Implementation of Agrovoltaics

Harshith K, Rajanarayana T,Vinodraj M B, Department of EEE, Srinivas Institute of Technology, Mangaluru.

ABSTRACT: The decline of agricultural land and the rapid development of technologies in the latest agricultural programs such as the NFT System, have presented a major challenge for farmers. The NFT system requires special attention to several parameters such as water temperature, water level, acid (pH), and nutrient concentration (PPM). Sadly, it's still controlled by mistreatment the manual manner, for example in controlling the nutrient concentrations has to be done many time in a day, so much time is wasted. To address these issues, we need a system that can be used and easily deployed and that should be affordable. We have built a hydroponic monitoring system and automation that can monitor using sensors connected to a small Arduino mega 2560 controller, Wi-Fi module and advanced features such as a web server with the Internet of Things, Web used as a visual interface system that allows the user to monitor and control Agrovoltaic farming The Agrovoltaic System is fully utilized by Solar power .So the project name is AGROVOLTAICS

Keywords: Internet of Things; Agrovoltaics; Arduino mega 2560; ;pH sensor;PPM sensor; Temperature sensor

P-26

Smart Water Agro-voltaic

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ABSTRACT: within the word Agro-voltaic, Agro means Agriculture and voltaic means Photovoltaic. Thus the term Agro-voltaic means Agriculture using Photovoltaic (i.e. solar). Here in Agriculture we use Hydroponic method of farming (NFT type). The meaning of Hydroponics is growing of plants in highly rich nutrient solution. The objective of the project is to create a hydroponic controller that monitors and automatically controls the environmental factors required for hydroponic farming. The main function in this type of method is controlling the TDS and pH level at required level for crops for each and every time. The implementation is done by using the Arduino Mega 2560 unit, as it has a higher processing power and more memory, and provides several ports to communicate with screens, sensors, relays and shields. The system acquires data regarding to light intensity, humidity, temperature, conductivity and acidity of the crop mixture and sends them to the Arduino. The Arduino then takes the decision to control all the parameters to be maintained in a specified range. The user via a display unit is able to monitor the above data in real time and manually or automatically can control the operation of the fan, lamp, pump and humidifier. Arduino regulates the composition of solutions containing nutrients to be circulated with a pump by the NFT system in Hydroponics. The circulation of nutrients for the NFT system is automatically and the data of different parameters can be sent to the owner's device using IoT. The main aim of Smart Water Agro-voltaic cultivation is to reduce water usage, growing more crops in less space and improving quality of crops without using chemicals and pesticides, and to save land. This type of cultivation can be in small scale or large scale and indoor or outdoor farming. This paper provides an overview about the cost-effective implementation of automated system for all farmers in India and other countries.

Keywords: IoT; Internet of Things; NFT- Nutrition Film Technique Hydroponic Farm; Arduino mega 2560; Agro-voltaic; pH sensor; TDS sensor; Temperature sensor

P-31

E-MOB Suncruiser

Harshith K,Swasthik N K ,Charan Alva M, Department of EEE, Srinivas Institute of Technology, Mangaluru.

ABSTRACT: Transportation-related greenhouse gas emissions are one of the most serious environmental concerns, and they are increasing at an alarming rate. As a result, solar energy for transportation may be able to alleviate this issue. The goal of the proposed effort is to offer a technology that promotes green energy; for example, assume a situation in which we might utilize solar energy to charge an electric vehicle, with solar panels builtin,but the next question is if this is practical during the rainy season. During the rainy season, charging internal solar panels is problematic. The SPEV system includes a charging wire that connects to both the car and a 230v wall outlet. A security system,drive guiding system, route detection, and other features are included into the electric car. Support for Android apps, Wi-Fi,Battery Update, and LoRa. Our research findings are thoroughly examined. Hence The use of a solar-powered electric vehicle (SPEV) results in fewer pollution. The majority of automobiles are powered by gasoline. Hazardous gases are emitted by these vehicles. This contributes to global environmental contamination. In recent years, academics have proposed the use of hybrid vehicles to minimise pollution. Many countries have chosen to reduce pollution by employing electric vehicles as one of their answers (EV). EVs have been rising in popularity in recent years.The electric vehicle's battery is a critical component. The efficient utilization of battery is a critical parameter for electric vehicles. The efficiency of electric vehicles can be improved by using renewable energy sources such as solar energy could be increased In electric vehicles, the energy management system (EMS) is crucial. Because the number of subsystems and components in electric vehicles is growing, enhancing EV efficiency through the use of EMS is desirable. Various EMS systems are explored in this research, and an energy model for effective battery use to increase

Keywords:SPEV; Solar powered Electric Vehicle EV; Electric Vehicle EMS; Energy Management System.

P-36

On-Road Charging Electric Vehicle

K. P. Srivatsa,M Vilas.H, Harshith K, Department of EEE, Srinivas Institute of Technology, Mangaluru.

ABSTRACT: Transportation-related greenhouse gas emissions are one of the most serious environmental concerns, and they are increasing at an alarming rate. As a result, solar energy for transportation may be able to alleviate this issue. The goal of the proposed effort is to offer a technology that promotes green energy; for example, assume a situation in which we might utilize solar energy to charge an electric vehicle, with solar panels built-in, but the next question is if this is practical during the rainy season. During the rainy season, charging internal solar panels is problematic. The SPEV system includes a charging wire that connects to both the car and a 230v wall outlet. A security system, drive guiding system, route detection, and other features are included into the electric car. Support for Android apps, Wi-Fi, Battery Update, and LoRa. Our research findings are thoroughly examined. Hence The use of a solar-powered electric vehicle (SPEV) results in fewer pollution. The majority of automobiles are powered by gasoline. Hazardous gases are emitted by these vehicles. This contributes to global environmental contamination. In recent years, academics have proposed the use of hybrid vehicles to minimize pollution. Many countries have chosen to reduce pollution by employ in electric vehicles as one of their answers (EV). EVs have been rising in popularity in recent years. The electric vehicle's battery is a critical component. The efficient utilization of battery is a critical parameter for electric vehicles. The efficiency of electric vehicles can be improved by using renewable energy sources such as solar energy could be increased In electric vehicles, the energy management system (EMS) is crucial. Because the number of subsystems and components in electric vehicles is growing, enhancing EV efficiency through the use of EMS is desirable. Various EMS systems are explored in this research, and an energy model for effective battery use to increase EV performance is proposed.

Keywords: SPEV; Solar powered Electric Vehicle EV; Electric Vehicle EMS; Energy Management System

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P-27

Farmland Surveillance and Protection with Smart Irrigation System

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ABSTRACT: India is the agriculture-based country. Our ancient people completely depended on the agricultural harvesting. Agriculture is a source of livelihood of majority Indians and has great impact on the economy of the country. In dry areas or in case of inadequate rainfall, irrigation becomes difficult. So, it needs to be automated for proper yield and handled remotely for farmer safety. Increasing energy costs and decreasing water supplies point out the need for better water management. Irrigation management is a complex decision-making process to determine when and how much water to apply to a growing crop to meet specific management objectives. If the farmer is far from the agricultural land he will not be noticed of current conditions. So, efficient water management plays an important role in the irrigated agricultural cropping systems. A low-cost alternative solution for efficient water management currently in use is drip irrigation systems that consist of an automated controller to turn on & off the control values, which in turn helps the farmers by managing the water supply to the crop fields and further maintains the moisture levels of soil that helps in better crop production. This project probes into the design of the automated irrigation system based on Arduino. This Embedded project is to design and develop a low-cost feature which is based on embedded platform for water irrigation system. This project uses temperature and soil moisture sensors to detect the water quantity present in agriculture. The project uses Arduino micro controller which is controller to process the information. The aim of the implementation was to demonstrate that the automatic irrigation can be used to reduce water use.

Keywords : GSM, Global system of mobile.

P-30

Pesticide Sprayer Quad copter with Bomb Defusing Robot

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ABSTRACT: Fertilizers and pesticides must be used in agricultural fields to increase crop yields. The biggest disadvantage of manual spraying is that it can cause a variety of health problems in the person spraying the fertilizers, such as respiratory ailments, cardiac diseases, and so on. When your skin is exposed to pesticides, dermal exposure can occur. Irritation or burns may result. We came up with the idea of an autonomous fertilizer/pesticide sprayer using a drone to prevent this risk and spray the fertilizers/pesticides consistently. This system is designed for activities involving a high danger of human entry, such as some criminal cases, and might be particularly useful in the military for spying purposes. The system engages a robotic arm as well as a robotic vehicle to not only access a high-risk region but also to carry whatever object it desires. The system also contains a night vision camera, which allows viewing of what is captured not only during the day but also at night. The entire system is managed through an Android application. Through an android device application, the system delivers commands to the receiving circuit mounted on the vehicle.

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Energy Generation Using Flywheel and Magnets

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ABSTRACT: The aim of our project is to generate energy using flywheel. Energy is usually produced by non- renewable sources such as petrol, diesel etc. unfortunately create pollution. There is electricity everywhere present in limitless quantities and can drive the world's equipment without the need of non- renewable sources such as gas, coal . The main reason to develop the idea of producing energy using a flywheel and magnet is that it will be clean, does not cause pollution. The gravity wheel or flywheel is coupled with magnets and the gear-train in order to produce energy. To create the solid disc type of flywheel , organize magnets in such a way that they provide mechanical force for the flywheel. Using a flywheel and magnets, generate electrical energy for as long as possible. The outcome of this project is that the power is generated with the help of flywheels, magnets and generator.

Keywords: Flywheel, Free energy, Generator, Alternator, Shaft.

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Sentiment Analysis and Text Analytics Using Deep Learning

Lokesha B, Simran U Baadkar ,Sahana Tandel,Department of EEE,Srinivas Institute of Technology, Mangaluru

ABSTRACT: Sentiment analysis focuses on locating and categorizing the attitudes or feelings expressed in the source text. In the form of tweets, status updates, blog entries, etc., social media is producing a large volume of sentiment-rich data. This user-generated data's sentiment analysis is highly helpful in determining the general consensus. Due to the use of slang phrases and misspellings, Twitter sentiment analysis is more challenging than conventional sentiment analysis. The two approaches utilized for analyzing sentiments from the text are knowledge base technique and machine learning approach. It is possible to determine the impact of domain information on sentiment classification by performing sentiment analysis in a particular domain. We demonstrate a new feature vector for categorizing tweets as favorable or unfavorable and obtaining users' opinions on various products.

Keywords: Data mining, supervised learning, sentiment analysis, and natural language processing.

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Hand Written digit Recognition using Convolutional Neural Networks

Lokesh B, Punya M P,Baby, Department of EEE, Srinivas Institute of Technology , Mangaluru.

ABSTRACT: Digit recognition is a suitable model issue for learning about the Neural Networks, and it will pave the way for sophisticated Deep Learning techniques..Many methods are found in literature to recognize and classify the digits which are written by hand(hand written digits).This paper explain show to recognize and classify hand written digits using CNN and MATLAB for enhanced performance. A deep convolutional neural network (CNN) is a type of neural network that is used to recognize images. This method determines how important the deep layer improvements are for processing the image. By using MATLAB, we provide the implementation of necessary for constructing and applying Convolution Neural Network to a high-quality data set known as MNIST which is a collection of more than 60,000 handwritten digits dataset for training purpose and 10,000 digits data set for testing purpose. When tested the developed model for classification, we got 99.60% accuracy and prove to be better than other classifier. Many hidden convolution layers and more hidden artificial neurons could improve the accuracy of the outcome.

Keywords: Convolution, Padding, Stride, Softmax, Maxpooling, ReLU .

P-38

Image Recognition and Identification using Convolution Neural Network

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ABSTRACT: The most common phase in picture analytics is object detection. The accuracy of object detection has a big impact on higher-level performance. Object detection algorithms are designed and implemented on a variety of platforms. C programming, MATLAB and Simulink, open CV, and more programmes are included. Due of its comprehensive features, MATLAB programming is the most popular among students and academics. Data processing using matrices, a variety of toolboxes and Simulink blocks spanning every technology field, simple programming, and Help topics with numerous examples are among these characteristics. This paper shows how to use MATLAB to develop object recognition and tracking. It shows the basic object detection block diagram and describes the numerous predefined functions and objects from various toolboxes that can be beneficial at each step in the process.

Keywords: Convolution, Padding, Stride, Softmax, Maxpooling, ReLU .

ASR for Tulu Language

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ABSTRACT: Today, technological progress is accelerating at a rapid pace. Previously, there was just a computer system with which we could perform a limited number of tasks. However, advances in machine learning, artificial intelligence, deep learning, and other technologies have advanced computer systems to the point where we can now accomplish any work. As a result, we need to create a voice assistant that allows locals to perform any command in the computer using their native language without the use of keyboard. The primary goal of a voice assistant is to reduce the use of input devices such as a keyboard and mouse. It will also save space and money hardware.

KEYWORDS: Automatic Speech, Recognition, Deep Neural Network, Convolution Neural Network.

Leaf Disease Detection Using CNN

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ABSTRACT: Plants are vital to the world and all living things. The most significant information about the plant comes from its leaves, such as what type of plant it is and what type of illness it is infected with. Plant diseases are a significant problem because they lower the quantity and quality of agricultural products. Plant disease identification used to be done manually by knowledgeable personnel, but with so many environmental changes, prediction has become difficult. As a result, we employ machine learning algorithms to detect plant illness. Based on images of leaves, we detect the plant illness and provide users or farmers with the essential information to treat it. Detecting pathogens on leaves is a difficult task.

KEYWORDS: Deep Neural Network, CNN, Mobilenet.

Pneumonia Detection Using AIML Technique

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ABSTRACT: Pneumonia is one of the types of lung infection that affects people of all ages. In this respiratory disease, the human lungs have small sacs called alveoli, in which is filled with air for people who are normal and healthy. But in pneumonia infected people, these alveoli is filled withfluid or "pus," and getting a chest X-ray is one of the most important steps in detecting and treating the phenomena (CXR). Chest X-ray is the important tool in the treatment of pneumonia. The goal of our project is to use AI approaches to identify Pneumonia using chest X-rays. This study, which we wrote, is an effective method of dividing chest X-rays were divided into pneumonia-infected and non-infected X-rays. We will take this strategy because the most used radiography procedure is prone to errors. AI have the ability to abet in the quick estimate of CT scans for the distinction of results from the clinical entities this section, we demonstrate how a sequence of Machine Learning algorithms will be used to solve a problem (ML). In 140 patients with laboratory confirmed other pneumonias, the false positive rate was 10%. AI-based algorithms will find CT scans with pneumonia and differentiate pneumonias across a wide range of patient demographics.

KEYWORDS: Deep Neural Network, CNN, ResNet.

Review on Machine Learning Method to Detect Diabetic Retinopathy

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ABSTRACT: A major reason for human eye blindness in worldwide is Diabetic retinopathy (DR). The disease requires an initial assessment to detect delays in progression. In low-resource environment, where some ophthalmologists are available to take care for every patient with diabetes, the clinical identification of DR are substantial challenges. This paper, reviews the foremost recent studies on the discovering of DR by mistreatment one in every of the economical algorithms of deep learning, that is Convolution Neural Networks (CNN), which is very facile to detect DR options from retinal images. CNN's approach to DR detection saves cost and time, and is more accurate and efficient than manual diagnosis. Therefore, CNN is more important and also useful for DR detection.

KEYWORDS: Diabetic Retinopathy, CNN, Fundus Images.

ABOUT SRINIVAS GROUP

Srinivas Group of colleges sponsored by A.Shama Rao Foundation was established in the year 1988, with a vison of fostering excellent education. The group provides quality professional education in Medical, Allied Health Sciences, Pharmacy, Hotel Management, Business Management, Engineering, Education etc. Srinivas Group is well known for imparting innovative education and has state of the art facilities for education and training, and is also recognised as center of excellence in research across disciplines. The dedicated faculty believes in and works towards materializing the adage of "Education is our passion but not profession"

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The department of MBA at SIT was started in the year of 2007 with the intention of producing proficient professionals to meet the prerequisite of competitive national & global economic environment. The focus is on nurturing the latent potentials of the students, with a special attention to develop leadership qualities with commitment to basic human values. The program offers specialisation in Marketing, Finance, Human Resources and Dual Specialisations. The faculty members have rich and varied experience in industry and academics. The department is equipped with spacious lecture halls, LCD Projectors, Wi-Fi Internet facility, well stocked library and an efficient placement cell. .

ABOUT THE CONFERENCE

This is a time that digital transformation takes an important role in the business world, therefore, modifying business models in order to be a modern organization focusing on digital technology becomes a key of the administration of a business. Analysts from the Economic Intelligence Centre (EIC) describe the meaning of the digital transformation era as an era where technology is evolving rapidly and this can be seen from data warehouse systems such as Cloud, Big Data, Internet of Things (IoT), smart phones, social media, and other technologies. The key of digital transformation is to apply technology to every part of a business such as operation, product creation, communication, marketing, organizational culture, and business growth planning, so that a business can adapt quickly and can deal with new problems. Hence, a company needs risk management plans and real-time customer service centres for problem solving. Apart from this, being a digital-transformed company could save the costs from less labours and loss from human errors. According to a Forbes survey, 84% of businesses fail in digital transformation due to the lack of accurate analysis in applying digital technology to their businesses and many companies have no proper plans such as a Five Business Model. Business models are essential for market economies where there are competition, consumer choice, transaction costs, and heterogeneity amongst consumers and producers. Technological innovation creates the needs to bring discoveries to markets and the opportunities to satisfy unrequited customer needs leading to the necessity of business models.

OBJECTIVE

The main objective of the National Seminar is to bring academicians, practitioners, professionals and research scholars on a common platform for sharing their opinions, experiences and ideas about "Managing Business Transformation in the Digital Era".

KEYNOTE SPEAKER

Dr. Ananda S

Dr. Ananda. S. Director of Postgraduate Studies and Research at College of Banking and Financial Studies (CBFS), Oman, is resourceful Doctor of Finance with more than three decades of expertise in management education and administration. He has served for about four years in Mutual Fund Industry. He was visiting professor at leading B-schools in Dubai, Germany, and India. His career has mainly been devoted to teaching and to a broad range of management responsibilities. He has published (more than 50) and presented (more than 40) several research papers in national and international conferences, journals, magazines, newspapers and promoted concepts and ideas in various academic forums. Recently, the Institute of Chartered Accountants of India (ICAI) has selected his research paper on What factors drive the adoption of digital banking for "ICAI International Research Awards 2020" as Second-Best Research Paper and awarded Silver Shield under the Economics category. He served as Faculty Advisor for Finance & Accounting club and as Editor for College Magazine. He also served as a member of the subject expert committee to review MBA/BBA curriculum in some of the State universities in India & Oman. His academic experience spans training and consultancy assignments in the areas of Investment Management, Mutual Funds, Financial Markets and Financial Services. He has successfully organized many Management Development Programmes for leading companies viz Oman Chamber of Commerce & Industry, Raysut Cements, Salalah Methanol, Syngenta Ltd, Hotel Leela Kempinski Ltd, Sesa Goa Ltd, LIC of India, Officers of Government of Goa, Goa Industrial Development Finance Corporation, Goa Electricity Board, and India Post.

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Transforming Customer Experience
Customer Understanding
Top-Line Growth
Customer Touch Points
Transforming Operational Processes
Process Digitization
Worker Enablement
Performance Management
Transforming Business Models
Digitally Modified Businesses
New Digital Businesses
Digital Globalization
(Any broad sub-themes related to the conference topic are also accepted)

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We invite researchers, academicians, business people, professional & practitioners to submit papers related to the conference theme/ sub themes

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Authors are requested to submit an abstract of the paper of not more than 300 words. The abstract should be spell checked, double spaced with 1.5 inch margin on all sides and fond should be 12point Times New Roman. All submissions are to be made through sitconference2022@gmail.com

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10-04-2022 Intimation of Acceptance of Abstract
15-04-2022 Last date for registration
18-04-2022 Last date to submit the full paper

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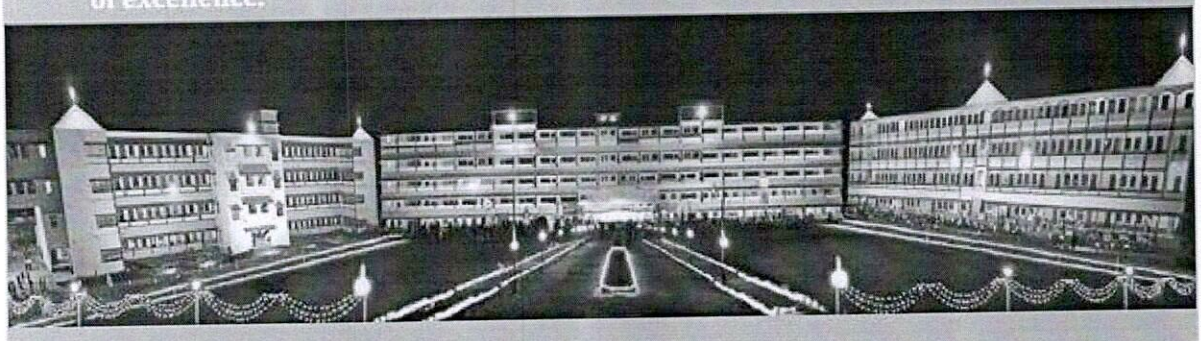

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Change in m-shopping Behaviour and Future Behavioural Intention – Covid-19 Impact in India

Dr. Ajoy S Joseph, Head, Department of Management Studies, Srinivas Institute of Technology, Valachil, Mangaluru, VTU University.

Rashmi, Assistant Professor, Department of Management Studies, Srinivas Institute of Technology, Valachil, Mangaluru, VTU University.

Dr.D. Shrinivasa Mayya, Principal, Srinivas Institute of Technology, Valachil, Mangaluru, VTU University.

ABSTRACT: The year 2020 was a nightmare; the covid – 19 Pandemic has affected human life tragically all over the globe. It has also affected the market of the various economy lockdown. The retail concept is changing from just brick and mortar to an online presence known as E-commerce and M-commerce. The commercial transactions done through the mobile phones are considered M-commerce and to suit the small handheld device known as mobile phones the retailers are adopting the apps. The pandemic has also affected the lifestyle, the buying pattern of the consumers, and the payment system for the purchases made worldwide. The case is not any different in India. The lockdown period has changed the daily routine of the people. And this gives an opportunity to find the behaviour of people and its implications on the purchases. The purchase destination might have changed due to the administrative restrictions imposed by the government and therefore, this paper intends to find the role of covid 19 pandemic in influencing the M shopping behaviour among consumers. The research used an online survey method through a structured questionnaire with five-point Likert scales from 136 shopping app users. Through this research the researcher aims at finding the impact of the Covid 19 pandemic on the attitude in influencing the m-shopping behaviour during the pandemic and the behavioural intention to continue after the pandemic, it also aims at finding the highly shopped product using shopping apps during pandemic. The implications of the results will help the m-retailers to bring in strategies to retain the m-shoppers using shopping apps and win customers through satisfaction and drive towards m – loyalty.

KEYWORDS: Behavioural Intention, Covid 19 pandemic, M - Commerce, M - Loyalty, M - Retailers, Shopping Apps.

Digital Transformation in Mars Incorporated - A Case Study

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Joe Joseph, 4th Year Student, Department of Electrical and Computer Engineering, Queens University, Kingston, Canada.

ABSTRACT: In the digital era, it's no surprise that digitalization is transforming the food industry. The food industry has already invested heavily in automation, with far-reaching benefits across multiple levels of production. Processors are under constant pressure to produce food in greater amounts and variety, and it's no secret that automated processes can perform tasks faster and more accurately than their manual counterparts. Moreover, food safety concerns are greater than ever following the pandemic, and minimizing human contact and human error in processing can have substantial benefits for food hygiene. The core principle of digital transformation is to replace outdated and analog processes with modern, fully integrated technology. Doing so immediately reduces or eliminates the inaccuracies, delays and lost data associated with manual processes. The authors tries to conduct a case study on what digital transformation process Mars Incorporated the American multinational manufacturer of confectionery, pet food, and other food products and a provider of animal care services, with US$40 billion in annual sales in 2020 which is ranked as the 6th largest privately held company in the United States by *Forbes*, has incorporated.

KEYWORDS: Digital, Transformation, Mars, Food.

Hi Tech Banking & Its Impact on Customer Relationship Management (CRM)

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Amal George, Administrator, Mowlam Health Centre, Kilcoole Co. Wicklow Ireland.

ABSTRACT: During the last two decades banking sector has undergone a phenomenal transformation. Technology has become a strategic tool for differentiation of banking services and has brought grass root revolution, as can be seen in the way various banks function, deliver, and compete against each other. Researchers in past few years have found technology acceptance in services from many levels like self service technology for delivering services at anytime, anywhere either by human or by technology. In the old days, banking used to be a time-consuming business, where the basic transactions like cash deposits and withdrawals were taking long time, the customers had to stand in a queue to avail the facility. Everything was done under the token system. But now everything has changed and become hassle free. Moreover, going digital allows you the perfect opportunity to enjoy paperless banking experience, where you no longer need to keep track of your transactions or banking history through physical documents. With Digital Banking, you can transact with higher speed, ease and convenience. It served as "Time saver tool" for customers as well as for employees.

Hi Tech Banking or digitalisation is moving online of all the traditional banking activities and transactions that initially were only available to customers under the bank roof. This includes activities like money deposits, withdrawals and Transfers (E-Payments). It is a part of the broader context for the move to online baking, where banking services are delivered over the internet. The shift from traditional to digital banking has been gradual and remains on going.

KEYWORDS: Banking, Technology, E-Payment, Hi Tech Banking, Customers.

Digital Transformation in Education - A Case Study based on Experiential Learning in MBA

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ABSTRACT: Each & every industry has been affected by the global impact of pandemic COVID-19. It has created a major challenge for India's and the rest of the world's educational systems including a program like MBA. It has imposed a global lockdown, which has harmed the lives of different academic stakeholders, primarily institutes, Business schools, management colleges, professionals, and students. It forced Business schools and management institutes to find an alternative productive way to rework on the traditional mode of teaching and learning. It has made everyone stand up and realize the importance and applications of e-learning platforms and tools for teaching and learning aspects. The advantages of adopting e-learning tools and technology has numerous benefits like it saves time and money, as well as the ability to offer a variety of options for collaborative learning, paperless work and activities especially in the field of Master of Administration (MBA) that connect faculties, students, resource persons throughout the world. A drive towards a sustainable environment has been triggered too with the use of all these digital platforms, the usage of papers is at the minimal requirement along with more people working from home, the use of vehicles have also reduced the carbon footprints and reduction of traffic congestions. The use of the work-from-home phenomenon can be investigated in a hybrid fashion, together with information sharing. In this experiential case study, we have show cased the exploration of various applications which were used during the MBA program in the recent past and how it has played its part to contribute towards a sustainable environment. It also examines how current teaching and learning models in MBA programs have changed as a result of the COVID-19 pandemic. Some of these methods will soon become a norm in days to come and will pave the way to create a sustainable environment.

KEYWORDS: Sustainable Environment, Paperless, Collaborative learning, Cost Efficiency, Information Sharing, Experiential Learning, MBA.

A Pilot Study on Work-Life Balance on Employee Satisfaction in Hospitals: A Study with Special Reference to Dakshina Kannada District

U.P. Shobha, Research Scholar, Srinivas Institute of Technology.

Dr. Ajoy S Joseph, Research Supervisor, Srinivas Institute of Technology.

ABSTRACT: Retention of competent employees is becoming a huge challenge for organizations and more so for healthcare institutions. The growing shortage of medical staff and its potential effect on the healthcare industry is of paramount importance. To retain the existing staff and to attract potential new entrants, healthcare organizations have to adopt strategies that would help them in retention. So, creating a balance between work-life is found as one of the suitable practices that when adopted can reduce work-related stresses, and increase satisfaction and performance. This study investigated the influence of work-life balance on job satisfaction leading to retention. The present paper is based on a pilot study conducted to know the satisfaction on work life balance in hospitals. The study area is Dakshina Kannada District.

KEYWORDS: Employees, Organization, Motivation, Business, Work-life Balance.

A Pilot Study on Impact of Micro Finance Schemes of SKDRDP on Self Help Groups (SHGS) on Economic Empowerment in Rural Area of Mysore Division District in Karnataka

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ABSTRACT: One of the most basic criteria for the economic growth of the weaker sections of society is financial resources. Microfinance has evolved as a need-based program for economic empowerment and poverty reduction. It is an attempt to research the role of microfinance in the rural poor. Has it been successful in expanding financial services to them and has it had a major impact on their economic status and welfare?. This study provides a critical assessment of several empirical studies conducted in India, which would be useful to academics working in the fields of SHG and microfinance. There has been a lot of research done on the impact of micro financing from various micro financing institutions. According to a thorough examination of the research, several microfinance organizations have made significant contributions to improving the economic and social conditions of SHG members. This study is a pilot study analysis to test the impact of SKDRDP on self help groups on economic empowerment.

KEYWORDS: Socio-Economic Development, Micro Finance, SHGs, Financial Inclusion.

We Are What We Consume: An Assessment of Characters and Characterizations in Web Series

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ABSTRACT: Over-the-top (OTT) and online streaming applications have led to new media consumption habits in India, especially among young Indian millennials and centennials. The expanding fan base for original content and the upsurge of 'Hallyu' (Korean wave) intrigue to explore the radically changing media consumption behavior. The present paper attempts to investigate the determinants influencing this changing pattern using narrative paradigm theory.

Walter Fisher's narrative paradigm theory broadly discusses truth and trust in persuasive communication. It is fascinating to witness the illustrations of the new and unfamiliar cultures through the web series and their ability to convey believable stories to the global audience as an evolving arena in media and culture literature.

The present paper employs the control group experimental research design to understand the determinants of changing media consumption. The participants' content preference list and watching habits are the parameters for comparing and contrasting the proposed increased interest in original content. A group of 10 participants who consume OTT content exclusively and 10 participants who do not have specific viewing choices were selected for the study. The results reveal some exciting viewers' characteristics that are different from their behavioral characteristics.

The research is qualitative. The present paper intends to propose a valuable scale to assess the OTT content consumption to capture the behavioral shift in group and individual viewing habits.

KEYWORDS: Media Consumption, Narrative Paradigm Theory, OTT Content.

Changing Shopper's Experience Due to Technological Changes

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ABSTRACT: When we look at the evolution of retailing it shows that technology has played a prominent role in retailing. As technology gets more advanced, the consumer's requirements also changes accordingly. Technology plays a critical role in the evolution of retailing. Technologies, in particular, emerging technologies, are significantly impacting the customer experience in general. In this age of fast food and faster lives, the power has shifted from the retailer to the consumer. To understand the technological changes in retail industry we can use different frameworks. In this paper we discuss on understanding how technologies are changing shopper experience and retailer business models.

KEYWORDS: Retailing, Technological Changes, Shoppers Experience.

Digital Transformation in Education - A Case Study based on Experiential Learning in MBA

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ABSTRACT: Each & every industry has been affected by the global impact of pandemic COVID-19. It has created a major challenge for India's and the rest of the world's educational systems including a program like MBA. It has imposed a global lockdown, which has harmed the lives of different academic stakeholders, primarily institutes, Business schools, management colleges, professionals, and students. It forced Business schools and management institutes to find an alternative productive way to rework on the traditional mode of teaching and learning. It has made everyone stand up and realize the importance and applications of e-learning platforms and tools for teaching and learning aspects. The advantages of adopting e-learning tools and technology has numerous benefits like it saves time and money, as well as the ability to offer a variety of options for collaborative learning, paperless work and activities especially in the field of Master of Administration (MBA) that connect faculties, students, resource persons throughout the world. A drive towards a sustainable environment has been triggered too with the use of all these digital platforms, the usage of papers is at the minimal requirement along with more people working from home, the use of vehicles have also reduced the carbon footprints and reduction of traffic congestions. The use of the work-from-home phenomenon can be investigated in a hybrid fashion, together with information sharing. In this experiential case study, we have show cased the exploration of various applications which were used during the MBA program in the recent past and how it has played its part to contribute towards a sustainable environment. It also examines how current teaching and learning models in MBA programs have changed as a result of the COVID-19 pandemic. Some of these methods will soon become a norm in days to come and will pave the way to create a sustainable environment.

KEYWORDS: Sustainable Environment, Paperless, Collaborative learning, Cost Efficiency, Information Sharing, Experiential Learning, MBA.

A Comparative Analysis of Digital Transformation of E Commerce on Technophobic and Tech Savvy Community

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ABSTRACT: There is a tremendous growth of E Commerce business growth in India. Increasing internet users have added to its growth. It provides multiple edges to the consumer's variety of accessibility of goods or services at lower value. Knowledge of e commerce and its usage helps for faster buying process. A full-fledged usages of E commerce's help faster response to buyer/ market demands. It has to be considered that, this keeps time starved customers satisfied and persistently adapt to their strategies according to their lifestyle and technological transformation. To facilitate best usage of the same people should be adoptable for the changes and overcome the difficulties faced by them to use E-commerce, therefore an attempt is made in this paper to analyze the impact of digital transformation in E commerce on technophobic and tech savvy community and find out the perceived risk faced by the customers to use E commerce and give the suggestion for smart use of the technological changes for betterment of their lifestyle for a better tomorrow.

KEYWORDS: Comparative Analysis, Consumer Variety, E- Commerce, Life Style Transformation, Techno Phobic, Tec Savvy.

Change in m-shopping Behaviour and Future Behavioural Intention – Covid-19 Impact in India

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ABSTRACT: The year 2020 was a nightmare; the covid – 19 Pandemic has affected human life tragically all over the globe. It has also affected the market of the various economy lockdown. The retail concept is changing from just brick and mortar to an online presence known as E-commerce and M-commerce. The commercial transactions done through the mobile phones are considered M-commerce and to suit the small handheld device known as mobile phones the retailers are adopting the apps. The pandemic has also affected the lifestyle, the buying pattern of the consumers, and the payment system for the purchases made worldwide. The case is not any different in India. The lockdown period has changed the daily routine of the people. And this gives an opportunity to find the behaviour of people and its implications on the purchases. The purchase destination might have changed due to the administrative restrictions imposed by the government and therefore, this paper intends to find the role of covid 19 pandemic in influencing the M shopping behaviour among consumers. The research used an online survey method through a structured questionnaire with five-point Likert scales from 136 shopping app users. Through this research the researcher aims at finding the impact of the Covid 19 pandemic on the attitude in influencing the m-shopping behaviour during the pandemic and the behavioural intention to continue after the pandemic, it also aims at finding the highly shopped product using shopping apps during pandemic. The implications of the results will help the m-retailers to bring in strategies to retain the m-shoppers using shopping apps and win customers through satisfaction and drive towards m – loyalty.

KEYWORDS: Behavioural Intention, Covid 19 pandemic, M - Commerce, M - Loyalty, M - Retailers, Shopping Apps.

Hi Tech Banking & Its Impact on Customer Relationship Management (CRM)

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ABSTRACT: During the last two decades banking sector has undergone a phenomenal transformation. Technology has become a strategic tool for differentiation of banking services and has brought grass root revolution, as can be seen in the way various banks function, deliver, and compete against each other. Researchers in past few years have found technology acceptance in services from many levels like self service technology for delivering services at anytime, anywhere either by human or by technology. In the old days, banking used to be a time-consuming business, where the basic transactions like cash deposits and withdrawals were taking long time, the customers had to stand in a queue to avail the facility. Everything was done under the token system. But now everything has changed and become hassle free. Moreover, going digital allows you the perfect opportunity to enjoy paperless banking experience, where you no longer need to keep track of your transactions or banking history through physical documents. With Digital Banking, you can transact with higher speed, ease and convenience. It served as "Time saver tool" for customers as well as for employees.

Hi Tech Banking or digitalisation is moving online of all the traditional banking activities and transactions that initially were only available to customers under the bank roof. This includes activities like money deposits, withdrawals and Transfers (E-Payments). It is a part of the broader context for the move to online baking, where banking services are delivered over the internet. The shift from traditional to digital banking has been gradual and remains on going.

KEYWORDS: Banking, Technology, E-Payment, Hi Tech Banking, Customers.

We Are What We Consume: An Assessment of Characters and Characterizations in Web Series

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Prof. Dr.D. Srinivasa Mayya, Principal, Srinivas Institute of Technology, Mangalore.

ABSTRACT: Over-the-top (OTT) and online streaming applications have led to new media consumption habits in India, especially among young Indian millennials and centennials. The expanding fan base for original content and the upsurge of 'Hallyu' (Korean wave) intrigue to explore the radically changing media consumption behavior. The present paper attempts to investigate the determinants influencing this changing pattern using narrative paradigm theory.

Walter Fisher's narrative paradigm theory broadly discusses truth and trust in persuasive communication. It is fascinating to witness the illustrations of the new and unfamiliar cultures through the web series and their ability to convey believable stories to the global audience as an evolving arena in media and culture literature.

The present paper employs the control group experimental research design to understand the determinants of changing media consumption. The participants' content preference list and watching habits are the parameters for comparing and contrasting the proposed increased interest in original content. A group of 10 participants who consume OTT content exclusively and 10 participants who do not have specific viewing choices were selected for the study. The results reveal some exciting viewers' characteristics that are different from their behavioral characteristics.

The research is qualitative. The present paper intends to propose a valuable scale to assess the OTT content consumption to capture the behavioral shift in group and individual viewing habits.

KEYWORDS: Media Consumption, Narrative Paradigm Theory, OTT Content.

Road To Lead

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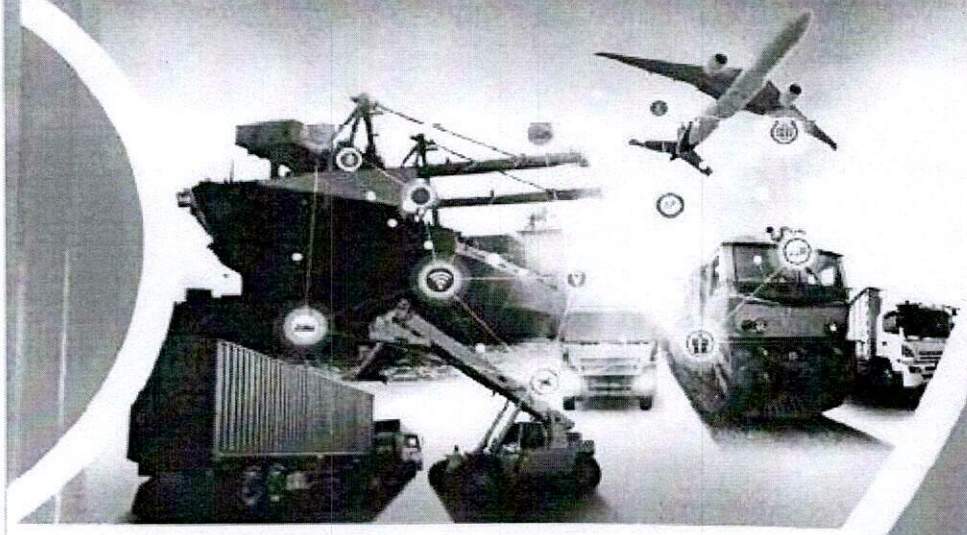
LOGISTICS AND SUPPLY CHAIN MANAGEMENT



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Dr. Hariprakash U.P
Raghu G

[About the Book]

This book of *"Logistics and Supply Chain Management"* provides a refreshing insight to the various aspects of inventory, warehouse, transportation, logistics and supply chain management. The material in this book is designed to provide maximum flexibility of use for teachers and students alike. Each topic has been started with fundamental introduction and developed steadily up to the standard form. Case studies and exercises are also provided in this book. This book is useful not only for students who are pursuing their studies but also for those working in the educational institutions and corporate world.

[About the Author]

Dr. Hariprakash U.P is an MBA, Ph.D specialized in Marketing and has **23 years** of experience. He is working as a **Professor for MBA** department at **Srinivas Institute of Technology, Mangalore**. He worked for education technology industry for **5 years** and then he shifted his career to academics. He has handled subjects like Marketing Management, Market Research and Analytics, Consumer Behavior, Integrated Marketing Communication, Management Information Systems, Business Research Methods, Macro Business Environment, Total Quality Management, International Business Management, Supply Chain Management.

Mr. Raghu G has done **Masters of Business Administration** and is presently pursuing his **Ph.D** in **Marketing** from the Bharthiyar University. He is associated as **Assistant Professor** at **Acharya Institute of Graduate Studies, Bengaluru**. He has **16 years** of teaching experience. He has taught various subjects which include Managerial Economics, Rural Marketing, Services Marketing, Macro Business Environment and others. He is a member of different management associations. He has contributed to many Journals, Seminars and Conferences as author and reviewer.

Visvesvaraya Technological University MBA Fourth Semester

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ISBN: 978-93-5480-569-1

Printed at Sanjeeva Printing Press, Jankipuram, Lucknow Mob. 9235318556/07

RTIMES22146

Implementation Of Japanese Manufacturing Methodology And Plant Modification

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Abstract

Lean manufacturing refers to a manufacturing improvement process based on the fundamental goal of Ajith Enterprises in order to minimize or eliminate waste while maximizing production flow. Many manufacturing organizations realize the importance of practicing lean techniques. However, few organizations applied lean techniques with the necessary knowledge and proven tools to achieve it. A value of a stream includes all the operations and processes to transform raw materials into finished goods and services,including non-value adding activities. Value stream management tool for planning a production process involving lean initiative through the symmetric data captured and analysis. It is a proven process for planning the improvement that allows the company to develop the lean practice.The main purpose to study Japanese methodology (Lean manufacturing/Kaizen, 5s, 7 wastages, Just-in-time) is to reduce the wastes and use of minimum resources as a result increasing the production rate and profit in Ajith Enterprises. This particular tool allows the company to document current lead time, inventory levels and cycle times to determine the ratio of value added to total lead time of the product line being analyzed. The first step will be to create a current layout to make a picture of production flow and to understand the current cycle time, process communication and machine equipment capacity. This provides information to develop the future layout creating vision and ideal value flow.

RTIMES22182

A study on correlation of different factors and its effect on Agility of micro and small-scale manufacturing industries

Shrinivasa Mayya D[1] , Sathyaprakash Anekallu[2] ,Mohammed Gowspeer[3], Tony K Sabastian[4]
[1]Research Guide & Principal, [2]Research Scholar, [3]Assistant Professor, [4]Assistant Professor, Department of ME SIT Mangaluru

Abstract
This paper highlighting on correlation of different factors that is effect on the agility of micro and small-scale industries using SPSS statistics tool. The various factors were identified and listed based on agility enablers and survey has conducted in and around Mangalore region. Total 116 micro and small-scale industries used to collect responses with 98 different questions. The questionnaires are part of three pillars of agile manufacturing. From the correlation study of different factors, it is observed that, there is a relation between different enablers and the enablers are depended on one another. The dependency or relation between the factors affects the performance of entire industry and agility of the industries is getting reduced.

Key Words: Correlation study, Agility, Small Scale Industries

Investigation on Rate of Digitalization and its Effect in Micro and Small - Scale Production Industries

A. Sathya Prakash, Assistant Professor, Srinivas Institute of Technology, Mangalore.

Dr.D. Shrinivasa Mayya, Principal, Srinivas Institute of Technology, Mangalore.

ABSTRACT: The 21st century is now era of industry 4.0 or smart manufacturing. The most of the industries are now turning in to industry 4.0 or smart manufacturing process. But this transformation is just limited to large scale industries because of cost of implementation. The survey of small and micro industries in Mangalore region highlighting these very clearly in the results. According to survey result majority of small and micro scale industries are still following industry 2.0 in their production process. But some amount of digitalization has seen in survey. The digitalization in their production and process is used to keep their production data and make their process easier. This paper highlights how digitalization helps in different fields of production.

KEYWORDS: Industry 4.0, Digitalization, Small Scale Industry, Micro Industry, Production Process.

RTIMES22187

Comparative Study on Temperature Measurement of a Coated and Uncoated Tool Insert In Turning Process by Using Tool Work Thermocouple

Raghavendra M J[1], Sandesh K S[2], Sudheendra H N[3] Chandra Jogi[4]

Abstract

This paper highlights the effect of the temperature and cutting forces generated on the tip of the Single Point Cutting Tool (SPCT) while working. In a experimental work, temperature measurement is done by using thermocouple at various depth of cut and it found that the temperature increases with increase in depth of cut. Temperature at the cutting point of the tool is a crucial parameter in the control of the machining process. Due to advancement in the machining processes, a special attention has been given on the life of a tool. To achieve this, the best way is to apply the coating to the tool. In this study, coated and uncoated carbide tools were used and temperature occurred during machining were measured. Among the number of temperatures measuring methods, the tool-work thermocouple technique is used as it is easy to install and inexpensive as compared to other methods. The procedure for the working of Tool-work thermocouple and method of calibration is described in this paper.

Keywords— *Temperature measurement, tool-work thermocouple, PVD coating.*

RTIMES22112

Intelligent Fire Fighting Robot Using Android Application

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Department of Mechanical Engineering, Srinivas Institute of Technology, Mangaluru, India.

Abstract
Detecting fire and extinguishing it is a dangerous job that puts the life of a fire fighter at risk. Robots are implemented in various areas like Industries, Manufacturing, Medicines, etc. Hence, Robotics can be used to assist fire-fighters to perform the task of fire-fighting and thus reduce the risk of their lives. Fire-fighting robots are designed to use in such extreme conditions. Fire-fighting is not only an important but also a dangerous occupation. Whenever a fire mishap occurs anywhere it is important to reach there quickly in order to prevent damage. This work is about the designing of an intelligent fire-fighting robot using an android application. The fire detection system is designed using the sensors mounted on the fire fighter robot. The robot is controlled by using an Android application. The robot consists of a water pump, fire extinguisher, and Arduino UNO for controlling the desired operation. The sensor module is used to sense fire within the area by using a temperature sensor and flame sensor. The android app has buttons for controlling the movement of the robot, using which the robot is made to approach the affected place and do the work of a fire extinguisher.

Key Words: *Industrial Robotics, Sugarcane Bagasse, MSC ADAMS, Multibody Dynamics, Ansys Workbench, Epoxy, Robotic arm*

RTIMES 22167

Design and CFD Analysis of Kaplan Turbine by Changing the Wicket Gate Angle

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Abstract.
The work is focused on the design and analysis of the Kaplan turbine using CFD (Computational Fluid Dynamics). The theoretical torque value and shaft power are calculated. The assembled 3D model of a Kaplan turbine with standard design parameters is carried out using a commercial CAD package. Before the analysis, the complexity of the turbine was reduced to get maximum meshing effort and multiple boundary pairing conditions were considered for the inlet and outlet. At different rotational speeds, different combinations of Wicket gate angle and runner blade angle were tested in the analysis. The movement of the coefficient is calculated so that the torque value is obtained. Power and efficiency are obtained from Torque. The results of the CFD analysis of the Kaplan turbine are compared with the literature to check the accuracy of the CFD analysis. The results from the CFD analysis and the results of the theoretical values were compared. As rotational speed increases, the net head also increases, resulting in greater power output. Consequently, efficiency also increased with the increase in the net head. It would be necessary to manipulate this turbine's geometry to see how it affects performance with the CFD model. Specifically, the runner blade angle and wicket gate angle could be adjusted for different flow rates to determine the most effective angle combination to get maximum efficiency.

Keyword: *Wicket Gate Angle, CFD*

RTIMES22188

Enhancement of Heat Transfer Rate in Concentric Heat Exchanger by the Use of Fin

Jayaram Thumbe[1] , Shankar K S[2], Sathish K G[3] Sunil Prakash R[4]

Abstract

In this analysis difference fin patterns are added on the inner tube of the concentric heat exchanger are absorbed for temperature, heat transfer rate and friction factor. Fins are considered on the exterior surface of the inner tube. Mainly temperature is the main data considered to conclude the concentric heat exchanger's rate of heat transfer. The following assumptions were considered for analysis: (i) Fluid flow is laminar. (ii)Hot water passes through the inner tube and cold water in the annular gap for all the 4 cases. (iii) Aluminium is used as the tube and fin material, the tube thickness of both the tubes is 1mm. The inlet of hot water is constant at 370K and that of the cold water at 300K.Analysis is carried out in ANSYS 19.2,Fin pattern and concentric heat exchanger 3D geometry is created in Catia v5, 3 finned inner cases and a no fin case is compared against. A better heat transfer rate is observed in the fin pattern cross section with curve/semi-circular head.

Keywords— Heat exchanger, friction factor, heat transfer rate, fin

RTIMES22182

A study on correlation of different factors and its effect on Agility of micro and small-scale manufacturing industries

Shrinivasa Mayya D[1] , Sathyaprakash Anekallu[2] ,Mohammed Gowspeer[3], Tony K Sabastian[4]
[1]Research Guide & Principal, [2]Research Scholar, [3]Assistant Professor, [4]Assistant Professor, Department of ME SIT Mangaluru

Abstract
This paper highlighting on correlation of different factors that is effect on the agility of micro and small-scale industries using SPSS statistics tool. The various factors were identified and listed based on agility enablers and survey has conducted in and around Mangalore region. Total 116 micro and small-scale industries used to collect responses with 98 different questions. The questionnaires are part of three pillars of agile manufacturing. From the correlation study of different factors, it is observed that, there is a relation between different enablers and the enablers are depended on one another. The dependency or relation between the factors affects the performance of entire industry and agility of the industries is getting reduced.

Key Words: Correlation study, Agility, Small Scale Industries

RTIMES22183

Investigation Of Field Dependent Variations of Torsional Stiffness Of Magneto Rheological Elastomer

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Abstract
Isolation of torsional vibrations in shafts is one of the most important aspects of a sound design system. Though existing systems such as the centrifugal pendulum absorber and the flywheels reduce the effects to a certain extent, the system fails to comply when the natural frequency of the torsional system changes. To counteract such instances, smart materials are used which can tune their parameters based on the variations in the system variables. Magnetorheological Elastomers offer a viable solution to the dynamic vibrations as they can adhere to variations in system properties. To properly implement the MRE, it is mandatory to characterize the mechanical properties under dynamic loading conditions under varying magnetic fields. The present paper focuses on characterizing the torsional stiffness of the MRE under varying magnetic fields. The characterization methodology is discussed with the building of the measurement system, followed by the results and discussions of varying hysteresis loop for different magnetic fields. Variations in the properties are discussed, highlighting the role of the dipole mechanism

Keywords: *Magnetorheological Elastomers, Torsional vibrations, Dipole Mechanism, Magnetic field dependent variations, torsional stiffness*

Change in m-shopping Behaviour and Future Behavioural Intention – Covid-19 Impact in India

Dr. Ajoy S Joseph, Head, Department of Management Studies, Srinivas Institute of Technology, Valachil, Mangaluru, VTU University.

Rashmi, Assistant Professor, Department of Management Studies, Srinivas Institute of Technology, Valachil, Mangaluru, VTU University.

Dr.D. Shrinivasa Mayya, Principal, Srinivas Institute of Technology, Valachil, Mangaluru, VTU University.

ABSTRACT: The year 2020 was a nightmare; the covid – 19 Pandemic has affected human life tragically all over the globe. It has also affected the market of the various economy lockdown. The retail concept is changing from just brick and mortar to an online presence known as E-commerce and M-commerce. The commercial transactions done through the mobile phones are considered M-commerce and to suit the small handheld device known as mobile phones the retailers are adopting the apps. The pandemic has also affected the lifestyle, the buying pattern of the consumers, and the payment system for the purchases made worldwide. The case is not any different in India. The lockdown period has changed the daily routine of the people. And this gives an opportunity to find the behaviour of people and its implications on the purchases. The purchase destination might have changed due to the administrative restrictions imposed by the government and therefore, this paper intends to find the role of covid 19 pandemic in influencing the M shopping behaviour among consumers. The research used an online survey method through a structured questionnaire with five-point Likert scales from 136 shopping app users. Through this research the researcher aims at finding the impact of the Covid 19 pandemic on the attitude in influencing the m-shopping behaviour during the pandemic and the behavioural intention to continue after the pandemic, it also aims at finding the highly shopped product using shopping apps during pandemic. The implications of the results will help the m-retailers to bring in strategies to retain the m-shoppers using shopping apps and win customers through satisfaction and drive towards m – loyalty.

KEYWORDS: Behavioural Intention, Covid 19 pandemic, M - Commerce, M - Loyalty, M - Retailers, Shopping Apps.

A Pilot Study on Impact of Micro Finance Schemes of SKDRDP on Self Help Groups (SHGS) on Economic Empowerment in Rural Area of Mysore Division District in Karnataka

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ABSTRACT: One of the most basic criteria for the economic growth of the weaker sections of society is financial resources. Microfinance has evolved as a need-based program for economic empowerment and poverty reduction. It is an attempt to research the role of microfinance in the rural poor. Has it been successful in expanding financial services to them and has it had a major impact on their economic status and welfare?. This study provides a critical assessment of several empirical studies conducted in India, which would be useful to academics working in the fields of SHG and microfinance. There has been a lot of research done on the impact of micro financing from various micro financing institutions. According to a thorough examination of the research, several microfinance organizations have made significant contributions to improving the economic and social conditions of SHG members. This study is a pilot study analysis to test the impact of SKDRDP on self help groups on economic empowerment.

KEYWORDS: Socio-Economic Development, Micro Finance, SHGs, Financial Inclusion.

Investigation on Rate of Digitalization and its Effect in Micro and Small - Scale Production Industries

A. Sathya Prakash, Assistant Professor, Srinivas Institute of Technology, Mangalore.

Dr.D. Shrinivasa Mayya, Principal, Srinivas Institute of Technology, Mangalore.

ABSTRACT: The 21st century is now era of industry 4.0 or smart manufacturing. The most of the industries are now turning in to industry 4.0 or smart manufacturing process. But this transformation is just limited to large scale industries because of cost of implementation. The survey of small and micro industries in Mangalore region highlighting these very clearly in the results. According to survey result majority of small and micro scale industries are still following industry 2.0 in their production process. But some amount of digitalization has seen in survey. The digitalization in their production and process is used to keep their production data and make their process easier. This paper highlights how digitalization helps in different fields of production.

KEYWORDS: Industry 4.0, Digitalization, Small Scale Industry, Micro Industry, Production Process.

P-01

Fe^{3+}DOPEDTRIGLYCINESULPHATESINGLECRYSTALS-ELECTRICAL, DIELECTRIC, STRUCTURAL AND OPTICAL PROPERTIES

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In this paper we have investigated electrical, optical and dielectric properties of pure Triglycine sulphate $(NH_2CH_2COOH)_3 \cdot H_2SO_4$ (TGS) and Fe^{3+} doped TGS. A good optical quality single crystal of TGS and Fe^{3+} doped TGS have been grown with the slow evaporation method. The crystalline phase purity and change in the unit cell parameters are investigated using powder X-ray diffraction method. The functional groups were confirmed by FTIR technique. UV visible spectral studies showed good optical transmittance window in the visible region of the electromagnetic spectrum. The dielectric constant is found to decreases with doping. The decrease in dielectric constant in the case of Fe^{3+} doped TGS has an application in pyroelectric infrared detectors as thermal sensors. High melting point (233 ℃) of Triglycine sulphate (TGS) crystals makes it as suitable in many scientific applications. Since the amino acids are the major constituent of TGS, it is soluble in water.

KEYWORDS: Triglycine sulphate, Functional groups, Optical Transmittance, Pyroelectric effect

C-21

SUSTAINED DRUG RELEASE STUDIES OF GUAR GUM/CARBOXYMETHYL CELLULOSE BLEND - ZINC OXIDE NANOCOMPOSITES

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Zinc oxide (ZnO) nanoparticles were synthesized by green chemistry approach. The obtained zinc oxide nanoparticles were confirmed using UV-Vis spectroscopy. The prepared zinc oxide nanoparticles were used as a compatibilizer to biocompatible polymer blend system of guar gum (GG)/carboxymethyl cellulose (CMC). The miscibility/compatibility was studied using density, ultrasonic velocity, and adiabatic compressibility methods in aqueous solution. Solution studies confirmed that GG/CMC blends were compatibilized by ZnO nanoparticles when the composition of GG is more than 50% in the blend. Further thin films of GG/CMC blend-ZnO nanocomposites were prepared. The morphology studies (FESEM) confirms the uniform distribution of GG and CMC in the blend when GG content is more than 50% in the blend. To assess the physical stability of the thin films thickness, weight, folding endurance (FE), % moisture absorbance (PMA), and % moisture loss (PML) were measured as per the standard procedures. The drug release studies were performed using a sample drug metoprolol succinate. The diffusion study showed that the drug release from CMC-ZnO nanocomposite thin film patch was immediate compared to that of GG-ZnO nanocomposite thin film patch. The 70/30 GG/CMC blend-ZnO nanocomposite thin film patch showed sustained release of the drug, metoprolol succinate.

KEYWORDS: Drug release, biocompatibility, nanocomposites, guar gum, zinc oxide nanoparticles

C-22

SUSTAINED DRUG RELEASE STUDIES OF XANTHAN GUM/CARBOXYMETHYL CELLULOSE BLEND - ZINC OXIDE NANOCOMPOSITES

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Zinc oxide (ZnO) nanoparticles were synthesized by green chemistry approach. The obtained zinc oxide nanoparticles were confirmed using UV-Vis spectroscopy. The prepared zinc oxide nanoparticles were used as a compatibilizer to biocompatible polymer blend system of xanthan gum (XG)/carboxymethyl cellulose (CMC). The miscibility/compatibility was studied using density, ultrasonic velocity, and adiabatic compressibility methods in aqueous solution. Solution studies confirmed the compatibility of all compositions of XG/CMC blend-ZnO nanocomposites. Further thin films of XG/CMC blend-ZnO nanocomposites were prepared. The morphology studies (FESEM) confirms the uniform distribution of XG and CMC in the blend. To assess the physical stability of the thin films thickness, weight, folding endurance (FE), % moisture absorbance (PMA), and % moisture loss (PML) were measured as per the standard procedures. The drug release studies were performed using a sample drug metoprolol succinate. The diffusion study showed that the drug release from CMC-ZnO nanocomposite thin film patch was immediate compared to that of XG-ZnO nanoconposite thin film patch. The ZnO nanocomposite of XG/CMC blends showed sustained release when compared with their pure polymer.

KEYWORDS: Drug release, biocompatibility, nanocomposites, xanthan gum, zinc oxide nanoparticles

C-24

AGRICULTURAL MICRONUTRIENT RELEASE STUDIES OF GUAR GUM/METHYL CELLULOSE BLEND - ZINC OXIDE NANOCOMPOSITES

Dhaivik Harshavardhan[1], Mokshith G.[1], Sahil B.[1], Shareefraju J. Ukkund[1], Savitha M. B.[2], Shrinivasa Mayya D.[3], Prasad P.[1*]

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Zinc oxide (ZnO) nanoparticles were synthesized by green chemistry approach. The obtained zinc oxide nanoparticles were confirmed using UV-Vis spectroscopy. The prepared zinc oxide nanoparticles were used as a compatibilizer to biocompatible polymer blend system of guar gum (GG)/methyl cellulose (MC). The miscibility/compatibility was studied using density, ultrasonic velocity, and adiabatic compressibility methods in aqueous solution. Solution studies confirmed that the GG/MC blend – ZnO nanocomposites are compatible when the composition of GG is more than 50%. Further thin films of GG/MC blend - ZnO nanocomposites were prepared. The morphology studies (FESEM) confirms the uniform distribution of GG and MC in the compatible blend. Potassium chloride (KCl) was used as the source for K^+ ions. Thin film patches were prepared by solution casting-solvent evaporation method. Distilled water (pH 7) was used as the medium of release. After each 10 minutes the samples were taken out from the set-up and dried, and studied for the K^+ ion release. UV-Vis spectroscopy at λmax. 515 nm was used for this study. The average release of K^+ ion from 1 cm^2 patch is found to be 0.07 mg/50 mL. The total amount of K^+ ions released from 30/70 GG/MC blend-ZnO nanocomposite for five release-dry-release cycle is 0.36 mg/50 mL. Hence it can be proposed that 50 pouches (of 1 cm^2) of K^+ ion loaded 70/30 GG/MC blend-ZnO nanocomposite can release the required amount of micronutrient potassium every day for five days.

KEYWORDS: Micronutrient release, biocompatibility, nanocomposites, guar gum, zinc oxide nanoparticles

C-25

AGRICULTURAL MICRONUTRIENT RELEASE STUDIES OF XANTHAN GUM/METHYL CELLULOSE BLEND - ZINC OXIDE NANOCOMPOSITES

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Zinc oxide (ZnO) nanoparticles were synthesized by green chemistry approach. The obtained zinc oxide nanoparticles were confirmed using UV-Vis spectroscopy. The prepared zinc oxide nanoparticles were used as a compatibilizer to biocompatible polymer blend system of xanthan gum (XG)/methyl cellulose (MC). The miscibility/compatibility was studied using density, ultrasonic velocity, and adiabatic compressibility methods in aqueous solution. Solution studies confirmed that the blends are compatible when the XG content is below 70% in the XG/MC-ZnO nanocomposites. Further thin films of XG/MC blend - ZnO nanocomposites were prepared. The morphology studies (FESEM) confirms the uniform distribution of XG and MC in the compatible blend. Potassium chloride (KCl) was used as the source for K^+ ions. Thin film patches were prepared by solution casting-solvent evaporation method. Distilled water (pH 7) was used as the medium of release. After each 10 minutes the samples were taken out from the set-up and dried, and studied for the K^+ ion release. UV-Vissible spectroscopy at λmax. 515 nm was used for this study. The average release of K^+ ion from 1 cm^2 patch is found to be 0.254 mg/50 mL. The total amount of K^+ ions released from 30/70 XG/MC blend-ZnO nanocomposite for five release-dry-release cycle is 1.27 mg/50 mL. Hence it can be proposed that 10 pouches (of 1 cm^2) of K^+ ion loaded 30/70 XG/MC blend-ZnO nanocomposite can release the required amount of micronutrient potassium every day for five days.

KEYWORDS: Micronutrient release, biocompatibility, nanocomposites, xanthan gum, zinc oxide nanoparticles.

We Are What We Consume: An Assessment of Characters and Characterizations in Web Series

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Prof. Dr.D. Srinivasa Mayya, Principal, Srinivas Institute of Technology, Mangalore.

ABSTRACT: Over-the-top (OTT) and online streaming applications have led to new media consumption habits in India, especially among young Indian millennials and centennials. The expanding fan base for original content and the upsurge of 'Hallyu' (Korean wave) intrigue to explore the radically changing media consumption behavior. The present paper attempts to investigate the determinants influencing this changing pattern using narrative paradigm theory.

Walter Fisher's narrative paradigm theory broadly discusses truth and trust in persuasive communication. It is fascinating to witness the illustrations of the new and unfamiliar cultures through the web series and their ability to convey believable stories to the global audience as an evolving arena in media and culture literature.

The present paper employs the control group experimental research design to understand the determinants of changing media consumption. The participants' content preference list and watching habits are the parameters for comparing and contrasting the proposed increased interest in original content. A group of 10 participants who consume OTT content exclusively and 10 participants who do not have specific viewing choices were selected for the study. The results reveal some exciting viewers' characteristics that are different from their behavioral characteristics.

The research is qualitative. The present paper intends to propose a valuable scale to assess the OTT content consumption to capture the behavioral shift in group and individual viewing habits.

KEYWORDS: Media Consumption, Narrative Paradigm Theory, OTT Content.

C-23

SUSTAINED DRUG RELEASE STUDIES OF GUAR GUM/HYDROXYPROPYLMETHYL CELLULOSE BLEND - ZINC OXIDE NANOCOMPOSITES

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Zinc oxide (ZnO) nanoparticles were synthesized by green chemistry approach. The obtained zinc oxide nanoparticles were confirmed using UV-Vis spectroscopy. The prepared zinc oxide nanoparticles were used as a compatibilizer to biocompatible polymer blend system of guar gum (GG)/hydroxypropylmethyl cellulose (HPMC). The miscibility/compatibility was studied using density, ultrasonic velocity, and adiabatic compressibility methods in aqueous solution. Solution studies confirmed the compatibility of all compositions of GG/HPMC blend-ZnO nanocomposites. Further thin films of GG/HPMC blend-ZnO nanocomposites were prepared. The morphology studies (FESEM) confirms the uniform distribution of GG and HPMC in the blend. To assess the physical stability of the thin films thickness, weight, folding endurance (FE), % moisture absorbance (PMA), and % moisture loss (PML) were measured as per the standard procedures. The drug release studies were performed using a sample drug metoprolol succinate. The diffusion study showed that the drug release from HPMC-ZnO nanocomposite thin film patch was immediate compared to that of guar gum. The blend-ZnO nanocomposite thin film patches showed sustained release when compared with their pure polymer.

KEY WORDS: Drug release, biocompatibility, nanocomposites, guar gum, zinc oxide nanoparticles

Volume 98 • 2024

ISSN 2214-7853

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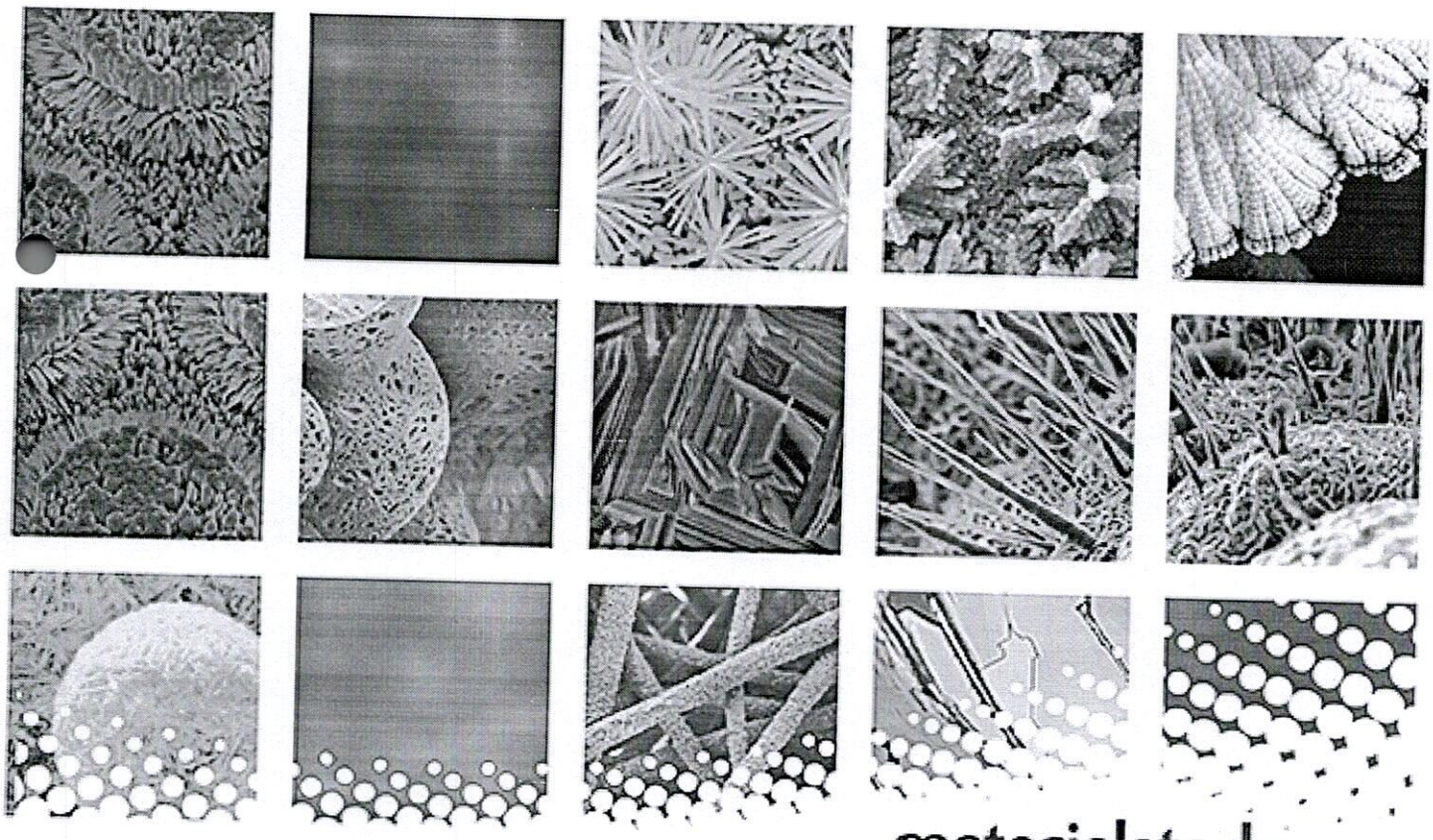

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Volume 52, Part 3, 2022, Pages 1841-1845

Hybridization effect on water absorption and flexural properties of E-glass/banana fibre/epoxy composites

Raghavendra Pai [a], L. Bangarappa [b], K.S. Lokesh [c], D. Shrinivasa Mayya [c], C.R. Naveen [c], Thomas Pinto [d]

https://doi.org/10.1016/j.matpr.2021.11.491

Abstract

RTIMES22151

CFD Analysis of a Diesel Generator Exhaust System to Reduce Back Pressure

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Abstract
Engine exhaust back pressure is defined as the pressure of gas in the exhaust system which is generated by the engine to overcome the hydraulic resistance of the exhaust system in order to release the exhaust gases into the outside of the system. A silencer performance is mainly related on the backpressure value. A high backpressure is commonly caused by exhaust pipe diameter too small and sharp bends in the exhaust system. In this study exhaust system of a diesel generator 125 HP is selected for CFD analysis. One dimensional analysis is carried out with specified boundary conditions. Original design is modified with varying pipe diameter, length and position of expansion chamber. The result of the simulation using CFD software is displayed in the form of velocity contour, pressure contour, graphs and velocity streamline. The study has indicated that increasing bends in the system and exhaust pipe diameter will increases exhaust back pressure and also the position of expansion chamber significantly affect backpressure and thus the engine performance.

Keywords: *CFD Analysis, Diesel Generator, Back Pressure*

RTIMES22188

Enhancement of Heat Transfer Rate in Concentric Heat Exchanger by the Use of Fin

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Abstract

In this analysis difference fin patterns are added on the inner tube of the concentric heat exchanger are absorbed for temperature, heat transfer rate and friction factor. Fins are considered on the exterior surface of the inner tube. Mainly temperature is the main data considered to conclude the concentric heat exchanger's rate of heat transfer. The following assumptions were considered for analysis: (i) Fluid flow is laminar. (ii)Hot water passes through the inner tube and cold water in the annular gap for all the 4 cases. (iii) Aluminium is used as the tube and fin material, the tube thickness of both the tubes is 1mm. The inlet of hot water is constant at 370K and that of the cold water at 300K.Analysis is carried out in ANSYS 19.2,Fin pattern and concentric heat exchanger 3D geometry is created in Catia v5, 3 finned inner cases and a no fin case is compared against. A better heat transfer rate is observed in the fin pattern cross section with curve/semi-circular head.

Keywords— Heat exchanger, friction factor, heat transfer rate, fin

RTIMES22158

Design Fabrication and Analysis of Hybrid Solar Banana Dryer

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Abstract
Banana powder is being used as a food material. The processing of raw banana requires drying to reduce the moisture content below 35% and is generally got in open sun drying. In this work a hybrid type, economical, low-cost solar dryer is designed to dry the banana. A hybrid solar banana dryer consists of a solar flat plate collector with dimensions 1.5m x 0.68m x 0.15m with V corrugated absorption plates, drying chamber and chimney for exhaust air. The trays are fixed inside the drying chamber. The dryer is also incorporated with an electric coil to which power is supplied externally. Experiments are conducted to study the drying characteristics of banana slices. Qualitative analysis for drying of bananas shows the final moisture content in the banana slices. The collector efficiency is found out to be 49.11%, 44.48% and 24.41% respectively and drying efficiency of banana slices is found to be 73%, 69% and 22.5% for three samples respectively. Temperature and humidity of air as well as air velocity is an important factor for improving drying rate.

Keywords: *Hybrid solar banana dryer, V corrugated absorption plate, flat plate collector and electric coil*

RTIMES22104

Design And Fabrication Of Arecanut Insecticide Spraying Machine

Rakesh A O[1] , Pavan D[2] , Huligeppa BM [3] , Darshan MM[4] , Sudheendra N[5]
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Abstract
Karnataka is the biggest producer of areca-nut in India which depends on traditional mountain climbing approachandskilled labour for harvesting areca-nut but in current time's professional climbers has grown to be scarce and farmers find hard to harvest the nuts. manual mountaineering includes high threat jumping from one tree to another. This venture offers with a manual machine which makes use of a spring and pulley mechanism to climb and harvest the nut. the principal goal of this venture is that its far least expensive and doesn't require any professional labour it's miles safe and can be without difficulty carried out. the usage of this gadget reduces the significant labour value and will increase safety extensively.

Keywords— *Areca-nut. harvesting*

RTIMES22187

Comparative Study on Temperature Measurement of a Coated and Uncoated Tool Insert In Turning Process by Using Tool Work Thermocouple

Raghavendra M J[1], Sandesh K S[2], Sudheendra H N[3] Chandra Jogi[4]

Abstract

This paper highlights the effect of the temperature and cutting forces generated on the tip of the Single Point Cutting Tool (SPCT) while working. In a experimental work, temperature measurement is done by using thermocouple at various depth of cut and it found that the temperature increases with increase in depth of cut. Temperature at the cutting point of the tool is a crucial parameter in the control of the machining process. Due to advancement in the machining processes, a special attention has been given on the life of a tool. To achieve this, the best way is to apply the coating to the tool. In this study, coated and uncoated carbide tools were used and temperature occurred during machining were measured. Among the number of temperatures measuring methods, the tool-work thermocouple technique is used as it is easy to install and inexpensive as compared to other methods. The procedure for the working of Tool-work thermocouple and method of calibration is described in this paper.

Keywords— *Temperature measurement, tool-work thermocouple, PVD coating.*

RTIMES22111

Analysis of Composite Material for Industrial Robotic Arm

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Abstract
Humans are getting replaced by robots in many jobs, since robots possesses excellent properties including tireless working, capable of doing routine works and to handle dangerous jobs. Materials in contact with the manipulating parts of robots experiences very large elastic deformations and stress. This project is analyzing a composite alternative in order to construct a light weight environment friendly industrial robotic arm which is more durable and reliable. The sugarcane bagasse composite is analyzed in the view of industrial robotic arm. The industrial robot is modelled using designing software. The multibody dynamics of the designed industrial pick and place robot is carried out using MSC ADAMS software. The mechanical behaviour of robotic structure is analyzed using Ansys Workbench software. The stress, strain and deformation are tested. Cast iron, Aluminium and Sugarcane Bagasse Composite are applied to the industrial robotic arm components under same driving trajectory.

Key Words: *Industrial Robotics, Sugarcane Bagasse, MSC ADAMS, Multibody Dynamics, Ansys Workbench, Epoxy, Robotic arm*

RTIMES22187

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Keywords— *Temperature measurement, tool-work thermocouple, PVD coating.*

RTIMES 22163

Design and Fabrication of Earth Auger with trolley

Akshay Kumar[1], Aman Arun Bangera[2], Nithin Paranjape[3], Akshay Kumar Hegde[4], Raghavendra M J[5]

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Abstract

The purpose of this project is to design and fabricate an earth auger to overcome limitations on the existing earth augers. The earth auger is designed by introducing the trolley system. The project will be successful in providing the earth auger which is operator friendly and can be transported from one place to another by the single operator. The simplified mechanisms are implemented in the project including the winches and pulley systems for the feed and movement of the drill bit. The clamping systems are introducing to increase the stability and to decrease the vibrations which keeps the operator to be in a distance during the operations for the purpose of safety. Therefore, this project is made to reduce the fault and to improve the safety measures as well as the usability.

Keyword: *Earth Auger, trolley*

RTIMES22187

Comparative Study on Temperature Measurement of a Coated and Uncoated Tool Insert In Turning Process by Using Tool Work Thermocouple

Raghavendra M J[1], Sandesh K S[2], Sudheendra H N[3] Chandra Jogi[4]

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Keywords— *Temperature measurement, tool-work thermocouple, PVD coating.*

RTIMES 22165

CFD ANALYSIS OF DRAFT TUBE

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Abstract
With the advancement of science and technology, the need for power is rising steadily. Due to the limited supply of non-renewable energy, the development of the renewable energy sector has become a crucial concern. Due to its high efficiency, capacity for continuous production, and cheap production costs, the hydro energy sector is superior to other renewable energy sources in terms of power output. In India, the hydropower system handles a large portion of the electricity generation, yet there is still untapped potential. By making improvements at the component level, the efficiency of the hydro turbine system can be increased for both new installations and existing systems. Modern inlet guide vane (IGV) control systems, enhanced runner designs, IGV systems, draft tubes, and penstocks can all be used to build the system, which will reduce loss and increase efficiency. The design of the draft tube affects the energy recovery in the draft tube. In the current study, computational fluid dynamics (CFD) simulation was used to optimize the design of the draft tube shape. This was done on the ANSYS FLUENT platform. The draft tube's design goal is to increase energy recovery and decrease flow loss, which will increase efficiency.

Keyword: *CFD, hydropower*

RTIMES22125

Optimization Of Heat Treatment Parameters To Facilitate Machining Of SAE4340 Steel Without Compromise On Mechanical Properties

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Abstract
SAE 4340 is a medium carbon low alloy steel used in many automobile and aircraft applications because of its high strength and toughness. But its machinability is very low and hence this poses difficulty in manufacturing the parts needed for such applications. Machinability of this material can be improved by adopting suitable tool material like CBN or ceramics. But these tool materials are costly and usually need high speed machines like CNC which are suitable mainly for mass production. Moreover, these inserts are brittle and chip off fast especially when intermittent cuts are involved especially in the rough machining of castings in large numbers. For this reason, it is proposed to improve machinability by adopting suitable heat treatment to the steel without considering the type of tool material being used. This will change the basic property and microstructure of the steel to facilitate machining. The inter-critical heat treatment process is suggested wherein the material is heated between the upper and lower critical temperatures followed by water quenching and suitable tempering. To begin with, the material was normalized to 850°C in order to carry out specimen preparation. The specimens were then subjected to quenching at two different temperatures of 770 and 790°C in the inter-critical range after which tempering was carried out at 580°C. Tensile strength of around 1100 N/mm2, impact strength of around 120J and hardness in the range of 35 to 40 HRC were obtained. Machinability tests were carried out on a centre lathe with lathe tool dynamometer set up using a brazed tip tool at low and high speeds giving a depth of cut of 1mm. The cutting forces were in the range of 60 to 70 kg force indicating good machinability. Thus without compromise in mechanical properties, good machinability was attained.

Keywords: *Machinability, inter-critical heat treatment*

RTIMES22128

Design And Fabrication Of Pick And Place Robot For Shaping Machine Application

Richard Michael Santhosh[1], Vishnuprasad H[2], Dhanashyam KV[3], Sanjay N[4], Sandesh M Prabhu[5] Sathish Kumar K[6]

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Abstract

This paper is about the design and fabrication of a pick and place robot which can load and unload a workpiece from and to a shaping machine. In addition to this, the vice of the shaping machine will also be tightened and loosened after loading and unloading of the workpiece. The machine is therefore made into two units. The first unit consists of a motor driven by a chain and sprocket drive which will help in performing the tightening/ loosening of the vice after the placement/ before removal of the workpiece. The second unit consists of a robotic arm which can perform the loading and unloading operation. Thus, the coordinated working of the two units results in the process sequence of loading and unloading components getting automated

Keywords: *pick and place robot, a chain and sprocket drive*

Volume 98 • 2024

ISSN 2214-7853

materialstoday: PROCEEDINGS

Second International Conference on Advances in Mechanical Engineering and Material Science

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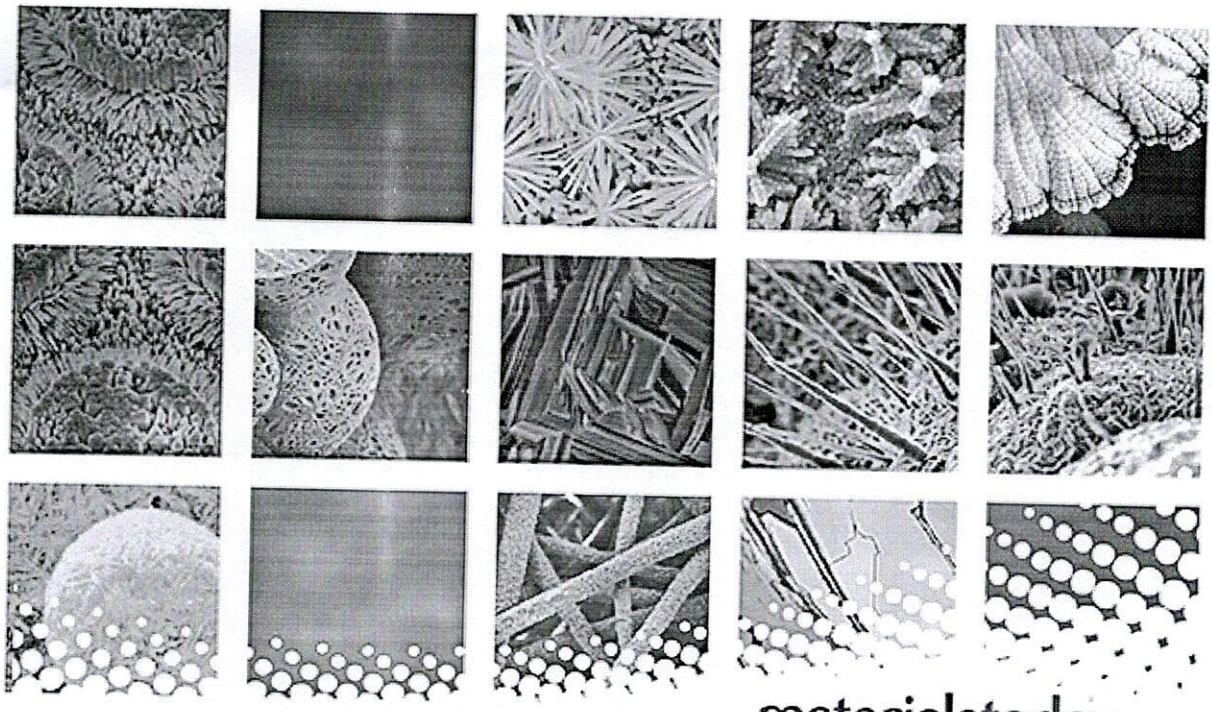

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Volume 52, Part 3, 2022, Pages 1841-1845

Hybridization effect on water absorption and flexural properties of E-glass/banana fibre/epoxy composites

Raghavendra Pai [a], L. Bangarappa [b], K.S. Lokesh [c], D. Shrinivasa Mayya [c], C.R. Naveen [c], Thomas Pinto [d]

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https://doi.org/10.1016/j.matpr.2021.11.491

Abstract

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RTIMES22189

Study of Mechanical and Tribological Properties of Hybrid Composite Material E- glass/Epoxy with Carbon Powder

Lokesh V[1], Basava T [2] , Nithin Joshuva[3], Venkatesh Rao[4]
Asstant Professor[1], Professor[2], Asstant Professor[3], Asstant Professor[4]
Mechanical Engineering, Srinivas Institute of Technology, Mangaluru, India[1,3,4]
Mechanical Engineering, SDMIT Institute of Technology, Ujire, India[2]

Abstract
Composite materials play important role in many industrial applications. Researchers are working on fabrication of new composite materials to enhance the applicability of these materials. Chopped strand mat glass fibre reinforced polymer composites is widely used in many industrial applications particularly in the automotive industry due to advantages such as low weight, ease of processing, price and noise suppression., The objective of the present work is to analyse mechanical and wear behaviour of chopped strand mat E-glass fiber, reinforced in epoxy matrix with carbon powder as filler. Three different types of composites are fabricated using 10% carbon, 20%carbon and 30% carbon with epoxy resin and hardener. The epoxy resin and hardener are mixed in 10:1 weight ratio. The present work shows that incorporation of carbon filler into E-glass fiber epoxy reinforced composites modifies the hardness compressive and wear properties of the composites when compared with unfilled E-glass epoxy composite.

Keywords: *Composite, FRP, E-Glass Fibre, hardness, D-shore,wear test.*

RTIMES22120

Green Synthesis Of Aluminum Oxide Nano Particles By Mimosa Pudica Plant Extract

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Department of Mechanical Engineering, Srinivas Institute of Technology, Mangalore[2,3,4,5,6]

Abstract

Mimosa pudica also called as touch me not or sensitive plant that is belongs to the mimosa genus. This plant grows as weed everywhere and used as a traditional medicine for the treatment of leprosy, dysentery and inflammations. This study will aims the synthesis of Aluminum oxide Nano particle using aluminium sulphate as a precursor material, reduced by mimosa pudica plant leaf extract. Nano particles that are produced by the plants are stable and faster. The present investigation is carried out to synthesis of alumina Nano particles by using this medicinal plant. The formation of aluminum oxide Nano particles were firstly confirmed by the inference of colour change and then by characterization instruments like, FTIR (Fourier transform infrared spectroscopy), UV-Visible spectrometer, Scanning Electron microscope and X-Ray diffractometer studies.

Keywords: *Aluminium Oxide, Mimosa Pudica, Nano particles.*

RTIMES22138

Experimental Investigation Of High Speed Turning Using Minimum Quality Lubrication

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Abstract
Steel machining generates a large cutting temperature, which not only reduces tool life but also affects surface finish. In this project, sunflower oil and an aluminium oxide-based nanofluid are used to create an MQL system which will offer lubrication and produce mist. The information is statistically and graphically evaluated. Cutting speed, feed rate, and depth of cut are the metal cutting factors that are taken into consideration. The results show that the cutting force parameter has an effect on the surface finish characteristics. The results reveal that the cutting force parameter is lower, therefore enhancing the surface quality. Tool wear is a normal occurrence in all machining procedures and eventually leads to tool failure. The increased demands for high productivity of machining require the use of high cutting velocity and feed rate. Such machining will produce a high cutting force parameter, which will not only reduce tool life but also destroys the product quality. MQL minimises the cutting force significantly, and thus improves the surface finish and tool life.

Keywords: *cutting force parameters, aluminium oxide, surface finish, mql.*

RTIMES22150

Fabrication of Hybrid of Human Transporter (Segway) And Forklift

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Abstract

Segway is used for transportation purpose of human beings. It can also help us to reduce the impact of global warming by reducing the usage of fuels. Most commonly used Segway is the two-wheel self-balancing Segway. Electronics components are placed major role in the existing Segways. Three Wheeled Mechanical Segway replaces complex electronic components like accelerometer and gyroscope with a heavy-duty wheel (the third wheel) making it more stable, economical and fail-safe. Mechanical fork lift is an improved and advance technology that helps brought about revolution in the mechanical industries today all heavy engineering company uses it. Widespread use of the forklift truck had revolutionized warehousing practices before the middle of the 20th century. Forklifts have made it possible for one person to move thousands of pounds at once. Well-maintained and safely operated forklifts make lifting and transporting cargo infinitely easier. A Segway forklift is a small electrical vehicle which is designed to build up a cheap forklift for industry warehouses and domestic purpose. The main aim of our project is that goods transportation device which can be driven by anyone. Dynamic principle is that to balance the vehicle a single heavy-duty wheel is used to make it stable. In Institutes or Colleges small goods cannot moved around easily by any human body, so to fill this need we have an electrically operated forklift to lift and transport such medium weight goods. It is a fast, efficient and low power consumption vehicle that does not require much space to move around.

Keywords; *Hybrid Human Transporter, Forklift.*

RTIMES22189

Study of Mechanical and Tribological Properties of Hybrid Composite Material E- glass/Epoxy with Carbon Powder

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Asstant Professor[1], Professor[2], Asstant Professor[3], Asstant Professor[4]
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Abstract
Composite materials play important role in many industrial applications. Researchers are working on fabrication of new composite materials to enhance the applicability of these materials. Chopped strand mat glass fibre reinforced polymer composites is widely used in many industrial applications particularly in the automotive industry due to advantages such as low weight, ease of processing, price and noise suppression., The objective of the present work is to analyse mechanical and wear behaviour of chopped strand mat E-glass fiber, reinforced in epoxy matrix with carbon powder as filler. Three different types of composites are fabricated using 10% carbon, 20%carbon and 30% carbon with epoxy resin and hardener. The epoxy resin and hardener are mixed in 10:1 weight ratio. The present work shows that incorporation of carbon filler into E-glass fiber epoxy reinforced composites modifies the hardness compressive and wear properties of the composites when compared with unfilled E-glass epoxy composite.

Keywords: *Composite, FRP, E-Glass Fibre, hardness, D-shore,wear test.*

RTIMES 22171

Design And Fabrication of Pesticide Sprayer with Rotary Mechanism Using Solar Energy

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Abstract

Design and fabrication of pesticide sprayer with rotary mechanism using solar energy is the present work. Thiswork is about a pesticide sprayer that uses solar energy as a spray source. 10W solar panel, 12V DC battery using solar energy received from solar panel, battery-powered DC motor, pesticide spraying pump, pesticide storage tank (in solution / liquid). The entire unit is portable and operated by one worker. This device is a very economical and environmentally friendly device because it uses solar energy that is affordable for farmers because it does not use any other external energy source and is powered by the user himself. Farmers have primarily used traditional techniques suchas manual and fuel-powered spraying systems to spray pesticides. A sprayer is a mechanical tool used to repel pests and insects by spraying liquids such as herbicides, pesticides and fertilizers onto crops.

Keywords: *Solar panel, DC pumps, sprayer.*

RTIMES22189

Study of Mechanical and Tribological Properties of Hybrid Composite Material E- glass/Epoxy with Carbon Powder

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Abstract
Composite materials play important role in many industrial applications. Researchers are working on fabrication of new composite materials to enhance the applicability of these materials. Chopped strand mat glass fibre reinforced polymer composites is widely used in many industrial applications particularly in the automotive industry due to advantages such as low weight, ease of processing, price and noise suppression., The objective of the present work is to analyse mechanical and wear behaviour of chopped strand mat E-glass fiber, reinforced in epoxy matrix with carbon powder as filler. Three different types of composites are fabricated using 10% carbon, 20%carbon and 30% carbon with epoxy resin and hardener. The epoxy resin and hardener are mixed in 10:1 weight ratio. The present work shows that incorporation of carbon filler into E-glass fiber epoxy reinforced composites modifies the hardness compressive and wear properties of the composites when compared with unfilled E-glass epoxy composite.

Keywords: *Composite, FRP, E-Glass Fibre, hardness, D-shore,wear test.*

RTIMES22126

Advanced Robot Prototype for Underwater Applications

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Abstract

This paper describes a wirelessly controlled underwater robot that can move under water and it can be even controlled by an android smart phone very easily. ROV (Remote Operating Vehicle) robot is mainly used for underwater exploration. An underwater submersible capable of conducting oceanographic surveys, pipeline and sub-sea structure inspection. In a novel approach, the structure was designed a underwater robot for surveillance. Signals are sent from the ROV to the operator via a Bluetooth that connect these robots. A video camera, propulsion system, and lighting are standard on all ROVs. PVC can be used to build the desired submarine shape because of its light weight, flexibility, and small structure. This robot's propulsion system is controlled by four custombuilt, thrusters that operate both horizontally and vertically. This robot's camera serves as its eyes. O- ring and hydraulic seal rubbers prevent water from leaking. Depending on the required specifications, additional equipment is added. A wired communication system directs the actions of this submarine. The bottom of the ROV should be weighted and the top should have floats to keep it stable in the water. Two smaller tubes were placed on either side of the ROV's centre tube and positioned slightly lower than the centre tube Desired outcome from this project is, the robot should be controlled easily by the android smart phone, and it should work according to the given instruction by the operator. The clear image should be received at the receivers end through the camera.

Keywords: *ROVs, propulsion, prototype, camera.*

RTIMES22182

A study on correlation of different factors and its effect on Agility of micro and small-scale manufacturing industries

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Abstract
This paper highlighting on correlation of different factors that is effect on the agility of micro and small-scale industries using SPSS statistics tool. The various factors were identified and listed based on agility enablers and survey has conducted in and around Mangalore region. Total 116 micro and small-scale industries used to collect responses with 98 different questions. The questionnaires are part of three pillars of agile manufacturing. From the correlation study of different factors, it is observed that, there is a relation between different enablers and the enablers are depended on one another. The dependency or relation between the factors affects the performance of entire industry and agility of the industries is getting reduced.

Key Words: Correlation study, Agility, Small Scale Industries

RTIMES22188

Enhancement of Heat Transfer Rate in Concentric Heat Exchanger by the Use of Fin

Jayaram Thumbe[1] , Shankar K S[2], Sathish K G[3] Sunil Prakash R[4]

Abstract

In this analysis difference fin patterns are added on the inner tube of the concentric heat exchanger are absorbed for temperature, heat transfer rate and friction factor. Fins are considered on the exterior surface of the inner tube. Mainly temperature is the main data considered to conclude the concentric heat exchanger's rate of heat transfer. The following assumptions were considered for analysis: (i) Fluid flow is laminar. (ii)Hot water passes through the inner tube and cold water in the annular gap for all the 4 cases. (iii) Aluminium is used as the tube and fin material, the tube thickness of both the tubes is 1mm. The inlet of hot water is constant at 370K and that of the cold water at 300K.Analysis is carried out in ANSYS 19.2,Fin pattern and concentric heat exchanger 3D geometry is created in Catia v5, 3 finned inner cases and a no fin case is compared against. A better heat transfer rate is observed in the fin pattern cross section with curve/semi-circular head.

Keywords— Heat exchanger, friction factor, heat transfer rate, fin

RTIMES22129

Detection Of Flaws In Ship Hull Using Underwater ROV

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Abstract

Fatigue leads to failure of ships and also fatigue is one of the major factors which can produce cracks in a ship. To maintain safety of ship structures, an optimum..inspection plan should be done. The robotics has become an important resource in recent years in the field of engineering. Earlier the ship inspection was carried out by humans. This paper explains how it could. be improved using ROV even though if it.is not completely autonomous for time being.

Since the manual approach completely depends on the experience and specialist knowledge. So, python programming image-based crack and hole detection is done as a replacement. This paper presents a review of inspection of a ship hull using Remoted Operated Vehicle (ROV). Several power considerations and designs are discussed and planned as per the requirement of ROV. The main purpose of this project is to detect crack and holes using ROV at low cost, which is safe, portable, and also it is easy.to use. It uses camera for the visuals beneath the water for detection. An Arduino board is used as microcontroller and Bluetooth module HC-05 to navigation of ROV to front, back, left, right and stop. A lithium battery of 12V is used for power supply and converted to 5V while giving power supply to Arduino board. The remotely

operated vehicle is constructed from PVC pipes which make them to float on the surface of the water. The underwater images captured from the camera are processed through python. coding and the result. will be appeared on the system interface.

Keywords: *Arduino board, Bluetooth, battery*

RTIMES22133

Implementation Of Water Management In Agriculture Using IoT For Small Farms

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Abstract
Our earth has 71% water in which 97% is saline water and in 3% fresh water 70% of fresh water is in glacier form, water left for human usage is 30% that is less than 1% of total fresh water present on earth. To combat water scarcity in summer and to use water wisely in agriculture as it is the highest user of fresh water in the world we have done a comparison project between drip irrigation and IoT based irrigation. As agriculture uses most of fresh water but the water required for plants is much lesser than farmers water their plants, overwatering will lead into many problems rather than solution like fertility of soil decreases as the nutrients gets washed out, because of that fertility of soil decreases and over use of pesticides and fertilizers also degrades soil fertility because of that soil dies that is microbes dies, the first step to improve soil fertility is proper water management which can be achieved by using IoT that is by using arduino, raspberry pi, solenoids, moisture sensor, temperature sensor and humidity sensor and this data can be collected so that it can be used for future farming by altering the water supply so that farmers can get good results. This not only increases soil fertility but also increases efficiency and decreases water consumption which can be used for later usage so the farmers will never face water scarcity.

Keywords— *Arduino, RaspberryPi, Solenoid, Moisture sensor.*

RTIMES22130

IoT-Based Smart Dehydrator For Cocoa Seeds

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Abstract

In India, cocoa is grown primarily as an intercrop in Andhra Pradesh, Tamil Nadu, Karnataka and Kerala. Despite the demand for cocoa beans far exceeding its supply in India. Hence there is a great push that needs to be given to local farmers to grow and process cocoa very efficiently. The quality of cocoa seeds mainly depends upon its moisture ratio. This has to start from the drying process. The present drying process is rudimentary andthis process gives very low quality beans as it is highly dependent on surrounding environment. This becomes a problem during monsoon season as sunlight which is a major source in this process is almost unavailable which turns out to be a hinderance for the supply chain of cocoa seeds. Hence we propose an IOT based smart dehydrator that helps to maintain the constant moisture ratio which in turn helps to achieve the required amount of drying of cocoa seeds with minimum manual effort. This will help the farmers to enhance the shelf life and quality of cocoa beans in spite of the surrounding environment conditions. The methodology for this project is as described further. The most effective way of structuring the dehydrator unit is by using hollow bricks which helps in circulation of surrounding air. This is thermodynamically an open system where the energy i.e., temperature and heat transfers in and out of the system. The polycarbonate sheets are the roofing system for green house because the heat from the sun will be trapped inside the dehydrator unit for approximately 16 hours which reduces the drying time. The fermented seeds are then kept in the shelf of dehydrator unit. These trays are made of Acashya trees which helps in water content absorbtion from cocoa seeds if any. The concept of IOT is being used in this unit which consists of temperature and moisture sensors, exhaust fan hot air blower and LCD. These are programmed such a way that the necessary drying conditions are maintained inside the dehydrator unit. These equipments are programmed using Arduino Uno board. The data is recorded and stored in cloud, which can be used for the further analysis of efficiency of the dehydrator unit . The expected outcomes of this project is maintaining uniform moisture ratio which will increase the shelf life. Implementing IOT in the field of agriculture which will be useful not only for cocoa seeds, but also other products like ginger, vanilla and rubber. Reducing the drying time of cocoa seeds will reflect in terms of reduced labour cost and turn around time. Implementing this concept in real time will be the greatest outcome of this project. Since the cocoa plantation are generally found in the sub-tropical regions there are high chances that these cocoa seeds might get damaged or fouled due to fungi in monsoon seasons but by implementing this smart dehydrator we can overcome this issue. And also this will help the farmers to keep the supply chain as per the demand for manufacturing the by-products.

Keywords: *cocoa dehydrator, IOT, Arduino Uno board*

RTIMES22188

Enhancement of Heat Transfer Rate in Concentric Heat Exchanger by the Use of Fin

Jayaram Thumbe[1] , Shankar K S[2], Sathish K G[3] Sunil Prakash R[4]

Abstract

In this analysis difference fin patterns are added on the inner tube of the concentric heat exchanger are absorbed for temperature, heat transfer rate and friction factor. Fins are considered on the exterior surface of the inner tube. Mainly temperature is the main data considered to conclude the concentric heat exchanger's rate of heat transfer. The following assumptions were considered for analysis: (i) Fluid flow is laminar. (ii)Hot water passes through the inner tube and cold water in the annular gap for all the 4 cases. (iii) Aluminium is used as the tube and fin material, the tube thickness of both the tubes is 1mm. The inlet of hot water is constant at 370K and that of the cold water at 300K.Analysis is carried out in ANSYS 19.2,Fin pattern and concentric heat exchanger 3D geometry is created in Catia v5, 3 finned inner cases and a no fin case is compared against. A better heat transfer rate is observed in the fin pattern cross section with curve/semi-circular head.

Keywords— Heat exchanger, friction factor, heat transfer rate, fin

RTIMES22131

Automatic Valve Operation For Bunkering

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Abstract

Bunkering is the supplying of fuel for use by ships including the logistics of loading and distributing the fuel among available shipboard tanks. Bunkering procedure is one such operation on a ship which has been the reason for several accidents in the past. Bunkering on a ship can be of fuel oil, sludge, diesel oil, cargo etc. Bunkering of fuel or diesel oil requires utmost care and alertness to prevent any kind of fire accidents and oil spill. Current scenario of bunkering system is done manually. This process takes more man power and requires continuous sounding of the tank at particular time interval. So, it is necessary to find out an alternate solution which gives continuous sounding of the bunker tank automatically all the time. The proposed project aims to overcome above problems. A model is fabricated with two tanks, a submersible pump, solenoid valve, microcontroller which controls the operation of valve for bunkering operation and sensors to sense the level of the tanks such that the valves open and close at preset time. The prototype was tested based on time taken in filling a tank and the response of the sensor with respect to time was identified. It is found that the time taken for bunkering is reduced.

Keywords: *Bunkering, Risk factors, Automation technology, Building automation system, Marine industry.*

RTIMES22134

Condition Based Maintenance Of CODLAG NPS With Supervised Data Analysis

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Abstract:
The maintenance of the several components of a Ship Propulsion Systems is an onerous activity, which need to be efficiently programmed by a shipbuilding company in order to save time and money. The replacement policies of these components can be planned in a Condition-Based fashion, by predicting their decay state and thus proceed to substitution only when really needed. In this paper, authors propose Data Analysis supervised techniques for the Condition-Based Maintenance of a vessel, characterized by a combined diesel-electric and gas propulsion plant.

The behaviour and interaction of the main components of Ship Propulsion Systems cannot be easily modelled with a priori physical knowledge, considering the large amount of variables influencing them. Data-Driven Models (DDMs), instead, exploit advanced statistical techniques to build models directly on the large amount of historical data collected by on-board automation systems, without requiring any a priori knowledge. DDMs are extremely useful when it comes to continuously monitoring the propulsion equipment and take decisions based on the actual condition of the propulsion plant.

In this thesis, we investigate a specific type of machine learning (ML) algorithm, specifically a regressor, as the foundation behind a condition-based maintenance (CBM) program for the major components affecting a naval propulsion system (NPS). By using data available in UCI, online machine learning repository, for prediction of gas turbine (GT) and GT compressor decay state coefficients.

Keywords: *Ship Propulsion Systems, Data-Driven Models, a naval propulsion system, machine learning*

RTIMES22136

Condition Based Maintenance Of Gearbox

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Abstract
Gearbox is one of the most important elements of rotating machineries and plays a key role in many industrial applications. If there is an unexpected failure in the gearbox it may lead to large economic losses. The fault diagnostic of rotating elements has drawn attention for its role in preventing disastrous accidents and beneficially assuring maintenance. Recently, fault diagnosis has paved its way in the multidisciplinary direction. Vibration analysis has always been a crucial component of preventative maintenance methods. and plays a significant role in assessing the health of the machinery and has supported decisions on machinery maintenance. An early fault identification of the gearbox is feasible by analyzing the vibration signal using various signal processing techniques since the vibration signal of a gearbox contains the signature of the defect in gear. This work aims to address fault diagnosis method based on vibrational analysis on gear box. Here an attempt has been made to use a diagnosis technique that when applied to gearbox highlights faults and these fault detection techniques are based on vibrational analysis approach.

Keywords: *Fault Diagnosis, Vibration Analysis, Rotating Machinery.*

Managing Business Transformation in Digital Era – A Review

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ABSTRACT: It is no surprise that research on digital transformation (DT) has raised vast interest among academics in recent decades. Countries, cities, industries, companies, and people all face the same challenge of adapting to a digital world. Digital transformation is perhaps the fuzziest term in the business world. Trying to capture too many moving parts, it transforms into visual white noise. But what does digital transformation mean? Is it about keeping up with new gadgets and software? Or does it imply that consumers want to interact with brands using a completely different means? Or maybe it conveys our retooling the ways we do business to leverage what the exciting new world of technology brings us. In this paper an attempt has been made to systematically define digital transformation agenda and paths of transformation from physical to digital era. Also to give some recommendation for the proper usage of new technology in managing the business transformation in digital era.

KEYWORDS: Digital Transformation, Digital World, Digital Era, Digital Infrastructure, Digital Channel.

C-21

SUSTAINED DRUG RELEASE STUDIES OF GUAR GUM/CARBOXYMETHYL CELLULOSE BLEND - ZINC OXIDE NANOCOMPOSITES

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Zinc oxide (ZnO) nanoparticles were synthesized by green chemistry approach. The obtained zinc oxide nanoparticles were confirmed using UV-Vis spectroscopy. The prepared zinc oxide nanoparticles were used as a compatibilizer to biocompatible polymer blend system of guar gum (GG)/carboxymethyl cellulose (CMC). The miscibility/compatibility was studied using density, ultrasonic velocity, and adiabatic compressibility methods in aqueous solution. Solution studies confirmed that GG/CMC blends were compatibilized by ZnO nanoparticles when the composition of GG is more than 50% in the blend. Further thin films of GG/CMC blend-ZnO nanocomposites were prepared. The morphology studies (FESEM) confirms the uniform distribution of GG and CMC in the blend when GG content is more than 50% in the blend. To assess the physical stability of the thin films thickness, weight, folding endurance (FE), % moisture absorbance (PMA), and % moisture loss (PML) were measured as per the standard procedures. The drug release studies were performed using a sample drug metoprolol succinate. The diffusion study showed that the drug release from CMC-ZnO nanocomposite thin film patch was immediate compared to that of GG-ZnO nanocomposite thin film patch. The 70/30 GG/CMC blend-ZnO nanocomposite thin film patch showed sustained release of the drug, metoprolol succinate.

KEYWORDS: Drug release, biocompatibility, nanocomposites, guar gum, zinc oxide nanoparticles

C-22

SUSTAINED DRUG RELEASE STUDIES OF XANTHAN GUM/CARBOXYMETHYL CELLULOSE BLEND - ZINC OXIDE NANOCOMPOSITES

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Zinc oxide (ZnO) nanoparticles were synthesized by green chemistry approach. The obtained zinc oxide nanoparticles were confirmed using UV-Vis spectroscopy. The prepared zinc oxide nanoparticles were used as a compatibilizer to biocompatible polymer blend system of xanthan gum (XG)/carboxymethyl cellulose (CMC). The miscibility/compatibility was studied using density, ultrasonic velocity, and adiabatic compressibility methods in aqueous solution. Solution studies confirmed the compatibility of all compositions of XG/CMC blend-ZnO nanocomposites. Further thin films of XG/CMC blend-ZnO nanocomposites were prepared. The morphology studies (FESEM) confirms the uniform distribution of XG and CMC in the blend. To assess the physical stability of the thin films thickness, weight, folding endurance (FE), % moisture absorbance (PMA), and % moisture loss (PML) were measured as per the standard procedures. The drug release studies were performed using a sample drug metoprolol succinate. The diffusion study showed that the drug release from CMC-ZnO nanocomposite thin film patch was immediate compared to that of XG-ZnO nanocomposite thin film patch. The ZnO nanocomposite of XG/CMC blends showed sustained release when compared with their pure polymer.

KEYWORDS: Drug release, biocompatibility, nanocomposites, xanthan gum, zinc oxide nanoparticles

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SUSTAINED DRUG RELEASE STUDIES OF GUAR GUM/HYDROXYPROPYLMETHYL CELLULOSE BLEND - ZINC OXIDE NANOCOMPOSITES

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Zinc oxide (ZnO) nanoparticles were synthesized by green chemistry approach. The obtained zinc oxide nanoparticles were confirmed using UV-Vis spectroscopy. The prepared zinc oxide nanoparticles were used as a compatibilizer to biocompatible polymer blend system of guar gum (GG)/hydroxypropylmethyl cellulose (HPMC). The miscibility/compatibility was studied using density, ultrasonic velocity, and adiabatic compressibility methods in aqueous solution. Solution studies confirmed the compatibility of all compositions of GG/HPMC blend-ZnO nanocomposites. Further thin films of GG/HPMC blend-ZnO nanocomposites were prepared. The morphology studies (FESEM) confirms the uniform distribution of GG and HPMC in the blend. To assess the physical stability of the thin films thickness, weight, folding endurance (FE), % moisture absorbance (PMA), and % moisture loss (PML) were measured as per the standard procedures. The drug release studies were performed using a sample drug metoprolol succinate. The diffusion study showed that the drug release from HPMC-ZnO nanocomposite thin film patch was immediate compared to that of guar gum. The blend-ZnO nanocomposite thin film patches showed sustained release when compared with their pure polymer.

KEY WORDS: Drug release, biocompatibility, nanocomposites, guar gum, zinc oxide nanoparticles

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AGRICULTURAL MICRONUTRIENT RELEASE STUDIES OF GUAR GUM/METHYL CELLULOSE BLEND - ZINC OXIDE NANOCOMPOSITES

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Zinc oxide (ZnO) nanoparticles were synthesized by green chemistry approach. The obtained zinc oxide nanoparticles were confirmed using UV-Vis spectroscopy. The prepared zinc oxide nanoparticles were used as a compatibilizer to biocompatible polymer blend system of guar gum (GG)/methyl cellulose (MC). The miscibility/compatibility was studied using density, ultrasonic velocity, and adiabatic compressibility methods in aqueous solution. Solution studies confirmed that the GG/MC blend – ZnO nanocomposites are compatible when the composition of GG is more than 50%. Further thin films of GG/MC blend - ZnO nanocomposites were prepared. The morphology studies (FESEM) confirms the uniform distribution of GG and MC in the compatible blend. Potassium chloride (KCl) was used as the source for K^+ ions. Thin film patches were prepared by solution casting-solvent evaporation method. Distilled water (pH 7) was used as the medium of release. After each 10 minutes the samples were taken out from the set-up and dried, and studied for the K^+ ion release. UV-Vis spectroscopy at λmax. 515 nm was used for this study. The average release of K^+ ion from 1 cm^2 patch is found to be 0.07 mg/50 mL. The total amount of K^+ ions released from 30/70 GG/MC blend-ZnO nanocomposite for five release-dry-release cycle is 0.36 mg/50 mL. Hence it can be proposed that 50 pouches (of 1 cm^2) of K^+ ion loaded 70/30 GG/MC blend-ZnO nanocomposite can release the required amount of micronutrient potassium every day for five days.

KEYWORDS: Micronutrient release, biocompatibility, nanocomposites, guar gum, zinc oxide nanoparticles

C-25

AGRICULTURAL MICRONUTRIENT RELEASE STUDIES OF XANTHAN GUM/METHYL CELLULOSE BLEND - ZINC OXIDE NANOCOMPOSITES

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Zinc oxide (ZnO) nanoparticles were synthesized by green chemistry approach. The obtained zinc oxide nanoparticles were confirmed using UV-Vis spectroscopy. The prepared zinc oxide nanoparticles were used as a compatibilizer to biocompatible polymer blend system of xanthan gum (XG)/methyl cellulose (MC). The miscibility/compatibility was studied using density, ultrasonic velocity, and adiabatic compressibility methods in aqueous solution. Solution studies confirmed that the blends are compatible when the XG content is below 70% in the XG/MC-ZnO nanocomposites. Further thin films of XG/MC blend - ZnO nanocomposites were prepared. The morphology studies (FESEM) confirms the uniform distribution of XG and MC in the compatible blend. Potassium chloride (KCl) was used as the source for K^+ ions. Thin film patches were prepared by solution casting-solvent evaporation method. Distilled water (pH 7) was used as the medium of release. After each 10 minutes the samples were taken out from the set-up and dried, and studied for the K^+ ion release. UV-Vissible spectroscopy at λmax. 515 nm was used for this study. The average release of K^+ ion from 1 cm^2 patch is found to be 0.254 mg/50 mL. The total amount of K^+ ions released from 30/70 XG/MC blend-ZnO nanocomposite for five release-dry-release cycle is 1.27 mg/50 mL. Hence it can be proposed that 10 pouches (of 1 cm^2) of K^+ ion loaded 30/70 XG/MC blend-ZnO nanocomposite can release the required amount of micronutrient potassium every day for five days.

KEYWORDS: Micronutrient release, biocompatibility, nanocomposites, xanthan gum, zinc oxide nanoparticles.

P-01

Fe^{3+}DOPEDTRIGLYCINESULPHATESINGLECRYSTALS-ELECTRICAL, DIELECTRIC, STRUCTURAL AND OPTICAL PROPERTIES

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In this paper we have investigated electrical, optical and dielectric properties of pure Triglycine sulphate $(NH_2CH_2COOH)_3 \cdot H_2SO_4$ (TGS) and Fe^{3+} doped TGS. A good optical quality single crystal of TGS and Fe^{3+} doped TGS have been grown with the slow evaporation method. The crystalline phase purity and change in the unit cell parameters are investigated using powder X-ray diffraction method. The functional groups were confirmed by FTIR technique. UV visible spectral studies showed good optical transmittance window in the visible region of the electromagnetic spectrum. The dielectric constant is found to decreases with doping. The decrease in dielectric constant in the case of Fe^{3+} doped TGS has an application in pyroelectric infrared detectors as thermal sensors. High melting point (233 ℃) of Triglycine sulphate (TGS) crystals makes it as suitable in many scientific applications. Since the amino acids are the major constituent of TGS, it is soluble in water.

KEYWORDS: Triglycine sulphate, Functional groups, Optical Transmittance, Pyroelectric effect

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IMPACT OF Sr^{2+} ON STRUCTURAL, OPTICAL AND PHOTOCATALYTIC PROPERTIES OF ZnO NANOPARTICLES

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Pure ZnO and Sr doped ZnO nanoparticles are synthesized by precipitation method using Zinc nitrate and KOH in aqueous solution.The prepared samples are based on different composition(0.2 -1 mol%).The influence of Sr dopant contents on absorption, emission, morphology and photocatalytic activity are investigated systematically. Synthesized samples were investigated by X-ray diffraction (XRD), field emission Scanning Electron Microscopy (FE-SEM), Energy dispersive spectroscopy (EDS), UV-visible, and Photoluminescence (PL) spectroscopy. The phase purity and crystalline size were characterized using X-Ray diffraction and Scanning electron microscopy. No characteristic peaks of of any other impurities are detected in XRD patterns which indicates that samples are of high purity. The average particle size of pure ZnO nanoparticles was about 40nm.Reduction in crystalline size upon increasing the amount of Strontium was confined by peak broadening. By using Scherrer equation the average crystalline size is decreased from 40nm to 20nm.SEM images clearly indicate that added Sr concentration is expected to influence the morphology of ZnO. The presence of strontium in the lattice was confirmed by EDS.UV-Vis spectra of doped and undoped ZnO nanoparticles were studied. The spectrum shows maximum absorption peak at 365nm. Photocatalytic activity of ZnO and Sr doped ZnO nanoparticles were studied. The results show that the Photocatalytic activity of Sr^{2+} doped ZnO was much higher than that of pure ZnO. It shows maximum absorbance for pure ZnO and decrease in absorbance as the doping concentration increases. Also the maximum absorbance peak shifts towards lower wavelength side as the doping increases.

KEYWORDS: nano particles, X-ray diffraction, FE-SEM