



ICETMSD-2020

2nd INTERNATIONAL CONFERENCE
ON
ENGINEERING, TECHNOLOGY AND MANAGEMENT
FOR THE SUSTAINABLE DEVELOPMENT
MAY 26-27 2020

ORGANIZED BY

Computer Science & Engineering Department
and
MBA Department

IIMT ENGINEERING COLLEGE, MEERUT, INDIA
(Affiliated to AKTU Lucknow, U.P.)

&

LIFE WAY TECH INDIA
Alwar, Rajasthan, India

Editors

Dr. Sanjeev Maheshwari, Dr. Niranjana Lal, Mr. Amit Garg

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ABOUT GECL AWARDS

GECL Awards is an open platform that brings together some of the national and International most brilliant minds to share their Leadership strategies and insights into Educational, financial, economic, corporate, industry, startups, entrepreneur and management issues, it is initiated by Life Way Tech India Pvt. Ltd Company in year 2018.

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About The Conference

Now a day the academia and researchers are not only pondering, but experiencing the overwhelming outcomes of interdisciplinary researches. Moreover, it has been ubiquitously encouraged by the governments, research agencies and by the academic institutions. The intent behind the multidisciplinary international conference is to provide a common platform, where academia, delegates from industry and nominees from various government agencies can sit together, and cherish about achievements so far, as well as deliberate upon futuristic approaches along with major bottlenecks.

The major objective of this conference was to bring together researchers, developers, and practitioners from academia and industry working in the area of advanced Engineering, Technology, Management, Applied Sciences and Advanced Computing. The conference covered a wide range of issues related to the Engineering, Technology, Applied Science and Management and next-generation computer and computing technologies Problems.

CALL FOR PAPERS

We invite academicians, practitioners, research scholars and students to submit research papers. Some indicative areas related to advanced Engineering, Technology, Management, Applied Sciences and Advanced Computing are given below, though submissions are welcome on any other topics aligned with the broad themes of the conference.

TRACKS

TRACK 1: ENGINEERING & TECHNOLOGY- Advanced Algorithms, Big Data, Communication Technology, Cryptography, Data Analytics, Data Science, Data Security, Database and Data Mining, Deep Learning, High Performance Computing, Image Processing Interpretations, Internet of Things, Machine Learning, Mobile Edge Computing, Biomedical Technologies, Wireless Sensor Networks, Mobile Communication, Civil and Environment Engineering, Electrical Engineering, Electronics Engineering, Mechanical Engineering problems.

TRACK 2: SCIENCE- Coastal Towns and Small Cities, Environmental Sustainability, Renewable Energies, Energy resources and savings, Bio- Energy, Agro- Sciences, Science Education, Atmospheric Physics, Resilience Building in Agriculture, Water and Soil conservation, Science and Mathematics problems.

TRACK 3: MANAGEMENT- Management Information System, Entrepreneurship Management, Collaborative Arts & Culture, Micro Finance, Financial Sustainability, Supply Chain Management, International Trade, SMEs, Customer Relationship Mgt., Economics and Demography, Business Knowledge Management, E-Governance, Technology-Based Entrepreneurship, IT Enabled Practices and Marketing in the VUCA World

TRACK 4: MULTIDISCIPLINARY- Science & Mathematics, Urban Transportation, Advanced Computing Architecture, City Planning, Smart Cities, Distance Education and E-Learning, E-Governance, M-Commerce, Social Science, Applied Science, Health Care.

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IIMT Group owns a special recognition for providing invaluable contribution to the Society in the field of academics since its inception in 1994. It provides education not only in the field of Engineering but IIMT spans to several other domains like life sciences, medical, hotel management, pharmacy etc. IIMT Engineering College is a constituent body of IIMT Group established in 2001 affiliated by Dr. A.P.J. Abdul Kalam Technical University Lucknow. Its transformative education system includes a broad – based curriculum under scored by multidisciplinary courses and cross – faculty enrichment, as well as special programmes which allow students to realize their potential and make them competent, inspired and successful professionals. Further more, IIMT Group envisions getting status of global academic excellence through innovations and research emphatically focused on environmental issues.

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Message

I am delighted to learn that ICETMSD–2020 (**2nd International Conference on Engineering, Technology and Management for the Sustainable Development**) is being organized by IIMT Engineering College. I am sure that it will contribute immensely in collaborating new ideas and dissemination of information. As we move towards greater digital convergence and sustainable development, the need for sharing of ideas, new initiatives and success stories will only help in moving towards a harmonious sustainable environment. My warm compliments are extended for the success of conference and hope this process shall continue for the benefit of the society at large.

CHIEF PATRON | ICETMSD-2020
Shri Yogesh Mohanji Gupta
Chairman, IIMT Group, Meerut



MESSAGES
&
PROFILE



Message

I am extremely delighted to know that **ICETMSD – 2020 (2nd International Conference on Engineering, Technology and Management for the Sustainable Development)** has been organized by IIMT Engineering College. Organization of such events plays catalytic roles in taking IIMT Engineering College to leapfrog ahead in coming years. I hope that ICETMSD – 2020 highlights the hard work put in by organization to develop and implement outstanding initiatives in delivering latest ideas in the field of Academic and Research Excellence across the Nation.

PATRON | ICETMSD-2020

Mr. Abhinav Mohan

Vice Chairman, IIMT Group, Meerut

Patron



Message

At the outset, I would like to convey my appreciation for the work done in organizing of **ICETMSD – 2020 (2nd International Conference on Engineering, Technology and Management for the Sustainable Development)** by IIMT Engineering College. I must say that the theme of Conference is very contemporary and alarming i.e. sustainability development through implementation of engineering, technology and management ideas from global perspective. I hope that this conference provides an enormous platform to delegates from industry and academia.

PATRON | ICETMSD-2020
Mr. Mayank Agarwal
Managing Director, IIMT Group, Meerut



Message

On behalf of **Life Way Tech India Pvt. Ltd.** and in Association with IIMT Group, Meerut, UP, India. I delight to welcome all delegates and participants around the globe to IIMT Engineering College, Meerut, UP, India, for “**2nd International Conference on Engineering, Technology and Management for the Sustainable Development (ICETMSD-2020)**” during 26th and 27th May 2020.

I congratulate the steering committee, reviewing committee, coordinators (**LWT India and IIMT Group**) and all the people involved for their efforts in organizing the event and successfully conducting the International Conference, wish all the delegates and participants also looking forward to your participation in other events of Life Way Tech India.

I wish the conference great success and urge all the participants to brainstorm various themes of the conference.

Mr. Sunil Kumar
Director & Chief Executive Officer
Life Way Tech India
Alwar, Rajasthan, India

Director & CEO, LWT INDIA



Message

I express my delight and extend my gratitude to all committee members taking initiative to organize ICETMSD – 2020 (**2nd International Conference on Engineering, Technology and Management for the Sustainable Development**). IIMT Engineering College has been playing a stellar role in developing, supporting and spreading new advents in the field of academic excellence and radiating the effulgence in North India. However, on this occasion, I urge Faculty and Students to undertake the task of sustainable development by generating the new ideas in order to convert conceptual knowledge into reality. I hope that this conference will lead to fruitful outcomes and serve the interest of society.

EXECUTIVE GENERAL CHAIR | ICETMSD-2020

Dr. V. K. Singh

Vice Chancellor, IIMT University, Meerut



Message

Towards the ongoing development of IIMT Engineering College, I feel very proud and privileged on the successful hosting of **2nd International Conference on Engineering, Technology and Management for the Sustainable Development (ICETMSD–2020)**. Under the transformative visions, the exuberant and skilled staff IIMT Engineering College is marching ahead on the path of academic and research excellence in true sense. It will prove to be a milestone for encouraging young researchers and innovators in the field of sustainability through science technology & management. Conferences provide us the platform to judge ourselves in terms of technology and research domains. We should always assess ourselves by participating in such events. It is a matter of great pride and honor to be a part of such a diversified conference. I congratulate each and every member of organizing team. Further I extend my gratitude towards Honorable Chairman Shri Yogesh Mohanji Gupta and Vice Chairman Shri Abhinav Mohan for their noble guidance and support. I would also like to thank Honorable Prof. V. K. Singh Vice Chancellor IIMT University for his timely feedback and regular monitoring of the event without which conduction of this event on such large scale is not possible. Further I extend warm welcome to all Delegates and Distinguished Speakers / Guests in the arena of research. I wish you all have a great learning experience and diversified knowledge in this conference.

GENERAL CHAIR | ICETMSD-2020
Dr. Sanjeev Maheshwari
Director, IIMT Engineering College, Meerut



Message

“Alone we can do so little; together we can do so much” – Helen Keller

On behalf of the Technical Program Committee, it is our great pleasure to welcome you to the **2nd International Conference on Engineering, Technology and Management for the Sustainable Development (ICETMSD-2020)** during 26th and 27th May 2020 at IIMT Engineering College, Meerut, UP, India (**Online**).

It has been a real honor and privilege to serve as the TPC Chair of the conference. I extend my good wishes and heartiest greeting for organizing this International Conference and look forward that budding Research Scholars, Academician, Students and other professionals across the world will come forward on this common platform to address and discuss various issues related to Social Sciences, Agriculture, Life Sciences, Biotechnology, Management, Computer Science, Engineering, Basic Applied Science for the sustainable development by facilitating knowledge flow from institution to institution & Industry to Industry and vice versa.

I take the privilege to thanks the Chief Guest, Prof. Suhash Chandra Dutta Roy, Ex Professor, IIT Delhi, Guest of Honor, Prof. Raj Senani, Professor, Netaji Subhas University of Technology, Delhi, India. Mr. Sunil Kumar, Director & CEO, Life Way Tech India and the Keynote Speakers, Dr Anil Goswami, Dr. Mani Madhukar, Program Manager - University Relations, IBM India Pvt. Ltd., and Prof. Bhaskar Bhattacharya, Professor, Department of Physics (MMV) in IIT BHU Varanasi, UP, India for sparing their valuable time and enlightening all of us with their impressive talks and Management of IIMT Group.

I congratulate the organizing team of this event. I extend my best wishes to succeed in their future endeavors and hope for successful conduction of this mega event.

TPC CHAIR | ICETMSD-2020

Dr. Niranjana Lal

Department of Computer Science and Engineering

School of Engineering and Technology

Mody University of Science and Technology Lakshmanagarh, Sikar, Rajasthan, India



Profile

Prof. (Dr.) Sanjeev Maheshwari, Director, IIMT Engineering College Meerut is a vibrant and dynamic academician with 30+ years of rich experience in the field of academics. He is known for his punctuality and strictness towards raising standards in academics. Prof. Maheshwari has done his research in the field of Microwave & Optical Fiber. He has done his M. E. from Govt. Engg. College Aurangabad and B.E. from Shivaji University Kolhapur in 1988. His areas of specialization are Fiber Optical Communications, Laser & it's applications and Electro Magnetic Field Theory. He has worked as Director MIT Group of Institutions Meerut for 7 years, as Dean Academics for 11 Years in MIET Engineering College Meerut. His major contributions can be visualized during NAAC accreditations, NBA Visits. He has also been actively involved in conduction of several examinations at University Level. He is also a Member in BoS of Marathwada University Aurangabad. Further he is also involved in Expert Committees at several universities and organizations of national repute.

GENERAL CHAIR | ICETMSD-2020

Dr. Sanjeev Maheshwari

Director, IIMT Engineering College, Meerut

General Chair



Message

We are glad to organize **2nd International Conference on Engineering, Technology and Management for the Sustainable Development (ICETMSD-2020)** at IIMT Engineering College on 26th and 27th May 2020 in collaboration with Life Way Tech India (LWTI), Alwar, Rajasthan India. However, we braved all the odds, and organize this conference on time. We followed a rigorous method to select the papers. All the papers we have included in this issue are peer reviewed and only those papers which went through this rigor, have been given space in this conference and will be published in SCOPUS / WoS / UGC CARE Journals. This conference attempts to document and spark a debate on the research focused on sustainable development in the context of emerging technologies in the field of engineering, sciences and management for the sustainable development. These technologies could be from very sophisticated to very elementary, but in term of impact they would be capable of being commercialized, scaled up and focused on real life challenges.

We sincerely hope that these in-depth research papers, focusing on different technologies, will further stimulate the academic research, and will help in developing an insight into the concerned areas. We are greatly indebted to the paper writers who took keen interest and submitted their research papers on time. It is because of the sincere efforts of these people that the ICETMSD– 2020 Conference Proceedings is in your hands today.

We are grateful to our management Honorable Shri Yogesh Mohanji Gupta Chairman IIMT Group and Shri Abhinav Mohan Vice Chairman IIMT Group who provided all guidance and support without which this typical task cannot be completed.

CONVENERS | ICETMSD-2020

Prof. Amit Garg

Dr. Sangeet Vashishtha

IIMT Engineering College

Meerut, UP, India



Message

Organization of **2nd International Conference on Engineering, Technology and Management for the Sustainable Development (ICETMSD-2020)** gives us immense pleasure and feeling of gratitude. A lot of hard work has been done in making this conference a great success. Success of any conference falls in the hands of Researchers and Academicians / Industry Experts who put lot of efforts in preparing and presenting good quality and original research papers. We welcome all Conference Delegates, Distinguished Guests and Dignitaries and promise to provide you a good treat through the medium of this Conference. We wish all the luck to everyone who is a part of this Conference.

CO-CONVENERS | ICETMSD-2020

Dr. Garima Sinha

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IIMT Engineering College

Meerut, UP, India

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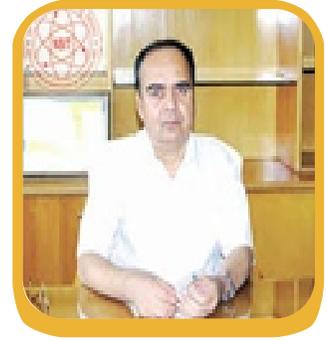


Profile

Prof. Roy is a Former Professor at IIT Delhi in Department of Electrical Engineering. He is an elected fellow of Indian Academy of Sciences, Indian National Science Academy, National Academy of Science India, IEEE, IETE, Systems Society of India, Acoustical Society of India. Throughout his glorified journey he is associated with River Research Institute, University of Kalayani, University of Minnesota, IIT Delhi, University of Leeds, Iowa State University. He has been honored and awarded many times in his life. Some important awards to his credit – IETE MeghnadSaha Award, IETE Ram Lal Wadhwa Gold Medal, Shanti Swarup Bhatnagar Prize, Vikram Sarabhai Research Award, Om Prakash Bhasin Award, INSA Syed Hussain Zaheer Medal, SSI Lifetime Achievement Award, IETE Lifetime Achievement Award, Jawahar Lal Nehru Award, UoC – IRPE Distinguished Alumnus Award. He is an Alma mater of Rajabazar Science College, University of Calcutta. He has countless contribution towards research sector in form of Session Chairs, Presenter, Reviewer. He has a very vibrant series of research publications both national and international to his credit. His research areas include Passive & Active Network Synthesis, Solid State Circuits, Distributed Networks, Digital Signal Processing.

Prof. Suhash Chandra Dutta Roy
Ex Professor, IIT Delhi, India

Chief Guest



Profile

Prof. Senani holds his B. Sc. Engineering in Electrical Engineering from HBTI Kanpur, M. E. Honours from MNREC Allahabad and Ph. D. in Electrical Engineering from MNREC, University of Allahabad. He has started their journey from Lecturer in 1988, and he worked at the various post like Assistant Professor, Reader, Adjunct Professor, Professor, Dean in Govt. institutes like NIT, NSIT. Presently he is working as a professor at Netaji Subhas University of Technology, Delhi, India. Professor Senani's areas of teaching and research interest are Analog VLSI Circuits, Analog Signal Processing, Current-Mode Circuits, Electronic Instrumentation, and Chaotic oscillators. He has published more than 150 international research papers, 04 Book chapters, 04 monographs mainly by Springer. He is an Editorial reviewer of more than 30 international journals like IEEE, IET. He has served as an Editor and advisor in various journals. Professor Senani is a Member of Sigma Xi (The Scientific Research Society, USA), a Senior Member of IEEE (USA), a Life Member of ISTE (India), a Fellow of the Institution of Engineers (India) and a Life Fellow of the Institute of Electronics and Telecommunication Engineers (IETE, India). He was elected a Fellow of the National Academy of Sciences, India (NASI) in 2008 for his contributions to Analog Integrated Circuits and Signal Processing and Analog VLSI. He is the recipient of the Second Laureate of the 25th Khwarizmi International Awards, bestowed upon him by Iranian Research Organization for Science and Technology (IROST) in 2012. His biography has been included in several editions of a number of international directories such as those of Marquis' Who's Who, International Biographical Centre, American Biographical Institute and several others.

Prof. Raj Senani
Professor, Netaji Subhas University of Technology
Delhi, India

KEYNOTE SPEAKERS



Profile

Dr. Mani has 16+ years of experience in IT with exposure to both industry and academia. He holds a doctorate in Computer Engineering and Executive program in Management from McIntire School of Commerce, University of Virginia.

His work areas mainly include Academic Program Management, IBM Cloud Pre-sales, Cloud Application Development, Infrastructure & Platform Cloud Services, Electronic Content Management, Competency Development, Mentoring Startups, Curriculum Design, Project Management, Teaching UG/PG Engineering students and Blockchain.

As part of IBM he has worked in various roles across different technologies including Cloud, Blockchain, Internet of Things, Data Science, DevOps and IBM Watson. Mani to his credit has chapter contribution to books including Springer, research papers in national and international conferences and journals including SCI publications and blogs on Cloud, Big Data, Machine Learning, Sentiment Analysis, IBM Watson, and Recommender Systems.

Mani represents IBM in various forums as technical expert /panelist on various technology areas and advisor to few incubation canter and start-ups. He mentors online community on Blockchain supporting community sessions on IBM Blockchain/Hyperledger and IBM Cloud. He is also an expert on curriculum design and part of many Academic councils/Board of Studies at various academic bodies/universities including AICTE, NITTTR and many more.

Dr. Mani Madhukar
Program Manager - University Relations
IBM India Pvt. Ltd.



Profile

Prof. Bhattacharya is currently working as Professor in Department of Physics (MMV) in BHU Varanasi. He holds his entire academic degrees i.e. B. Sc., M. Sc. and Ph. D. in Physics from Banaras Hindu University Varanasi. He is Life time Member of Indian Physics Association, BARC Mumbai, Indian Society of Technical Education New Delhi, Indian Solid States Ionics Society Varanasi, Indian Society of Radiation and Photochemical Science BARC Mumbai. He is an active member of Society of Society of Advancement of Electrochemical Science and Technology, Karaikudi. He is member of International Advisory Committee – High Performance Polymer Journal. He is Advisory Board member in Invertis Journal of Renewable Energy. He has worked on projects funded by DRDO and DST, Government of India. His earlier associations are at Dean Position at Sharda University Greater Noida, Hindustan College of Science and Technology Mathura and Meerut Institute of Engineering Technology Meerut. He has done fellowships with CSIR and DST New Delhi. He has several patents to his credit. His research area includes Polymer Electrolytes, Dye Sensitized Solar Cell (DSSC) using Polymer Electrolytes, Quantum Dot Sensitized Solar Cells, Supercapacitors, Ion Beam Irradiation effects on Polymer Electrolytes, Carbon Nanotubes and other derivatives for electrode application. He has been awarded many times during his glorified journey some important are – ISCAS Silver Medal, Young Teacher Career Award, Young Scientist Award, Best Poster Award in Singapore. He has very wide range of publications in Journals of national and international repute.

Prof. Bhaskar Bhattacharya
Professor, Department of Physics (MMV)
IIT BHU Varanasi, UP, India

Keynote Speaker

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Conference Program and Schedule (26-27 May 2020)

DAY 1 (26/05/2020)	EVENT	TIME
	ONLINE REGISTRATION	09 AM-10:30 AM
	INAUGURATION	11:00 AM-12:10 PM
	IP MOMENT (SPONSOR)	12:11 PM-12:21 PM
	KEYNOTE ADDRESS -1	12:22 PM-12:50 PM
	LUNCH BREAK	1: 00 PM – 2: 00 PM
	PARALLEL TECHNICAL SESSION-1	2:00 PM – 4:30 PM
	PARALLEL TECHNICAL SESSION-2	2:00 PM – 4:30 PM
	PARALLEL TECHNICAL SESSION-3	2:00 PM – 4:30 PM
	PARALLEL TECHNICAL SESSION-4	2:00 PM – 4:30 PM
	PARALLEL TECHNICAL SESSION-5	2:00 PM – 4:30 PM
	PARALLEL TECHNICAL SESSION-6	2:00 PM – 4:30 PM
	PARALLEL TECHNICAL SESSION-7	2:00 PM – 4:30 PM
DAY 2 (27/05/2020)	EVENT	TIME
	KEYNOTE ADDRESS–2	10:00 AM – 11:00 AM
	PARALLEL TECHNICAL SESSION-8	11:30 AM – 1:30 PM
	PARALLEL TECHNICAL SESSION-9	11:30 AM – 1:30 PM
	PARALLEL TECHNICAL SESSION-10	11:30 AM – 1:30 PM
	PARALLEL TECHNICAL SESSION-11	11:30 AM – 1:30 PM
	PARALLEL TECHNICAL SESSION-12	11:30 AM – 1:30 PM
	VALEDICTORY PROGRAM	02:00 PM – 2:30 PM

Inauguration Schedule (11:00 AM- 12:10 PM)

S. No.	Task	Required Time	Approx. Time
1.	Welcome of Guest and Delegates	3 Min	11:00 AM – 11:03 AM
2.	Welcome Address and Conference report General Chair Prof. (Dr). Sanjeev Maheswari Director, IIMT Engineering College	10 Min	11:04 AM – 11:13 AM
3.	Address by Management IIMT Group of Colleges	20 Min	11:14 AM – 11:33 AM
4.	Address by Mr. Sunil Kumar, CEO & Director, LIFE WAY TECH INDIA Alwar, Rajasthan, India	3 Min	11:34 AM - 11:36 AM
5.	Address by Guest of Honor Prof. Raj Senani, Netaji Subhas University of Technology, Delhi, India	10 min	11:37 AM - 11:46 AM
6.	Address by Chief Guest Prof. Suhash Chandra Dutta Roy, Ex Professor, IIT Delhi	10 Min	11:47 AM-11:56 AM
7.	Release of Conference Proceeding	3 Min	11:57 AM - 12:00 PM
8.	Vote of Thanks by Convener Prof. Amit Garg, IIMT Engineering College	10 Min	12:01 PM - 12:10 PM

VALEDICTORY SCHEDULE (2:00 PM- 2:30 PM)

S. No.	Task	Required Time	Approx. Time
1.	Conference summary by General Chair Prof. (Dr). Sanjeev Maheswari Director, IIMT Engineering College	10 Min	02:00 PM – 02:10 PM
2.	Announcement: Best Paper Award of all Sessions (One Award for Each)	5 Min	02:10 PM – 02:15 PM
3.	Valedictory Address by Executive General Chair Prof. (Dr.) V. K. Singh, Vice Chancellor, IIMT University, Meerut	5 Min	02:15 PM – 02:20 PM
4.	Address by TPC Chair Dr. Niranjana Lal, Mody University	5 Min	02:20 PM – 02:25 PM
5.	Vote of Thanks by Convener Prof. (Dr.) Sangeet Vashistha, IIMT Engineering College	5 Min	02:25 PM – 02:30 PM

TECHNICAL SESSIONS AT A GLANCE

TECHNICAL SESSION 1- ADVANCED COMPUTING AND INFORMATION TECHNOLOGY		
May 26, 2020 (Tuesday)		Time: 2:00 PM – 4:30 PM
Paper Id	Author (s)	Title
8	Dr. Sudhanshu Maurya, Mayank Nautiyal, Prof. Ir. Ts. Dr. R Badlishah Ahmad, Deepika Sharma	Impression of Cloud Computing Environment on E-Commerce Industry
11	Saurabh Singhal, Rooban Agrawal, Amit Garg and Ankur Rastogi	A Literature Survey: Role of TCP in IoT Applications
23	Arju Malik and Garima Bhardwaj	A Survey: Improvement of QoS via load balancing approach in parallel distributed system
45	Riya Sapra and Parneeta Dhaliwal	MissingChain: A novel blockchain system for missing or found cases
48	Sonika Malik and Sarika Jain	Handling Uncertainty in OWL using BN
61	Pooja Bhardwaj, Vikram Bali and Jaspreet Kaur	A Review on Load Balancing and Site Selection of Electric Vehicle Charging Station
63	Shyam Agrawal and Rakesh Rathi	Topology Control Strategies in AdHoc Networks
66	Uma Sharma, Chetna Soni, Arpana Chaudhary and Chilka Sharma	Analysis and Literature Review of Weather Prediction and Forecasting Methods
69	Dr. Krishan Kumar Goyal, Vivek Jain and Dr. Shivani Chauhan	Sorted Burst Time Average RoundRobin Algorithm (SBTARRA)
70	Stuti Kapoor, Aparna Bhardwaj, Vishakha Sehdev and Ankit Verma	Envisioning the Future with Augmented, Virtual and Mixed Reality

TECHNICAL SESSION 2 DATA INFORMATION MANAGEMENT, NETWORK AND MACHINE LEARNING		
May 26, 2020 (Tuesday)		Time: 2:00 PM – 4:30 PM
Paper Id	Author (s)	Title
74	Anil Sharma and Suresh Kumar	Rough Set Theory in Intelligent Information Retrieval: A Comprehensive Survey
83	Kapil Kumar, Anil Kumar Solanki and Sharvan Kumar Garg	Antipatterns: A Search of Negative for Positive The Analysis of Published Taxonomy
89	Dr A K Daniel and Ashok Rai	An Energy Efficient Routing Protocol for Wireless Sensor Network
93	Deepak Vishwakarma and Suresh Kumar	A Survey on Effective Index Design Schemes in Local and Distributed IR Systems
95	Bhavya D N and Chethan H K	Wavelet Transforms in Palm print Recognition
97	Arun Kumar Singh, Khel Prakash Jayant, Nidhi Bansal, Pratik Singh and Amit Awasthi	A proposal for advanced security system based on empirical technologies: cloud computing, machine learning and the Internet of Things
106	Anuj Singh and Arvind Tiwari	Computational Intelligence Technique for the Prediction of Neurotransmitters: A Review

109	Garima Sinha, Deepak Sinha and Pankaj Gupta	Applications of Internet of Things in Renewable Energy Power Generation System for Efficient Monitoring
115	Aejaz Paray and Krishan Goyal	To predict the best hospital in an area using Machine learning.
119	Pradeep Kumar Patel, Chandu Vaidya and Parwani Dhote	Result Analysis of Hidden Identity Mechanism for File Storage Server

TECHNICAL SESSION 3 - IMAGE PROCESSING AND DATA SCIENCE		
May 26, 2020 (Tuesday)		Time: 2:00 PM – 4:30 PM
Paper Id	Author (s)	Title
124	Nidhi Arora and Parth Patpatiya	Implications and Impact of Artificial Intelligence and Sustainable Development in Law & Legal Practice
126	Ranjith K C and Sharath Kumar Y H	Deep Learning for Logo Classification
135	Shaifali Shrivastava, Pratik Singh and Khel Prakash Jayant	An Approach for Secure Message Transmission Based On Steganography
142	Sakshi Saoji, Zayeema Masoom Bhat, Sakshi Karanjekar, Eniya Kulshreshtha and Anjali Naik	Analysis of Convolutional Neural Networks for Lung Cancer detection using CT -scan images.
145	Meena Talele, Smita Jangale and M Vijayalakshmi	Rumor Detection Using Various Deep Learning Approaches
165	Pankaj Kumar Gupta, Shweta Mittal, Prakhar Consul and Jitendra Kumar Jindal	A review of different vulnerabilities of Security in a Layered Network
166	Ajeet Singh, Ankur Rastogi, Saurabh Singhal and Amit Garg	Data analytics: A visionary approach
169	Shailja Gupta, Manpreet Kaur and Sachin Lakra	Sentiment Analysis: A Framework for Text Mining
190	Rajeev Kumar and Jainath Yadav	A Robust Speech Watermarking Techniques using Arnold Transform based on multi - dimension multi -level DWT method
194	Rajesh Agrawal, Harvir Singh, Vijay Singh Rathore and Saurabh Maheshwari	Evaluation of Theory based Handwritten Answers through BFO Model for Pixels and Pruned Scale Invariant Character Features

TECHNICAL SESSION 4 - COMMUNICATION SYSTEM AND ENERGY SYSTEM		
May 26, 2020 (Tuesday)		Time: 2:00 PM – 4:30 PM
Paper Id	Author (s)	Title
10	Dr. Garima Bhardwaj, Arju Malik, Nitin Kumar and Shalendra Singh	Designing of Circular Polarized Micro -strip Patch Antenna

75	Ghanendra Kumar and Sandeep Kumar	Performance Evaluation of Optical Amplifiers for high speed dense Optical communication system
146	Sanjeev Maheshwari, Nikhil Gupta and Arvind Kumar Pandey	A Band Notched Microstrip Patch Antenna with Defected Ground Structure for Ultrawide Band Communication
221	Ruchi Sharma, Khyati Chopra	Abnormalities analysis of EEG Signals for Seizure detection using Logistic regression model and a comparative analysis of neural nets and support vector machine.
222	Ruchi Sharma, Khyati Chopra	A comprehensive review on human stress analysis using brain Signals
60	Budigi Prabhakar and Tanveer Ahmad Wani	Crystal Structure Visualization of Niobium Nitride (NbN) Thin Film
86	Jitendra Kumar Kushwaha and Pankaj Kumar	Study of dielectric parameters of liquid crystal mixtures useful as a dielectric substrate in design of Tunable Patch Antenna
96	Priyanka Malhan and Monika Mittal	Analytical method for determination of cost correlation for Small Hydro Power Plants
100	Simran Srivastava, Saumyadip Hazra, Shini Agarwal, Sauhardh Sethi and Souvik Ganguli	Some new GWO variants for PV systems modelling
123	Tarun Shrivastava, S C Gupta and A M Shandilya	A GWO Implementation for FreeFEM++ and Its Utilization in Optimization of Roebel Cable for SFCL Applications
162	Salim and Jyoti Ohri	Life Cycle Study of Solar Panel using LabVIEW
174	Sonali Raj and Ramesh Kumar	Distinctive approaches for evaluating maximal power from Photovoltaic Energy system
176	Tatikayala Vinay Kumar and Shishir Dixit	Enhancement of Power Quality For Wind Systems In Grid Application With SVPWM Control

TECHNICAL SESSION 5 MANAGEMENT IN EDUCATION, BANK AND EMPLOYMENT		
May 26, 2020 (Tuesday)		Time: 2:00 PM – 4:30 PM
Paper Id	Author (s)	Title
17	Vikhyat Singhal and Dr. Ravinder Saini	Management Education in India: Challenges and Reforms
18	Nitin Agarwal and Dr. Sidharth Jain	An analysis of relationship between macroeconomic variables and stock prices: A case study of BSE Sensex (India)
43	Ms. Megha Grover and Ms. Rashi Jain	A Study On Factors Affecting The Customers Using Virtual Banking

49	Joseph Paul and S. Asrafi	Employee Satisfaction Through Labour Welfare Measures In Hospitality Sector With Special Reference To Chennai
50	B.K. Indrani and S. Asrafi	THR – Combo of Technology with Human Resource Industry 4.0
51	M. Shalini and Dr.M. Radhikaashree	Impact on Digital Implication on Customer Confinement Techniques Using CRM
76	Roopendra Singh and Rashmi Vaishya	Analysing the Employee Engagement practices in State Bank of India, Raipur region
85	Supriya Sehgal, Vaishali Dhingra and Md. Abu Bakkar	Reverse Mortgage - An Empirical Study in NCR
92	Vivek Rajvanshi and Vineet Choudhary	Portfolio Insurance and Leverage Based Strategies

TECHNICAL SESSION 6 - LEADERSHIP AND ORGANIZATION MANAGEMENT		
May 26, 2020 (Tuesday)		Time: 2:00 PM – 4:30 PM
Paper Id	Author (s)	Title
125	John Ben Prince and Viswanathan T	Enhancing understanding of Resource Based View: analyzing impact on performance of Organizations
128	Pushkar Dubey and Satish Kumar Sahu	A Comparative Study of Public and Private Health Care Services of Selected Hospitals in Chhattisgarh State
131	Sahila Chaudhry and Rakesh Kumar	Impact Of FDI, Staff And Expenditure On The Profits Of Indian Private Sector Banks
132	Dr. Pushkar Dubey, Dr. Abhishek Kumar Pathak and Kailash Kumar Sahu	Effect of Workplace Spirituality on Leadership, Job Satisfaction and Organisational Citizenship Behaviour: An Analytical Study in Private Manufacturing Firms
136	Bhupal Bhattacharya	Re- Socialization of Probationers in West Bengal: The need of Sociological Re - integration of Ex -Probationers
139	Palak Sharma and Apeksha Agrawal	What's In A Name? The Abusive Domain Of Cyber Squatting In India
150	Sri Biswajit Pattajoshi, Dr Sangeeta Mohanty and Dr Debadutta Das	Brand -Image Dimensions and Bottom Of Pyramid
230	Bhupal Bhattacharya	Resistance in functioning of subordinate court by advocates in India: Illegal and unethical practices
242	Neha Bobde, Bhupal Bhattacharya	Globalization Fail – Barriers to Free International Trade

TECHNICAL SESSION 7 - OPTIMIZATION IN MECHANICAL SYSTEM		
May 26, 2020 (Tuesday)		Time: 2:00 PM – 4:30 PM
Paper Id	Author (s)	Title
33	Rajesh Kumar, Ajay Pratap Singh and Saurabh Soni	Computational Analysis of the Effects of Elastic Foundations on Elliptical and Rectangular Cutouts FGM Plates with Random Material Properties for Post buckling in Thermal Environments
54	Ram Bansal, Kapil Shrivastava, Himanshu Jain, Nimil Doshi, Niraj Soni and Nikita Soni	Conversion of Conventional Vehicle Into An Electric Vehicle
55	Ram Bansal, Avinash Sharma, Mohammed Ali, Pulkit Shrivastav, Vipul Yadav, Sarthak Mandloi and Rachit Dhanotia	Design and Fabrication Of Electric Bicycle
57	Neelesh Sahu, Amit Dixit, Mohammed Ali, Shreyash Jain, Vishal Gaur and Yash Kushwah	Study of Self Inflating Tyre System
78	Neelesh Sahu, Bhupendra Shikarwar and Mohammed Ali	Design of Shock Absorbing wheel for Bicycle
80	Balajee Suryavanshi, Faisal Rahmani, Aniket Sinha and S Vardhan	Design of Vibration Absorber for minimizing the Vibrations Produced in an Overhead Crane.
81	Mohammed Ali, Shubham Soni, Neelesh Sahu, Ashutosh Khare, Abhi Jain and P Sharatchandra	Comparative Exergy Analysis of Vapour Compression Refrigeration System using R134a and R290
91	Arpit Dubey, Afifa Kanchwala, Aditya Sharma and Ramjanam Singh	Significance Of Entrepreneurial Learning In Education Its Impact And Outcomes
94	Naveen Gupta	Parametric optimization of thermal performance of heat pipe using Taguchi method
98	Avinash Sharma, Mohammed Ali, Ram Bansal, Aditya Pandey, Abdul Majid Khan, Adnan Khan and Aman Burman	Weight Reduction Of Wheel Rim Using 'Peek' Composites

TECHNICAL SESSION 8 - AGRICULTURE, MATH AND APPLIED CHEMISTRY		
May 27, 2020 (Wednesday)		Time: 11:30 AM – 1:30 PM
Paper Id	Author (s)	Title
27	Alok Bharadwaj	Vermiremediation – A Revolution for Sustaining Soil Fertility
53	Kiran Dangwal and Deepa Mehta	Innovative Technology with Micro -Irrigation For Sustainable Farming In Hills

195	K Jayaraj	Green Composite Film for Food Packaging Applications
201	Gurumurthy.B. Ramaiah, Parashuram S Chillal and Ashok P. Ari	Preparation and Properties of Waterproof Coated Fabrics using Non-woven Fabric as Base Material
196	Nikky Kumari	More for Less Paradoxical Situation in Transshipment Problem with Mixed Constraints
244	E. Poongothai and S. Divyapriya	On Fuzzy Soft Strongly Baire Spaces

TECHNICAL SESSION 9 - MANAGEMENT		
May 27, 2020 (Wednesday)		Time: 11:30 AM – 1:30 PM
Paper Id	Author (s)	Title
118	Piyush Goel and Dr Bibhu Prasad Sahoo	A study of Impact of Gross Domestic Product, Taxes and Business Cycle On FDI in India
173	Bibhu Prasad Sahoo and Upasana Dhanda	A study on Impact of Goods & service tax on the manufacturing sector in India
175	Vijay Kumar, Bishwajeet Prakash, Ankit Srivastava, Neha Rajput	Macroeconomic Determinants and Stock Market Volatility: Evidences from Indian Stock Market
182	Patiraj Kumari and Anshika Sharma	Regulation Of Positive Emotions In Emotional Labour Process: Procreate As A Proliferator Of Individual Resilience
202	Dr. Apoorva Trivedi and Dr. Lalitha Pillai	HR : Digital Transformation 2020
206	Dr. Sunil Kumar, Ms. Abha Gupta and Mr. Manoj Kumar Mishra	Human resource practice and patient empowerment: Mediating role of Quality of patient care
212	Ms. P. Vakula Kumari, Dr. Pushkar Dubey	The Mediating Effect of Job Satisfaction on Employee Performance and Organizational Commitment in relation to HRM Practices in Banking Sector in India.
223	Puja Khatri and Neha Verma	The Organizational Attachment Survey: Instrument Development and Exploratory Factor Analysis
240	Sapna Yadav, Mohit Gupta	Startups Branding In Dearth Of Finance: Reinventing Strategies

TECHNICAL SESSION 10 – ADVANCED ALGORITHMS, BIG DATA AND IOT		
May 27, 2020 (Wednesday)		Time: 11:30 AM – 1:30 PM
Paper Id	Author (s)	Title
199	Utsav Upadhyay, Saurabh Maheshwari and Geeta Sikka	SRD-LB: A Smart Route Determining algorithm with Load Balancing for Smart Cities in India

211	Shubham Gupta, Vishal Bharti and Anil Kumar, Priyanka Dahiya	Designing Of A Hybrid Machine Learning Algorithm For Liver Disease Prediction
207	Nipun Bansal, Mrinal Singhal, Mohak Rastogi and Lakshay Arora	Understanding and Analyzing Consensus Algorithms for Blockchain
220	Saksham Bhambri, Muskan Ahuja, Vishakha Sehdev and Ankit Verma	Chatbot as an Innovation of Machine Learning
228	Juginder Pal Singh, Anubhav Bansal and Neeraj Varshney	Bolt Based Smart Bulb for Home Automation Using Internet Of Things (BULBIFI)
234	Ms. Malika Falak Naaz and Dr. Krishan Kumar Goyal	Described a Facial Expression Recognition in Real Time using Machine Learning Algorithm
237	Harshita Khangarot and Alok Kumar	Statistical Decoding the Winners based on Match Parameters in the Game of Cricket
238	Harshita Khangarot and Alok Kumar	An Analysis of Batting Performance of the Cricket Players
239	Harshita Khangarot and Alok Kumar	Statistical Analysis on Bowling Performance of Player
243	Rashika Bangroo, Kushal Gupta and Anil Kumar, Priyank Dahiya	Quantum Inspired Genetic Algorithm to solve Multiprocessor Task Scheduling Problem
250	Sunita Choudhary and Anand Sharma	Ensuring Data Security in Internet of Things through Big Data Analytics

TECHNICAL SESSION 11 - MECHANICAL PURIFICATION AND WELDING SYSTEMS

May 27, 2020 (Wednesday)		Time: 11:30 AM – 1:30 PM
Paper Id	Author (s)	Title
121	Mr. Bhaskar Patel, Mr. Anish Kumar and Mr. Sunil Kumar Patidar	Dual Axis Solar Tracking Energy Based Water Purification System
153	Hari Om Sharma, Bodhisatwa Seal, Nadeem Ali and Mohit Agarwal	Optimization Of Process Parameters Using Multi-Objective Taguchi Analysis
154	Bodhisatwa Seal, Nadeem Ali, Hari Om Sharma and Mohit Agarwal	Friction Stir Welding and Processing
159	Anas Islam and Vijay Dwivedi	Application of statistical and management methodologies in a small -scale industry and their after effects
167	Aman Sharma, Kamal Sharma and Rohit Sharma	Design and Analysis of Chassis and Powder based Additive Manufacturing for Chassis of Under Water Robot
170	Aman Sharma, Vijay Dwivedi, Anas Islam and Nikhil Sharma	Design and Simulation Analysis of gas turbine blade with variation in blade angle
171	Rishabh Chaturvedi, Anas Islam, Aman Sharma, Kamal Sharma and Rohit Sharma	Design and Analysis of Mechanical Gripper of Aristo-Robot for welding

189	Neelesh Sahu, Aishwarya Khare, Ashish Gupta, Anshraj Singh and Gourav Patel	Enhancing Thermo -acoustic refrigeration System with the help of Vapour Absorption Refrigeration System
233	Neelesh Sahu, Abdul Majid Khan, Aditya Pandey, Aman Burman, Adnan Khan and Gourav Patel	In-Wheel Epicyclic Regenerative Braking System

TECHNICAL SESSION 12 - CIVIL ENGINEERING		
May 27, 2020 (Wednesday)		Time: 11:30 AM – 1:30 PM
Paper Id	Author (s)	Title
47	Ali Akbar, Mr. Amir and Uzair Hasan	Experimental Investigation of Fibre Reinforced Based Geo -Polymer Concrete
58	Hemant Singh Parihar, Prakash Singh, Prashant Sharma, Neha Sharma and Yogendra Kumar	Exploring the effects of Stearic Acid in terms of setting time and compressive strength as an admixture in cement mortar
65	Mohit Verma, Neha Sharna, Prashant Sharma and Prakash Singh	Evaluate the effect in terms of setting time and compressive strength of Oleic Acid as an admixture in cement
158	Mohd Umair and Tanveer Ahmad Wani	Steel Foam Aid of Various Disasters In Building Construction
*	Subhash Kumar	Only presentation

ABSTRACTS

TRANSFORMATIONS OF URBAN AGRO ECOLOGY LANDSCAPE IN TERRITORY TRANSITION

José G. Vargas-Hernández, M.B.A.; Ph.D.

Abstract: This paper has the objective to analyze the transformation process of the urban agro ecology landscape in territory transition. It begins questioning the implications that the agro ecological practices and territorial transformation and transition have on food systems sovereignty and security as well as other effects on land uses, climate change, environmental services, etc. The method used is based on an analytical review of the literature to elaborate a critical perspective of benefits and challenges. It is concluded that agro ecology is the key element in the construction of food system sovereignty and security which requires the transition towards the urban agroecology based on the transformation of social and political power structures moving away from corporate control towards community governance aimed to achieve improvement of ecosystem services and environmental sustainability of the city.

Keywords: Agro ecology, landscape, territory, transformation, urban agro ecology

IMPRESSION OF CLOUD COMPUTING ENVIRONMENT ON E-COMMERCE INDUSTRY

Dr. Sudhanshu Maurya, Mayank Nautiyal, Prof. Ir. Ts. Dr. R Badlishah Ahmad, Deepika Sharma

Abstract: Cloud computing is acknowledged as the greatest acquired and emerging technology in the field of IT. In the last few years, it has transformed from speculative thoughts to services and applications based on the requirements of commercialization. Cloud computing caters its clients to remotely access its services over an internet connection. There are many application areas where the cloud environment is used. E-commerce is one such area where the cloud is being used. E-commerce adept small and medium businesses to purchase and sell goods over the internet. We are trying to delve into the influence of the cloud computing environment over the E-commerce industry. Furthermore, the glitch of assets by creating the e-commerce applications taking cloud technology under the consideration and the ways by which cloud computing will affect the services and applications offered by e-commerce. Here we discussed the influence of cloud environment over the e-commerce industry. Besides, an e-commerce model and its implementation over the cloud environment is proposed.

Keywords: Cloud computing, Services, Internet, E-Commerce, Applications, Business.

DESIGNING OF CIRCULAR POLARIZED MICROSTRIP PATCH ANTENNA

Garima Bhardwaj, Arju Malik, Nitin Kumar and Shalendra Singh

Abstract: In this work a square micro-strip patch antenna is designed and simulated. The designing of antenna is on Teflon glass material of dielectric constant of 2.55. The resonating frequency of the designed patch antenna is 2.99 GHz. The electrical parameters like as return loss, directivity, gain and radiation pattern is simulated. The antenna is simulated using IE3D electromagnetic simulator version 14.0. The micro-strip antenna designed is circular polarized.

Keywords: IE3D, micro-strip, circular polarized

A LITERATURE SURVEY: ROLE OF TCP IN IOT APPLICATIONS

Saurabh Singhal, Rooban Agrawal, Amit Garg and Ankur Rastogi

Abstract: IoT can be defined as a M – to M Communication. M can be any computing device like desktop, laptop, PDA, sensor, actuator etc. We have to focus on properties of these communicating devices which are presently in communication with each other. Before going into the depth of communicating devices first and the foremost we have to identify the backbone of IoT i.e. communication channel. The channel through which these devices are communicating with each other. According to OSI model of networking, TCP protocol suite is most effective and widely adopted protocol for performing any kind of communication. Whether the communication is connection less or connection oriented but it has to follow TCP protocol suite. Therefore in order to move further in the direction of IoT communications we are discussing different variants in Transmission Control Protocol (TCP).

Keywords: IoT, TCP, BIC,

IMPLEMENTATION OF THE COMPREHENSIVE ENTREPRENEURSHIP MODEL FOR THE INTERNATIONALIZATION OF ECO-EFFICIENT COMPANIES

José G. Vargas-Hernández and Olga Nayeli Aceves Alvarez

Abstract: The objective of this paper is to analyze the functioning of the integral model of entrepreneurship in a new model of companies that are currently emerging, which aim to be eco-efficient. Therefore, this work aims to study the central perspectives of technology that are based on the phenomenon of entrepreneurship and thus develop a strategy that adapts to companies with an ecological basis to achieve internationalization. This article will analyze a particular company, which specializes in the area of ecological composition, where no chemical product is used to produce the composition, everything that is marketed is made up of a base of alpaca and other organic compounds.

Keywords: Integral model, ecoefficiency, internationalization

MANAGEMENT EDUCATION IN INDIA: CHALLENGES AND REFORMS

Vikhyat Singhal and Dr. Ravinder Saini

Abstract: India is one of the largest country in the world in terms of graduates passing every year. We look around us the job seekers running in the search of job opportunities in the market. Even after having a higher education they are not able to get the desired jobs. The increasing rate of unemployment has become one of the major problems in India. The lack of required employability skills have been observed as a cause for failure in getting the job. Aspirants of management education are facing the enormous challenges in getting employment and excel in their career. In this view the academic institutions may play a vital role in imparting contemporary vibrant knowledge and honing the skills of management students. The reforms in the management education system are highly required to bridge the gap between corporate expectations from management graduates and the skills possessed by them. This research study aims at exploring the challenges faced by stakeholders in the education industry and the attempts have been made to give the new insights into the issues and find the solutions to overcome these challenges. The researcher has gone through a plenty of existing research studies and approach the secondary data to conclude the research work. The policies and announcements made by AICTE and National Education Policy have been considered as an integral part of this research paper.

Keywords: Unemployment, Employability Skills, Management Education, AICTE, National Education Policy

AN ANALYSIS OF RELATIONSHIP BETWEEN MACROECONOMIC VARIABLES AND STOCK PRICES: A CASE STUDY OF BSE SENSEX (INDIA)

Nitin Kumar Agarwal, Dr. Sidharth Jain

Abstract: In the last few years, numerous investors have lost their hard earned money due to the wrong prediction while investing in stocks. Problem of forecasting of stock market trends leads to the objective of this present research study. The problem of investors may be resolved and they may be capable to predict the market if they have the accurate and ample amount of information about the determinants of stock prices. This research work is expected to unearth the factors which play crucial role in determining stock prices. Foreign exchange rate, Money Supply, Foreign reserve have been considered as selected macroeconomic factors for analysis under this study. This research study aims at studying the magnitude of effect of these selected factors on Bombay stock exchange Sensex (India). The monthly data has been collected from reliable source and it is related from April 2010 to March 2017. After review of existing literature, the collected data was examined to state the status of data i.e. existence and non- existence of unit root problem. Johansen co-integration being a wide popular tool has been applied to examine the independent and dependent variables in order to ensure co-integration. To measure the causal relationship among the factors, the granger causality test has been applied.

Keywords: Macroeconomic variables, Stationary of data, Co-integration, Granger causality, BSE Sensex

A SURVEY: IMPROVEMENT OF QOS VIA LOAD BALANCING APPROACH IN PARALLEL DISTRIBUTED SYSTEM

Arju Malik, Garima Bhardwaj, Shriniwas Singh and Prafull Goswami

Abstract: A rapid growth in computer technology demands high accepts load nodes for worldwide network. Load balancing approach in parallel distributed system can be solving the problem of load distribution in large network. The load balancing algorithms were involved for the improvement in the performance and Quality of service (QoS) of the parallel distributed system. After applying the load balancing approach, the assign task of each processor minimizes the execution time of the program and network maintains the effective utilization of each node. This paper gives the survey of newly develop principal concepts for many load balancing approaches parallel distributed computing system. Load balancing consist various types of algorithms, their pros and cons and comparison for parameters in QoS. This paper describes the way of distributing the load in different nodes via a parallel distributed system in order to improve the performance of loaded nodes which help in job response time and resource utilization of each assigned nodes.

Keywords: Load balancing, Distributed system, Parallel Computing, QoS

VERMIREMEDIATION – A REVOLUTION FOR SUSTAINING SOIL FERTILITY

Alok Bharadwaj

Abstract: Soil i.e. also called as mother land is a natural habitat, that play an important role in sustaining life because all living organisms whether plants, human, animals directly or indirectly depend on it for food and shelter. To meet the requirements of increasing human population, rapid industrialization, incorporation of chemical pesticides to increase the crop yield and other anthropogenic activities has polluted the soil. All such activities have increased the concentration of heavy metals, crude oil, petrol, diesel and other aromatic hydrocarbons in the soil upto the hazardous level. One of the remedial approaches i.e. nontoxic and environmental friendly is 'vermiremediation'. In vermiremediation technology earthworms are used. They eat the soil contaminated with such toxic compounds, grind and digest them and excrete the dark coloured, porous, non-hazardous material called vermicast. This vermicast have improved physicochemical properties and biological activity. Moreover, these earthworms also remediate toxic compounds like heavy metals, petroleum products within few weeks to months. Henceforth, vermiremediation is one of the potent tools for the remediation of toxic compounds in soil.

Keywords: Vermiremediation, heavy metals, petroleum products

COMPUTATIONAL ANALYSIS OF THE EFFECTS OF ELASTIC FOUNDATIONS ON ELLIPTICAL AND RECTANGULAR CUTOUTS FGM PLATES WITH RANDOM MATERIAL PROPERTIES FOR POST BUCKLING IN THERMAL ENVIRONMENTS

Rajesh Kumar, Ajay Pratap Singh and Saurabh Soni

Abstract: FGM plates with Elliptical and rectangular cutouts resting on Winkler and Pasternak elastic foundations, for post buckling and random material properties in thermal environments are studied. The basic formulation is done in MATLAB code SFEM and first order perturbation Technique for plate thickness and volume fraction index for amplitude ratios and foundation parameters. The results obtained by the present solution approach are validated with those available in the literatures and independent Monte Carlo Simulation (MCS). Applicability of this study is in Aerospace Engineering.

Keywords: FGM plates, Random material properties, Elastic foundations, Elliptical Cutouts

A STUDY ON FACTORS AFFECTING THE EMPLOYEES USING VIRTUAL BANKING

Ms. Megha Grover and Ms. Rashi Jain

Abstract: In the present era use of internet and going digital has dominated most of the sectors. Banking sector has completely revolutionized. Virtual banking is broadly defined in this paper as the provision of banking services via traditional method of banking. Currently, virtual banking is done through ATM, phone banking, home banking and Internet banking. Understanding people's adoption intention of virtual banking helps banks to formulate promoting strategies to introduce virtual banking to all its customers. The term virtual banking means having access to all banking services online over the internet instead of physically going to a bank. Virtual banks are now seen as an answer to the challenge of designing a new service channel that is fully secure, functional and which customers can readily learn to use and trust it. Virtual banking, a robust "value added" tool, has become the attentiveness for banks to draw in and retain. The questionnaire, containing demographics of the customer, issues of awareness, perception and the level of satisfaction are very well interpreted with the help of simple random sampling method. Through the findings of the study, we wish to express that, banks ought to do a lot to take advantage of virtual banking services.

Keywords: Virtual banking, Innovation diffusion, Information technology, Banking

MISSINGCHAIN: A NOVEL BLOCKCHAIN SYSTEM FOR MISSING OR FOUND CASES

Riya Sapra and Parneeta Dhaliwal

Abstract: Blockchain is an immutable ledger of records that is shared among all the nodes of the network in a distributed fashion. All the transactions are verified by the peers and then written on the blockchain. The updated blockchain is then shared among all the peers. In this paper, MissingChain has been proposed to register missing and found person's complaint. It is a blockchain based approach to bring transparency among police officials and end users. The proposed system will assign a police official to every complaint that will be responsible for solving the case. It will also share the complaints among all police stations throughout the country and will also provide blockchain access to end user for its own complaints.

Keywords: Blockchain, FIR, missing person, lost child, Smart contract, private blockchain

EXPERIMENTAL INVESTIGATION OF FIBRE REINFORCED BASED GEO-POLYMER CONCRETE

Ali Akbar, Amir, Uzair Hasan

Abstract: Fly ash based Geopolymer is considered as the third generation cement after lime and Portland cement. Geopolymer cements are acid resistant cementitious materials with zeolite properties, developed for the long term containment of hazardous and toxic wastes. The term geopolymer is generally used to describe an amorphous alkali aluminosilicate which was also commonly used for inorganic polymer, alkali-activated cements, geocements, alkalibonded ceramics, hydro ceramics etc. This research is carried to investigate the fresh, hardened, durability and structural behaviour of Fibre Reinforced Geopolymer (FRGP) concrete members. The casting and testing of FRGP concrete specimens were done according to the specifications followed for ordinary Portland cement mortar and concrete. The test specimens were heat-cured in an oven/heat curing chamber. The tests were carried out for the fresh concrete initially. The slump value and percentage of flow for fresh geopolymer concrete with and without polypropylene fibre were tested in accordance with ASTM-C143 and ASTM C1362-09 respectively.

Keywords: Geopolymer concrete, Source, Geopolymerization, curing of Geopolymer concrete, Polypropylene fibre geopolymer

HANDLING UNCERTAINTY IN OWL USING BN

Sonika Malik and Sarika Jain

Abstract: Ontologies play a major role in knowledge management and inference. A mechanism for managing uncertainty should be included in ontological applications. The ontological technologies will be the future of the web in the coming era, but it still lacks in certain features like exceptions, uncertainty and default values. Ontology languages such as OWL and RDF are by default discrete in nature, so it cannot handle uncertain information. In this paper the uncertainty in ontology is handled using Bayesian Network. A probabilistic model of uncertainty available in the knowledge base is the Bayesian network. The likelihood of uncertainty can be used in the knowledge base to implement several real-life situations. We have also added defaults and exceptions along with uncertainty which outputs better and more realistic results, therefore enhancing the OWL functionality. The source code is then converted into jar file using maven and this plugin is available for use in Protégé itself.

Keywords: Ontology, Uncertainty, Bayesian Networks

EMPLOYEE SATISFACTION THROUGH LABOUR WELFARE MEASURES IN HOSPITALITY SECTOR WITH SPECIAL REFERENCE TO CHENNAI

Joseph Paul and S. Asrafi

Abstract: The research is on the basis of “EMPLOYEE SATISFACTION THROUGH LABOUR WELFARE MEASURES IN HOSPITALITY SECTOR WITH SPECIAL REFERENCE TO CHENNAI. Due to the differences in technology and meeting various strains of the staffs and to with stand the place in international arcade the firm has to focus on staffs fulfilment on main areas like well-being measures, health, safety, complaint management, motivation, adequate and fair compensation etc., Survey is an operative way of significant about the employee welfare measures providing in the organization and the awareness to the employees about the welfare measures, through the welfare measure the employees getting overall satisfaction in their work, and the welfare measure motivating the employees job performance. The study was built on the Descriptive Research design. The sampling design being used here is Convenience Sampling. The sample size is 200 over 3800 population. Thus this paper seals to utilize primary research, through structured Questionnaire with five point liker scale and secondary method involves data collection through journal, books and website. The main findings 86% of the respondents are aware about the welfare facilities providing by the organization, it is inferred that is 14% of the respondents are unaware about the welfare facilities 45.5% of the respondents are neutral with employee overall the organization, 32% of the respondents are satisfied, 14.5% of the respondents are highly dissatisfied, 1.5% of the respondents are highly dissatisfied. The tools being used for analysis and interpretation are Chi Square test, T – Test, One way ANOVA and Correlation. The submission made by the staffs where mostly applied whenever they were appropriate.

Keywords: Labour welfare, Convenience Sampling, Employee satisfaction, Questionnaire, suggestion, Well Being.

THR – COMBO OF TECHNOLOGY WITH HUMAN RESOURCE INDUSTRY 4.0

B.K. Indrani and S. Asrafi

Abstract: THR- This is the era of industry revolution 4.0. many technologies were arriving to maximise the benefits and improves organisation. Rising of artificial intelligence mainly helps organisation and employees to be Retain and Develop in the market.

What this study states? - This study states amalgamation of technology with human resources.

Research frame- Research design: Descriptive research, Sample design: Convenience sampling. Sample size: 54. Data Collection- Primary data collection: Questionnaire, Secondary Data Collection: Books, Journals, Websites. Objective of the study: To study the effectiveness and efficiencies of technology with Human resource. Findings- There is a relationship between Productivity with Service quality and automation helps for augmentation.

Keywords: Technology, Artificial intelligence, Human Resources, Amalgamation, Automation, Augmentation, Productivity, Service quality

IMPACT ON DIGITAL IMPLICATION ON CUSTOMER CONFINEMENT TECHNIQUES USING CRM

M. Shalini and Dr.M. Radhikaashree

Abstract: Purpose – The retail sector has an impact on customer relationship techniques and confinement. This research undergoes to investigate about the association between customer confinement & customer relationship techniques.

Research Methodology/Design: researcher has used descriptive research design, from the total population the sample size has taken as 126 respondents. Convenience sampling technique has been used, for the data collection the questionnaire has used as the primary data and the secondary data has been observed from books and journals.

Findings: it has found that when a retail store follows customer relationship technique by maintaining the customer database and maintain good relationship with regular customer, so that they can confine more customers easily they can raise their sale and increase the profit of the retail store.

Research limitation/Implications: This research has limited generalized with particular retail store in the Chennai city (Big bazar, Star bazar) and the report of updated data is not independently authenticated.

Practical implementation: This research insistence on the two factors for customer confinement and customer relationship technique which shows the high percentage will helpful for the future research should examine the standardised processes.

Originality/values: the primary augmentation of this research paper is to clear there is the link between customer confinement & customer relationship techniques of the retail store

Keywords: customer confinement, Customer relationship techniques, Retail store

INNOVATIVE TECHNOLOGY WITH MICRO-IRRIGATION FOR SUSTAINABLE FARMING IN HILLS

Kiran Dangwal and Deepa Mehta

Abstract: A vast tract of land inhabited by humans consists of hilly terrain. The people from these hills, per force, resort to terrace cultivation. Water for irrigation is not scarce but mis-managed. Whatever the scant rainfall it receives is allowed to run down the slopes unutilised. No substantial effort is made to enrich the moisture content of the soil or recharge the subsoil water. The water is wasted down through rivulets and streams. The sub Himalayan region is blessed with a string of rivers. Billions of cfs of water just flows down to the plains. No environment friendly efforts are made to harness the energy from this flowing water at micro level. Using conventional means of irrigation by pumps and motors is neither sustainable nor economical. Thus the lack of cultivation is leading to mass migration to big cities in plains for alternate livelihood. Only the old and handicapped persons are left behind to fend for themselves. This in turn is resulting in demographic shift and overcrowding of cities. The village land is lying virtually abandoned in most hilly areas. This paper dwells on utilising and upgrading with newer technology the potentials of natural energy sources available in situ. These sources are the gravitational flow of water, barometric pressure, solar and wind energy. The paper also highlights the adoption of rain harvesting techniques and promotion of micro-irrigation by resorting to capillary and drip irrigation for sustainable development.

Keywords: Micro-irrigation, Green energy, Rain water harvesting, Capillary lift, Drip irrigation

CONVERSION OF CONVENTIONAL VEHICLE INTO AN ELECTRIC VEHICLE

Kapil Shrivastava, Ram Bansal, Himanshu Jain, Nimil Doshi, Niraj Soni, Nikita Soni

Abstract: At the mention of global warming, the first thing that comes to mind is an increasing number of vehicles in traffic, as well as exhaust gases these vehicles emit. To control the emission caused by gasoline vehicles, we aim to offer a cost effective and more environmental friendly way to travel. So, this project describes a modified procedure for a conversion of a specific IC engine vehicle into an electric powered vehicle. Our aim is to target a specific sector of Garbage collection vehicles where an electric motor can be more efficient than an Internal Combustion engine. The reason behind choosing this specific sector lies in observing the working of these vehicles, which mainly operates in lower gears leading to high amount of fuel burning and high emission of exhaust gases. Our project takes a step ahead to save resources and environment.

Keywords: I.C. Engine, Electric Vehicle, Electric Motor, Battery, Controller, Conversion

DESIGN AND FABRICATION OF ELECTRIC BICYCLE

Ram Bansal, Avinash Sharma, Mohammed Ali, Pulkit Shrivastav, Vipul Yadav, Sarthak Mandloi and Rachit Dhanotia

Abstract: The bicycle has gone from being an old- fashioned recreational product of a less polluting means of transport and a compact, ultra-light personal mobility tool. In today's world, the pollution is increasing very fastly and spontaneously because of the heavy usage of fuels, due to that air is contaminating at a high rate which leads to a various severe diseases. And the cost of fossil fuels is also increasing day by day as well as government policy is also try to minimize of atmospheric pollution in surrounding. So, electrical bicycles will be used as the pillars that support individual public transport in large cities. Electric bicycle is a bicycle with an integrated electric motor that is used for propulsion. It is also called as E-bike or booster bike. This bike is built up with BLDC motor, controller, rechargeable batteries and a throttle. The technology gives you the extra oomph you need to cover miles of distance with little effort.

Keywords: Electric bicycle, BLDC motor, Controller, Charger

STUDY OF SELF INFLATING TYRE SYSTEM

Amit Dixit, Mohammed Ali, Neelesh Sahu, Shreyash Jain, Vishal Gaur, Yash Kushwah

Abstract: Driven by studies that show that a drop in tire pressure by just a few PSI (pound per square inch) can result in the reduction of gas mileage, tire life, safety, and vehicle performance, this study developed an automatic, self-inflating tire system that ensures that tires are properly inflated at all times. The design proposes and successfully implements the use of a centralized compressor that will supply air to all four tires via hoses and a rotary joint fixed between the wheel spindle and wheel hub at each wheel. The rotary joints effectively allow air to be channeled to the tires without the tangling of hoses. With the recent oil price hikes and growing concern of environmental issues, this system addresses a potential improvement in gas mileage; tire wear reduction; and an increase in handling and tire performance in diverse conditions.

Keywords: Automatic control, Safe driving, Self-inflating system, Tyre pressure, Vehicle

EXPLORING THE EFFECTS OF STEARIC ACID IN TERMS OF SETTING TIME AND COMPRESSIVE STRENGTH AS AN ADMIXTURE IN CEMENT MORTAR

Hemant Singh Parihar, Prakash Singh, Prashant Sharma, Neha Sharma and Yogendra Kumar

Abstract: This paper addresses the influence of Stearic Acid (SA) on setting time and compressive strength of cement mortar. Till now, researcher used SA as an grinding additive (powder form) with cement during manufacturing of cement. Test have been conducted using 0.25%, 0.5%, 0.75%, 1%, 1.5%, and 2 % of SA by weight of cement. The little change in compressive strength under different curing condition was tested and performed. For testing compressive strength, cubes were casted at a curing age of 3, 7 & 21 days. Initial and final setting time with different proportion of SA has been tested. We have concluded that SA reflects retarding properties when used as an admixture with OPC. It caused set retardation of cement, depending upon the proportion of SA used. Reduction in setting time begins from 0.5% SA content and flash setting occurs at 2.0% SA content. So, SA can be used as an effective retarder which shows a slight change in compressive strength of cement mortar.

Keywords: Grinding aids, Admixtures, initial and final setting, Compressive strength

CRYSTAL STRUCTURE VISUALIZATION OF NIOBIUM NITRIDE (NbN) THIN FILM

Tanveer Ahmad Wani and B.prabhakar

Abstract: The crystal structure of Niobium Nitride (NbN) Thin film has fascinated the material science research group. The structural parameters are calculated by crystal structure visualization and functional program, diamond software. The angles are calculated and the table of angles is configurable in this research work. The measurement of extended geometric features include angle between two planes , angle between two lines, angle between a normal of a plane and a line, distances of atoms from a plane or a line and centroid of a set of atoms and planarity or linearity of a set of atoms . By altering columnar inclination angle, and vapour incidence angle, different and varied properties of the films emerge which are characteristic for special applications. The peak positions, intensities and Powder diffraction data have been used to determine the Crystal structure of NbN Thin film. The powder diffraction is used to examine the small, weakly interacting crystal orientations. The powder diffraction technique has been used to study the polycrystalline materials such as metals and alloys High quality, high resolution powder patterns have been recorded with short scan times. The crystal structure visualization and powder diffraction pattern of NbN Thin film are further investigated in this research study.

Keywords: NbN Thin film, Crystal Structure, Diffraction Pattern, Functional program

A REVIEW ON LOAD BALANCING AND SITE SELECTION OF ELECTRIC VEHICLE CHARGING STATION

Pooja Bhardwaj, Vikram Bali and Jaspreet Kaur

Abstract: Due to continuous changes in environmental activities in the pollution level i.e. climate change, rapid depletion of natural resources, deforestation, and global warming have become major global concerns. Electric automobiles are a revolutionary idea for drastically reducing road traffic emissions. This is a vital aspect of diminishing carbon dioxide (CO₂) pollution, air pollutants, and passenger vehicle traffic and light commercial vehicles. This paper discusses the need for Electric vehicles in the India market and designs the Location Design for the collection of electric charging stations for automobiles. Further development of Electric vehicle construct the load balancing model for the charging station i.e., Electric vehicle traveling simulation process model, Queuing process model, and Active charging selection model. This study aims to provide a better and more efficient comparison of different strategies and help the researcher to select the best solution from all current models.

Keywords: Electric Vehicle, charging station, load forecasting, charging infrastructure

TOPOLOGY CONTROL STRATEGIES IN AD-HOC NETWORKS

Shyam Sundar Agrawal, Rakesh Rathi

Abstract: Topology control is about determining transmission power of each node in the network so as to consume minimum power while maintaining the network connectivity. A low transmission power results into moderate energy costs and low interference that in turn, enhances the network longevity and capacity. However, low transmission range may affect the network connectivity adversely. Therefore, under topology control, nodes collaboratively determine energy efficient transmission power, while maintaining connectivity. Topology control algorithms are categorized as globalised and localized topology control algorithms. Globalized algorithms require a central node to collect information of the whole network while in localized versions; each node uses only the information that is one-hop away. Therefore, localized topology control algorithms are more scalable and energy efficient. Further, topology control algorithms are categorized as 1-edge connected or k-edge connected. A network is called k-edge connected network if it remains connected even after failure of up to k-1 links. In this paper, a survey on topology control algorithms, which are used in mobile ad-hoc networks, wireless ad-hoc networks and wireless sensor networks, is presented. The basic geometrical structure used in designing of topology control algorithms, the network parameters used to evaluate performance of topology control algorithms and their relationship is also summarized.

Keywords: Minimum Spanning Tree Shortest Path Tree, Relative Neighborhood Graph

EVALUATE THE EFFECT IN TERMS OF SETTING TIME AND COMPRESSIVE STRENGTH OF OLEIC ACID AS AN ADMIXTURE IN CEMENT

Mohit Verma, Neha Sharna, Prashant Sharma and Prakash Singh

Abstract: This paper studied the effect of Oleic Acid (OA) as an admixture on cement mortar paste. Many engineers, manufactures & researchers have helped the cement industry by using OA as a grinding aid in manufacture process. In this investigation, the influence of OA on physical properties of cement paste for finding initial & final setting time and compressive strength has been widely discussed. Various percentage of OA was taken as 0.5%, 0.75%, 1.0%, 1.5% and 2.0% by weight of cement. For this purpose, cubes were cast & after casting normal curing was done with cement mortar mixes. For examining compressive strength, we used OA in two ways, firstly by replacing water amount and secondly by adding it with water. Compressive strength for these mixes were examined at different curing ages of 3, 7, 28 days. Initial and final setting time of cement paste performed as adding with various percentage of OA at 28±20C. The examined results showed that Initial & Final setting time of mixes increases with slight change in Compressive strength. We have noticed that there is a slight difference in results, when using OA as an admixture than grinding additive. So the retarding effect of OA and compressive strength of cement mortar paste had been widely discussed in this paper.

Keywords: Grinding aids, Admixtures, initial and final setting, Compressive strength

ANALYSIS AND LITERATURE REVIEW OF WEATHER PREDICTION AND FORECASTING METHODS

Uma Sharma, Chetna Soni, Arpana Chaudhary and Chilka Sharma

Abstract: Weather forecasting is the interesting area of research as so many living and survival conditions are heavily dependent on it in many living and non-living regions round the globe. Nowadays prediction of weather effecting human life in so many ways in different areas like Agriculture, Fishing, Military Surveillance and many more. In the current work various problems in the prediction of weather forecasting have been identified also existing Forecasting methods along with the parameters, domain and advantages, have been discussed such as machine learning based models, Artificial Neural Networks based models, Convolutional Neural Network, Deep neural network, Numerical weather prediction, support vector regression based models and Linear Regression model on the basis of Domain, Advantages and used parameters.

Keywords: ANN, CNN, DNN, Linear Regression, Neural Network, SVR, Weather

SORTED BURST TIME AVERAGE ROUND-ROBIN ALGORITHM (SBTARRA)

Vivek Jain, K. K. Goyal and Shivani Chauhan

Abstract: Cloud computing is a technology changing the way of using data, software, platform and infrastructure on a pay as you go and on-demand model which provides high performance with huge storage services and high scalability which uses virtualization technology, provide the available shared pool of resources present on cloud to the requesting user. Cloud Computing is shifted from buying of product to pay per model as the user requirement and demand. The main goal of cloud computing is to provide efficient access to geographical distributed resources remotely. To host an application in real cloud environment is a costly process. So for these different types of simulation tools are available like CloudSim, CloudAnalyst, GreenCloud, iCanCloud, EMUSIM, GroudSim etc. In computer, task scheduling is a method of arranging the submitted task into a particular sequence for execution. There are thousands of jobs to be executed by the resources available on cloud data centers to achieve minimum time, high performance and the proper utilization of CPU and resources. To overcome with these challenges there is a requirement of efficient job scheduling algorithm that minimizes the response time and gives high performance. Different job scheduling algorithms have different perspective and principles. The entire job scheduling algorithms covers some performance metrics.

Keywords: Cloud computing, Virtualization, CloudSim, Job scheduling.

ENVISIONING THE FUTURE WITH AUGMENTED, VIRTUAL AND MIXED REALITY

Stuti Kapoor, Aparna Bhardwaj, Vishakha Sehdev and Ankit Verma

Abstract: This paper demonstrates the outline of the present cutting edge in augmented reality, virtual reality, mixed reality and the fundamental ideas of this innovation. It portrays the primary fields in which it is applied these days. Right now, content is flawlessly coordinated with presentations of genuine scenes, is a developing region of intuitive plan. With the ascent of individual cell phones fit for creating fascinating increased reality situations, the huge capability of this innovation has started to be investigated. This innovation permits a client to connect with a PC reenacted condition, regardless of whether that condition is a recreation of this present reality or a conjured-up universe. It is the way to encountering, feeling and contacting the past, present and what's to come. It is the mode of making real and the tweaked reality.

Keywords: Augmented Reality, Virtual Reality, Scientific Visualization, Virtual, Environments, Mixed Reality.

ROUGH SET THEORY IN INTELLIGENT INFORMATION RETRIEVAL: A COMPREHENSIVE SURVEY

Anil Sharma and Suresh Kumar

Abstract: Today World Wide Web” is the largest pool of information in terms of volume, but still users are struggling to get relevant information. Information retrieval systems suffers mainly due to two reasons: first, information overload problem, and second, vagueness and imprecision prevailing in document representations as well as in the information need description by the users. Rough set theory is a mathematical tool for dealing with vague, uncertain, imprecise and incomplete information. Due to this ability, rough set theory has found its applications in various domains related to artificial intelligence. One of such domains of application of rough set theory is information retrieval. In this survey, we have focused on rough set and its generalization models applied in information retrieval. Some existing surveys tried to comprehend rough set-based information retrieval models but were restricted in their scope. This study provides systematic and comprehensive elucidation of different rough set-based information retrieval models, their basic approaches, key features, strengths and limitations. A comparison of reviewed frameworks is also included for critical analysis.

Keywords: Rough Set Theory, Rough Extension models, Information Retrieval, Equivalence Relation, Rough Approximations

ANALYSIS THE CHARACTERISTICS OF OPTICAL AMPLIFIERS FOR HIGH SPEED DENSE OPTICAL COMMUNICATION SYSTEM

Ghanendra Kumar and Sandeep Kumar

Abstract: : Fiber-optic amplifier has presently perverted interest of research for efficient broadband enlargement in fiber-optic communication network system. In this paper, we have investigated the possibility of comparison of optical amplifiers in terms of performance parameters in proposed dense wavelength-division-multiplexing (DWDM) system. The erbium doped fiber amplifier (EDFA) is used as a power booster and inline optical amplifier is used as RAMAN amplifier and semiconductor amplifier in optical transmission system. This paper optimize the competent design parameters such as gain, bit error ratio (BER), quality factor for optical amplifiers (erbium doped fiber amplifier, Raman amplifier and semiconductor optical amplifier). The profile of the gain of optical amplifier is depend on the optic fiber length with operating wavelength range is 1.50 μm to 1.640 μm that gives maximum gain of 43.5 dB, 33.9 dB, and 25.5 dB for EDFA, Raman amplifier and SOA respectively. The minimum BER of 10⁻⁴ is reported with transmission distance of 100 km and better-quality factor of 37.5 dB is obtained.

Keywords: Dense wavelength division multiplexed (DWDM), gain, BER, quality factor

AN ANALYSIS OF THE EMPLOYEE ENGAGEMENT PRACTICES IN STATE BANK OF INDIA, RAIPUR REGION, CHHATTISGARH

Roopendra Singh and Rashmi Vaishya

Abstract: The success and growth of an organization is dependent on the level of employees' performance. The performance of the employees is determined by the level of employees' engagement. Engagement has the potential to significantly affect Employee Retention, Productivity, and loyalty. The study attempts to identify the predictors of Employee Engagement and investigate its level among the employees of State Bank of India falling in Non Managerial Executive cadre, with special reference to Raipur region of Chhattisgarh state situated in Central India. The research is based on the primary data collected from 104 employees on multiple dimensions related to Employee Engagement and its drivers. The research showed that the level of employee engagement in the organization is dependent on seven Factors namely Employee Job satisfaction, employee pay and financial benefits, employee sustainability and career progression, employees job profile, working environment and organization culture. Further, the association of demographic factors with employee engagement drivers is analyzed. The research also showed that whereas the male employees are more driven by the career progression and better job opportunities, the female employees are more inclined towards stability and sustainability in job

Keywords: Employee Engagement, Constructs of employee engagement, Demographic factors, State, bank of India, Factor analysis, Construct validity

DESIGN OF SHOCK ABSORBING WHEEL FOR BICYCLE

Amit Pandey, Awadhesh Sharma, Arpit Kumrawat, Bhupendra Sikarwar

Abstract: In today's world, Bicycles are the most preferred choice when it comes to causes like health, pollution, and the environment. Several types of research have been done to make the ride comfortable. Peculiar sorts of cycles have been designed for different applications like Commuter Bikes, Mountain Bike, and Racing bicycle. Shock absorber wheels offer you a more tranquil ride. Shock absorber wheel springs are generally comprised of a steel material specifically designed to offer ideal pressure and horizontal soundness and quality and strength. The three shock absorbers in each wheel work along as a self-amending framework. This suspension framework between the centre point and the edge of the wheel gives suspension that constantly acclimates to bumpy landscape padding the rider from irregularities in the street.

Keywords: In-wheel suspension, Shock absorbing wheel, Shock Absorber, Nitrogen gas spring, Static, analysis, Bicycle suspension

DESIGN OF VIBRATION ABSORBER FOR MINIMIZING THE VIBRATIONS PRODUCED IN AN OVERHEAD CRANE

Balajee Suryavanshi, Faisal Rahmani, Aniket Sinha and S Vardhan

Abstract: Vibration refers to the oscillatory motion of a body about its mean equilibrium position. It is one of the major causes of accidents and damages caused to any mechanical equipment such as overhead cranes. Hence, vibration plays a major role in accidents of overhead cranes because of which they get derailed and can cause numerous problems. While in running condition, motor will produce vibration due to unbalance centrifugal force. When the frequency of rotation of motor matches the natural frequency of beam, a condition of resonance will occur and significant vibration amplitude of beam will restrict the operation of overhead crane for safety. Oueini et al. (1998) studied the non-linear vibration absorber for flexible structures that eliminates the vibration of single degree of freedom system. Moradi et al. (2008) stated that dynamic vibration absorbers are used to reduce the undesirable vibrations in many applications such as bridges, engines, transmission lines etc. Liao and Xuan (2011) designed an active adaptive tuned vibration absorber. A voice coil motor could be attached to a conventional magneto rheological elastomer adaptive tuned vibration absorber to improve its performance. Yang et al. (2011) carried out study on dynamic vibration absorbers and observed that the vibrations produced in a particular band of frequencies were being absorbed by the dynamic vibration absorber. Huang and Lin. (2014) had done the design of vibration absorber for periodic excitation. Since the periodic rather than the single harmonic excitation was the most occurring case in mechanical systems, the author believed that the design of Periodic Vibration Absorber (PVA) is hence of engineering significance.

Hence, vibration absorbers are very much effective in reducing the failures in various mechanical equipment and hence can also be used to absorb the vibration produced by the motor of an overhead crane. In order to reduce the level of vibration in overhead cranes a vibration absorber can be designed to absorb the energy due to vibration and reduce the level of vibration in the main system. Vibration absorber comprises of an auxiliary system which may be a spring mass system or a cantilever type.

In the present work, the auxiliary system comprises of a cantilever beam arrangement, which when attached to the motor, absorbs all the transverse vibration energy of the main system. Hence, with the help of vibration absorber, vibration in motors of overhead cranes can be significantly reduced.

Keywords: Vibration Absorbers, Overhead Cranes, Reducing the amplitude of, vibration

COMPARATIVE EXERGY ANALYSIS OF VAPOUR COMPRESSION REFRIGERATION SYSTEM USING R134A AND R290

Shubham Soni, Mohammad Ali, P.Sharat Chandra, Ashutosh Khare, Abhi Jain

Abstract: In this research work exergy analysis of VCR system is performed using an existing refrigerant R134a with an alternate refrigerant R290. R290 has very low GWP & ODP as compared to that of R134a. Hence its applicability in terms of exergy destruction is being studied. First and second laws of thermodynamics are used as tools for the analysis.

Keywords: VCR system, low GWP and ODP, Exergy analysis,

ANTIPATTERNS: A SEARCH OF NEGATIVE FOR POSITIVE THE ANALYSIS OF PUBLISHED TAXONOMY

Kapil Kumar, Anil Kumar Solanki and Sharvan Kumar Garg

Abstract: Performance is an important quality attribute among all other attributes. It is important to analyze the performance of any software system and on the other hand is difficult to understand. If the performance of any software is not up to the mark, a number of negativities for example the breakage of strong relationship with the customer, downing of business, wastage of money and time, reimplementing of software or application etc. may occur. If the problem of poor performance occurs it may create delays in the implementation, restructuring and even the system may be implemented again which automatically increase the cost of the overall project.

Antipatterns are solutions to the recurring design problems occurs due to poor practices and poor smells. The identification of antipattern has become the topic of interest of the scientist and the software or application developers. A number of approaches of detection of antipatterns have also been proposed by the researchers. Software Developers and Modeling Experts should be aware of all these types of antipatterns. Although a number of research papers have already been written to explore the importance of antipatterns but a structured bibliography of antipatterns which shows its necessity is missing. To overcome this difference, this paper presents a bibliography of presented and proposed antipatterns observed in established systems.

Along with the analysis of existing antipattern, some issues for future discussion will also be proposed. This paper provides a support to research scholars and the software developers those who are interested in analysis of already proposed taxonomy related to the finding of antipatterns during the development of any software.

Keywords: Antipattern, Poor Smells, Poor Practices, Process Models, Taxonomy

REVERSE MORTGAGE - AN EMPIRICAL STUDY IN NCR

Supriya Sehgal, Vaishali Dhingra and Md. Abu Bakkar

Abstract: Reverse Mortgage is mortgage instrument which helps elderly convert their housing equity into cash to fund their retirement expenses. Reverse Mortgage as a concept had developed in Europe over two hundred years ago which then slowly evolved into the modern reverse mortgage instrument. It was introduced in USA in the year 1988 in the form of Home Equity Conversion Mortgage (HECM) , a non recourse loan. It was later introduced in other countries including but not limited to Canada, Australia, Hong Kong . It was introduced in India in 2007. It has got a mixed response everywhere being a “complex” and “confusing” among other factors. Reverse Mortgage loans did not take many takers in India. Despite the large size of market it failed to garner the success if was expected to. This paper explores the factors affecting demand and supply side of reverse mortgage and see how future demand for Reverse Mortgage Loans can be generated.

Keywords: Reverse Mortgage, Senior citizens, India, Financial planning, Govt. policies

STUDY OF DIELECTRIC PARAMETERS OF LIQUID CRYSTAL MIXTURES USEFUL AS A DIELECTRIC SUBSTRATE IN DESIGN OF TUNABLE PATCH ANTENNA

Jitendra Kumar Kushwaha, Pankaj Kumar, K K Raina

Abstract: The principal dielectric permittivity (ϵ') and dielectric loss (ϵ'') components were measured as a function of temperature, and the D.C. bias voltages for a nematic liquid crystal mixtures. The relaxation frequency (f_r), dielectric strength ($\delta\epsilon$), and distribution parameters (α) have been calculated. The result of substrate to influence for propose the use of liquid crystal mixtures as a dielectric substrate for a tunable patch antenna whose frequency can be tuned by changing the temperature and biasing voltage across the substrate due to dielectric parameters were changed with temperature and bias voltage has been reported in this paper.

Keywords: Nematic liquid crystal (NLC) mixture, Relaxation frequency, Dielectric strength, Patch Antenna

AN ENERGY EFFICIENT ROUTING PROTOCOL FOR WIRELESS SENSOR NETWORK

Ashok Kumar Rai, A.K.Daniel

Abstract: Wireless sensor network (WSN) made up of sensors and sink having self-configured and infrastructure less network property. Energy plays an important role to effect the lifetime of network. In the paper new algorithm is proposed based on residual energy and distance from base station. The cluster head selection is based on residual energy and distance from each other The Proposed protocol simulation shows better performs compares to LEACH protocol in terms of network lifetime, energy consumption in transmission of packets.

Keywords: Residual energy, distance, cluster head, Wireless sensor network

SIGNIFICANCE OF ENTREPRENEURIAL LEARNING IN EDUCATION ITS IMPACT AND OUTCOMES

Arpit Dubey, Afifa Kanchwala, Aditya Sharma, Ramjanam Singh, Mohammed Ali

Abstract: The study tells about the current scenario of the country where we are generating humongous amount of theoretically qualified students failing to qualify for industry-ready jobs and discusses how learning about entrepreneurship and implementing it along with the traditional course can not only multi-dimensionally improve a student's performance but can also act as a bridge between the knowledge and its successful implementation for solving the problems of society and boosting the economy.

Keywords: entrepreneurship, entrepreneurial learning, unemployment

PORTFOLIO INSURANCE AND LEVERAGE BASED STRATEGIES

Vivek Rajvanshi and Vineet Choudhary

Abstract: In this paper we examine the performance of two portfolio insurance strategies - CPPI and Structured Note. We also propose Structured Note strategy which allow for Value at Risk (VaR) based dynamic leverage. We have implemented these strategies by using Nifty50 Index - a broad equity index in India, two sectoral indices - Nifty IT Index and Nifty Bank Index, one bond index, and risk-free rate index - Overnight Interest Rate Swap (OIS). We use monthly data from January 2004 to June 2019 to test Modified Structured Note Strategies and compared its results with the well-known Constant Proportion Portfolio Insurance (CPPI) strategy by using Sharpe ratio and drawdown measure. Our results suggest that both CPPI and Structured note strategies reduce risk significantly in high volatility days and Structured note strategies provide higher reward to risk ratios.

Keywords: Portfolio Insurance, CPPI, Risk Management, Structured Note

A SURVEY ON EFFECTIVE INDEX DESIGN SCHEMES IN LOCAL AND DISTRIBUTED IR SYSTEMS

Deepak Vishwakarma and Suresh Kumar

Abstract: The effectiveness of an information retrieval system depends on how efficiently its inverted index is implemented. It actually depends on the data structures which are used to implement the dictionary and the postings. It also depends on the amount of data to be indexed. To select best possible strategy, proper analysis must be performed for different aspects like the storage requirements of selected data structure, the compactness of the data after applying compression etc. Designing an inverted index includes designing of both dictionary and postings parts. Mostly, on the web, the indexes cannot be constructed on single machine. So, we perform distributed indexing. Also, for a dynamically changing corpus, we must perform dynamic indexing. For better memory utilization and efficient operations, various compression strategies are applied to the indexes. This survey paper presents major steps for effective index construction on both single machine and distributed environments. It also analyses and outlines the advantages and issues of different tricks and techniques involved in inverted indexing.

Keywords: Distributed Index, Dynamic Index, Hashing, Index compression, Inverted Index, Search Trees

PARAMETRIC OPTIMIZATION OF THERMAL PERFORMANCE OF HEAT PIPE USING TAGUCHI METHOD

Naveen Kumar Gupta

Abstract: Heat pipe is used to increase the heat transfer rate for a given temperature difference. In compact and high heat flux generating systems heat pipe facilitates, higher heat transfer rate leads to the effective operation of the system. Thermosyphon heat pipe is a specific type of heat exchanger, known as gravity assisted heat pipe. Thermal efficiency of thermosyphon depends on the various operating parameters like power input, inclination angle, working fluid, vacuum pressure etc. In present paper authors find out the maximum thermal efficiency for various level of operating parameters. Design of experiments using Taguchi approach is used for finding the most suitable parametric combination for maximum thermal efficiency of heat pipe.

Keywords: Heat pipe, Thermal efficiency, Taguchi method, Thermal performance

WAVELET TRANSFORMS IN PALM PRINT RECOGNITION

Bhavya D N and Chethan H K

Abstract: In this paper, we have planned palmprint based person identification by exploiting wavelet features. In addition to this, we also proposed a multi-algorithm based palmprint identification system using MWT, CWT and DWT. For effective classification, we used convolution neural network. PolyU palmprint database is used to conduct Extensive experiments. Through experimental results, it shows that the DWT features achieves good classification results, when compared to the classification accuracies obtained for CWT and MWT moments alone.

Keywords: CWT,DWT, MWT, PCA, LDA

ANALYTICAL METHOD FOR DETERMINATION OF COST CORRELATION FOR SMALL HYDRO POWER PLANTS

Priyanka Malhan and Monika Mittal

Abstract: In recent years, small hydro power plants played a vital role in the sustainable development of various developing countries. It provides technically feasible solution for electricity supply to the far flung areas where power supply through conventional grid doesn't seem viable. This technology is widely accepted all around the world due to its least cost of generation among other renewable options. India has planned to harness 5 GW from SHPs (Small Hydro Projects) till 2027. In order to meet the set targets, planning and design stage of the project needs to evaluate the initial investment costs involved in successful implementation of small hydro systems. Therefore, the decision making process would require total project cost estimation to study the effect of different parameters on its development. In this paper, an attempt has been made to develop total project cost correlation based on rated power, net head and design discharge of SHPs with special emphasis on involving discharge data for cost evaluation procedure. The accuracy of derived cost expression is characterized by mean error which is found less than that reported in the literature.

Keywords: Small hydro power plant, Project Cost, Discharge, Net head, Power

A PROPOSAL FOR ADVANCED SECURITY SYSTEM BASED ON EMPIRICAL TECHNOLOGIES: CLOUD COMPUTING, MACHINE LEARNING AND THE INTERNET OF THINGS

Arun Kumar Singh, Khel Prakash Jayant, Nidhi Bansal, Pratik Singh and Amit Awasthi

Abstract: Emerging technology takes a very large place in the technology database. As a mixture of two or more methods gives greater suitability for the work of any real complex problem, embedded systems prove to be very efficient and very effective for running in any complex task. The large-scale selection and manipulation of empirical technologies prove positive for future development to run life smoothly. Given a large number of applications, intellectual comics are eager to design this paper to create images related to a mixture of several technologies. Cloud computing, machine learning, and the Internet of Things are working together to create a very special model for many coming challenging tasks. Cloud proved to be an assurance, with the absolute percentage of availability of the resources provided based on demand and satisfaction criteria. A survey provides inspiration to show a model that proposes a mixture of these three mentioned technologies. Through which, each user will be assured to complete their task using the features of the CMI proposed system. This work will allow researchers to make appropriate technology decisions to run user applications.

Keywords: Cloud Computing, Machine Learning, Internet of Things

WEIGHT REDUCTION OF WHEEL RIM USING 'PEEK' COMPOSITES

Avinash Sharma, Mohammed Ali, Ram Bansal, Aditya Pandey, Abdul Majid Khan, Adnan Khan, Aman Burman

Abstract: This work or research deals with design of PEEK (Polyether ether ketone) composite wheel for automobile application which carried out paying special reference to optimization of the mass of the wheel. With the help of Finite Element Analysis, results show that the optimized mass of the wheel rim could be reduced to around 40-50 % as compared to existing alloy wheel. The results of the material are compared with one another and with best mechanical properties are considered as an alternative material for conventional wheel rim. The main purpose of this project is regarding with un-sprung weight of an automobile. The un-sprung mass of a vehicle offers a trade-off between a wheel's bump-following ability and its vibration isolation. Bumps and surface imperfections in the road cause tire compression, inducing a force on the un-sprung mass. A lighter wheel which readily rebounds from road bumps will have more grip and more constant grip when tracking over an imperfect road. For this reason, lighter wheels are sought especially for high-performance applications such as in case of F-1 car.

Keywords: PEEK composite, aluminium alloy, unsprung weight, wheel rim

SOME NEW GWO VARIANTS FOR PV SYSTEMS MODELLING

Simran Srivastava, Saumyadip Hazra, Shini Agarwal, Sauhardh Sethi and Souvik Ganguli

Abstract: Single Diode Model (SDM) is one of the models used for the modelling of PV cells where five parameters are to be determined. This work accurately determines the five parameters of the SDM using meta-heuristic algorithm. Three equations have been considered for parameter extraction. The parameters of three widely used panels (KC200GT multi-crystal, MSX-60 poly-crystalline, and CS6K-280 M mono-crystalline) are extracted. The summation of the square of errors is used to define the error function. The Grey Wolf optimization (GWO) and its variants have been used. The values of the parameters and the error for all the three panels are compared for each algorithm. The results obtained are very promising and the error in the results is very less with GLF-GWO proving out to be the best.

Keywords: Single double model (SDM), Grey wolf optimizer (GWO), parameter, estimation

COMPUTATIONAL INTELLIGENCE TECHNIQUE FOR THE PREDICTION OF NEUROTRANSMITTERS: A REVIEW

Anuj Singh, Arvind Kumar Tiwari

Abstract: Neurotransmitters are endogenous chemical messengers participating in the transmission of nerve signals as well as they play significant tasks in human brain activity. Alterations in concentrations of neurotransmitters are contributed to several other behavioral or physiological disorders in the brain. Determination of specific neurotransmitters is becoming more and more essential for disease detection, control, and recovery. Efficient monitoring of neurotransmitters is important for diagnosing and treating disease and for researching and developing new drugs. The voltage-gated ion channels are accountable for creating motion abilities in the human neurons. The main subunits of voltage-gated channels Na⁺, Ca²⁺ as well as K⁺ are participants of an associated gene family and seem to be fundamentally independent in voltage-dependent activation, ion conductivity. They are the top choices for the drug industry. Ligand-gated ion channels containing a pore that permits specified ions to the regulated move throughout the plasma membrane. They try to resolve fast neuronal propagation in the human brain as well as at the somatic neuromuscular junction on even a millisecond short timescale. It has already been discovered that certain Ligand-gated ion channels mediate a tonic mode of neuronal control resulting from activation of extra-synaptic neurotransmitter receptors by ambient rates. This study concentrates on the characteristics of the neurotransmitters, voltage-gated as well as ligand-gated ion channels including their specific functions. This review paper covers most work done in the area of neurotransmitters over the past few years.

Keywords: Artificial Intelligence, Cognitive Learning, Episodic Memory, Neurotransmitters, Voltage-gated ion channels, Ligand-gated ion channels

APPLICATIONS OF INTERNET OF THINGS IN RENEWABLE ENERGY POWER GENERATION SYSTEM FOR EFFICIENT MONITORING

Garima Sinha, Pankaj Kumar Gupta, Deepak Kumar Sinha

Abstract: The efficient and reliable power supply has become significant with the growing interest in smart cities. The power supply has to ensure the smooth functioning of smart devices. The renewable energy sources can play a vital role in efficiently meeting the demand for smart cities and it can be achieved by integrating IoT and renewable energy production sources. Using IoT for the production of renewable energy is based on using smart sensors for transmission and distribution of energy. Companies can conveniently monitor the equipment in real-time through remote control access. The use of smart sensors and remote control access minimizes operation cost and cuts down the dependence on limited fossil fuel or conventional energy sources. The use of renewable energy is already providing various benefits that are not possible through conventional energy sources. IoT can define the better path to the generation and distribution of clean energy sources. This paper focuses on the use of IoT applications to optimize the generation of renewable energy.

Keywords: IOT, Renewable energy, Sensors, Transmission and Distribution

TO PREDICT THE BEST HOSPITAL IN AN AREA USING MACHINE LEARNING

Krishan Kumar Goyal, Aejaz Hassan Paray

Abstract: In health care sector, we have enormous demand of best Medicare for the patients. Now how to choose the best hospital for the patient among various hospitals in an area? The KNN supervised machine learning approach is used to predict the best hospital for the patient on the basis of various attributes used in the dataset. The various distance measure methods are used to calculate the similarity between attributes. The methods like KNN with Euclidean, Manhattan and Minkowski distances is used to measure the similarity among the attributes. However Euclidean distance have limitation in a real data set which often have some degree of covariance and it does capitalize on any statistical regularities in the data that might estimated from a large training set of labeled data. In this paper, we use the KNN to choose the optimal hospital for the patients on the basis of cost and quality variables. The KNN predict which hospital is optimal for the patient according to need of patients. The attributes type of hospital, surroundings, near to hospital determines the cost factor. And the modern equipments, specialist doctors, medical staff quality determines the quality Factor.

Keywords: : KNN, Manhattan distance., Euclidean distance.

A STUDY OF IMPACT OF GROSS DOMESTIC PRODUCT, TAXES AND BUSINESS CYCLE ON FDI IN INDIA

Piyush Goel and Dr Bibhu Prasad Sahoo

Abstract: This paper attempts to examine the impact of GDP, business cycle and taxes on the FDI inflows to India. The Multiple regression analysis is applied to analyse the impact on FDI inflows. The finding revealed that the model is significant even at 1% level of significance as the p-value is less than 0.01. The GDP is the most significant factor which influences FDI inflows to India, whereas the impact of other variables i.e. taxes and the business cycle seems to be insignificant even at 5% level of significance.

Keywords: Business Cycle, Foreign Direct Investment (FDI), Gross Domestic Product (GDP), Tax

RESULT ANALYSIS OF HIDDEN IDENTITY MECHANISM FOR FILE STORAGE SERVER

Pradeep Kumar Patel, Chandu Vaidya and Parwani Dhote

Abstract: The concept 'server' is designed to serve information or services to multiple users over the network, which makes it, enable user profile management. Taken an example of storage server; system need to manage data or files from multiple users or belonging to multiple owners. Managing this ownership, systems normally separates the user files in different directory and records this directory information in index table. By the time system separated the files in different directory for its own management it unknowingly reveals the file owner information to system user who has direct access to the server directory structure. Main threat lies here only, that malicious user has access to every user's files. Malicious user attacks are not controllable or having no direct protection over it but it can be made difficult for the malicious user to get the ownership information about files by hiding the files original name and the ownership information by designing novel index table which has no record about files real identity and its location information. So by the time of accessing the files its location and name information will be generated temperately using secure key.

Keywords: IDENTITY, FILE STORAGE, SECURITY, ENCRYPTION, CLIENT SERVER

DUAL AXIS SOLAR TRACKING ENERGY BASED WATER PURIFICATION SYSTEM

Mr. Bhaskar Patel, Mr. Anish Kumar and Mr. Sunil Kumar Patidar

Abstract: The proposed archetypal of solar RO water bactericide can be fabricated carriageable and extend its appliance area. The use of solar PV corpuscle forth with acceptable controller circuits for RO water purification (small capacity). Controller circuit consisting allegation controller which access the solar ability which accepting assorted protection. It can be formed out alone on DC eliminating the use of inverter. This accessories is based on the renewable energy source. Solar is a apple-pie energy arrangement which can cut down the abuse problems and gives the befalling to accomplish reliable antecedent of potable water. In the absence of solar energy, we are application electricity Supply from electric company. This arrangement is distinctively advised to accommodated the charge of peoples in assorted regions. The basic assumption abaft this energy is Reverseosmosis. The solar radiations are calm by solar panel. This energy is again stored in a battery. The purification assemblage consists of top load motor, Reverse osmosis arrangement and the water tank. Our project will include the design and construction of a microcontroller-based solar panel tracking system. Solar tracking allows more energy to be produced because the solar array is able to remain aligned to the sun. This system builds upon topics learned in this course. A working system will ultimately be demonstrated to validate the design.

Keywords: Aquifer, distillation, reverse osmosis, Photovoltaic solar water pumping

A GWO IMPLEMENTATION FOR FREEFEM++ AND ITS UTILIZATION IN OPTIMIZATION OF ROEBEL CABLE FOR SFCL APPLICATIONS

Tarun Shrivastava, S C Gupta and A M Shandilya

Abstract: Applications for high-temperature superconductors (HTS) have achieved mature status, with several commercial applications these devices are working around the world. To maintain the development pace, computational tools capable of simulating and optimizing their behavior have become essential tools for predicting and improving their design performance. In this paper, freely available FEM (Finite Element Method) software FreeFem++ is used to design and evaluate Roebel cable under self-field and then a GWO (Gray Wolf optimization) technique is used to obtain Roebel cable design parameters unique to SFCL requirements. The FreeFEM++ an open-source framework is used for developing, simulating and optimizing the FEM model, then MATLAB is used to plot data as it has better plotting capabilities. Our main contribution in this work is the integration of the GWO algorithm with the FEM in the FreeFEM++ environment. The GWO is a metaheuristic optimization algorithm that is easy to implement, computationally efficient, easy to tune, and faster convergence. These unique properties make it suitable for any kind of optimization problem. Comparing the simulated and experimental values of critical currents (I_c) for 5/2, 9/2 and 15/5 Roebel cables validates the existing model. Validation confirms that the model is highly accurate and has only 5% of variation comparison to experimental values. Finally, for various combinations of design variables are used to optimize the Roebel cable for HVDC SFCL specific requirement.

Keywords: SFCL, HTS, Roebel Cable, Critical Current, FreeFEM++, GWO

IMPLICATIONS AND IMPACT OF ARTIFICIAL INTELLIGENCE AND SUSTAINABLE DEVELOPMENT IN LAW & LEGAL PRACTICE

Nidhi Arora and Parth Patpatiya

Abstract: “Artificial intelligence is changing the manner in which lawyers think, the manner in which they work together and the manner in which they interact with customers. Artificial intelligence is more than legal technology. It is the next incredible concept that will reform the legal profession.” At present, Artificial Intelligence in the legal profession is one of an incredible unfolding opportunity and not a genuine threat, with pioneering adopters providing increasingly proficient and cost-effective legal solutions to an expanding arrangement of existing and potential customers. The utilization of Artificial Intelligence in law is in this manner in the idea of advancement, instead of a transformation. However, beyond a shadow of a doubt – Artificial Intelligence is as of now transforming for all intents and purposes each business and activity that lawyers manage some more rapidly and drastically than others, and the legal profession won't be saved from this problematic change.

The incorporation of Artificial Intelligence into a law company's systems and operations is a continuous, learning process, so early adopters would have a distinct preferred position over firms that fall behind in adopting the technology. Sustainable development is becoming a necessity for lawyers nowadays. Only a few yet constantly increasing numbers of lawyers are actually doing work related to sustainable development. The present paper discusses the implications and impact of Artificial Intelligence and Sustainable Development in Law & Legal Practice.

Keywords: Artificial Intelligence, Sustainable Development, Legal practice, Future Law Firms

ENHANCING UNDERSTANDING OF RESOURCE BASED VIEW: ANALYZING IMPACT ON PERFORMANCE OF ORGANIZATIONS

John Ben Prince and Viswanathan T

Abstract: C-suite executives are keen to deploy their assets in an effective manner, such that their organizations could benefit, generate profits and in the long run also ensure returns for several stakeholders. Academicians, however are also interested in understanding the subtle levers at play behind the scenes. Theories related to the Resource Based View and others that follow focus on the tangible investments made by firms. In the realm of technology, firms are also keen to understand the impact of technology investments made by firms. Overarching motives prominently pertain to how market performance of firms can be improved – this is especially true since the developed and developing world looks at not just acceptance from shareholders, but also acclaim. With a view to enhancing knowledge in this domain, firms are also keenly adhering to principles of sustainable business practices while they deliver economic profits for the firms. The paper, while outlining and subsequently emphasizing the need for the environmental school of thought also empirically finds the strong influence of resource based decisions on the market performance.

Keywords: resource based view, technology, sustainable business, market performance

DEEP LEARNING FOR LOGO CLASSIFICATION

Ranjith K C and Sharath Kumar Y H

Abstract: Logos are the brand ambassadors of any company or the organization which serves as the identity of it in many of the ways. Logos plays a distinct and significant role providing information about the documents of the particular organizations. Logos can be classified based on the size, texture, color, information, shapes and many other factors. In this work, we mainly focus on the classification of different types of logos in two stages of classification systems using Deep learning and KNN with Gabour and SIFT features respectively. The advantage of the proposed method is that the two stage classification yields better results and the accuracy with the classification of testing images is high.

Keywords: Logo Classification, Feature Extraction, Deep Learning, KNN

A COMPARATIVE STUDY OF PUBLIC AND PRIVATE HEALTH CARE SERVICES OF SELECTED HOSPITALS IN CHHATTISGARH STATE

Pushkar Dubey and Satish Kumar Sahu

Abstract: Background- The study presents a comparison of public and private hospitals service quality, customer satisfaction, customer loyalty and perceived value of selected hospitals in Chhattisgarh state. The present study focused on quality of service in public and private hospitals and examined the relative importance of quality indices in predicting the perceived value, satisfaction and loyalty of the patients.

Design - The study sample consists of 400 useful respondents from selected ten (private and government) hospitals among 4 district of Chhattisgarh state, the data collection tools consists of a quality service scale comprising of 22 items developed by Cronin & Taylor in 1992 and other dimensions of self-structured survey questions using a seven-point Likert scale during the implementation of a purposive sampling technique.

Findings- The study compares between public and private healthcare systems on the dimension of service quality, customer satisfaction, customer loyalty and perceived value of Chhattisgarh state. Finding show that there exists significant difference between respondents belonging to private and government hospitals related to service quality and customer loyalty. Further significant difference was not found between respondents belonging to private and government hospitals related to customer satisfaction and perceived value dimension.

Keywords: Customer Loyalty, Customer Satisfaction, Hospital, Perceived Value, Service quality

IMPACT OF FDI, STAFF AND EXPENDITURE ON THE PROFITS OF INDIAN PRIVATE SECTOR BANKS

Sahila Chaudhry and Rakesh Kumar

Abstract: Through this study, an attempt is made to examine the impact of foreign direct investment (FDI), staff and expenditure on profits of selected Indian private sector banks. The required data were collected from the secondary sources like RBI Data-warehouse, Report on Trends and Progress of Banking in India, IBA Bulletins, Journals, and Online databases for a period of seven years from 2011-12 to 2017-18. The collected data were analyzed through descriptive and inferential statistical techniques like correlation, t-test and ANOVA with the help of PASW (18.0 Version). The study found that there is a significant relationship between the FDI, Staff and Expenditure (independent variables), and profits per employee and profits per Branch (dependent variables). The profits per employee (dependent variable) are explained by the FDI, staff and expenditure (independent variables) to the level of 44.5 percent only. On the other hand, profits per branch (dependent variable) are explained by the FDI, staff and expenditure (independent variables) to the level of 62.5 percent. There is no significant impact of FDI, staff and expenditure (independent variables) on profits per employee (dependent variable), whereas the impact of FDI, staff and expenditure (independent variable) on profits per branch (dependent variable) is significant. Therefore to improve the performance, the banks should take suitable policies to reduce the level of NPAs and improve net interest margin. The credit policies should be strict and debt collection policy should be strong enough to reduce the amount of bad debt. As investment from abroad is required to meet the capital adequacy requirements of Indian banks, therefore efforts should be made to ensure transparency and consistency in policy making alongwith comprehensive long-term development strategy.

Keywords: Business, Employee, Branch, Expenditure, Correlation

EFFECT OF WORKPLACE SPIRITUALITY ON LEADERSHIP, JOB SATISFACTION AND ORGANISATIONAL CITIZENSHIP BEHAVIOUR: AN ANALYTICAL STUDY IN PRIVATE MANUFACTURING FIRMS

Dr. Pushkar Dubey, Dr. Abhishek Kumar Pathak and Kailash Kumar Sahu

Abstract: Talented and competent employees are considered as assets in the organisations and they need to be retained for the sustainable growth of organisation. This research investigates the effect of workplace spirituality on leadership, job satisfaction and organisational citizenship behaviour among the employees working in the selected private manufacturing firms of Chhattisgarh state. The primary data were collected of 400 employees of selected manufacturing firms working in the selected regions i.e., Raipur, Durg, Raigarh and Korba of Chhattisgarh state. Results indicated that few dimensions of workplace spirituality found positively related with job satisfaction, leadership and organisational citizenship behaviour. Mindfulness, transcendence and sense of community is positively and significantly associated with job satisfaction, mindfulness and sense of community is found significantly associated with leadership and transcendence, mindfulness and sense of community is predicted significantly with organisational citizenship behaviour.

Keywords: Workplace spirituality, Leadership, Job satisfaction, Organisational citizenship behaviour, Sustainable Growth

AN APPROACH FOR SECURE MESSAGE TRANSMISSION BASED ON STEGANOGRAPHY

Shaifali Shrivastava, Pratik Singh and Khel Prakash Jayant

Abstract: The rapid changes in the technology over the internet lead to open the new threads and breaches for data security during transmission. Security is a term that includes authentication, authorization, integrity and confidentiality. For the authentication purpose use one time password (OTP) based concept that verify the genuine sender, to maintain the confidentiality of data there are number of cryptography techniques offer based on public and private key. There is also a cousin of cryptography exist known as Steganography. Cryptography is defined as art to hide the data in unreadable form at sender end called encryption and decrypt data at receiver end called decryption where as Steganography is a technique to hide the existence of data behind a cover data, so no one can observe the hide data and data transmit securely without monitoring. Hide data and cover data are maybe same type such as an image hide with another cover image. There are lots of Steganography techniques for digital images. This research paper proposed an image Steganography Technique, in this proposed approach same text message partially hide in multiple cover images that is encrypted and embeded by a shared secret key. To recover the hidden text messages from cover images, same shared secret key and sequence of cover images will be required

Keywords: Steganography, Cryptography, Security

RE- SOCIALIZATION OF PROBATIONERS IN WEST BENGAL: THE NEED OF SOCIOLOGICAL RE-INTEGRATION OF EX-PROBATIONERS

Asif Iqubal Shah, Nirmal Kanti Chakraborty, Bhupal Bhattacharya

Abstract: Over the years after the gradual development of modern criminological thinking, probation evolved as a viable means of reformation and also an alternative to incarceration. Probation is such a system that acts as a bridge to fill the so-called gap created between the harsh realities of our Penal Code and the modern trend in penology directed to humanize the criminal laws. It is believed that if a man deviates from the path of rectitude, he can be directed to the right path through proper assistance and guidance. If an offender commits an offense it may be because of necessity, inadvertence or being in association with bad characters or just to wreck vengeance. Probation deals with such first-time offenders under conditional suspension of their sentence after being convicted and they are placed under the supervision of a probation officer subject to certain conditions solely with a view to re-establish and rehabilitate them in the society. The author in the present paper has tried to highlight how far the Probation system proved to be a success in re-socializing the probationers into the mainstream of the society by undertaking an empirical study of the ex-probationers of West Bengal.

Keywords: Probation, Incarceration, Ex-Probationers, Probation Officer, Supervision

WHAT'S IN A NAME? THE ABUSIVE DOMAIN OF CYBER SQUATTING IN INDIA

Palak Sharma and Apeksha S. Agrawal

Abstract: The present study focuses on cyber squatting – a practice where certain domain names are targeted and bought with a corrupt intent to be sold later to relevant users at exorbitant prices. Users include individuals and businesses who intend to create websites identifiable with their name/brand name. Such illicit practices result in significant damage to business prospects of the affected companies. While US enacted the Anticyber squatting Consumer Protection Act (ACPA) back in 1999, India remained far behind with no explicit legislation or uniform code to govern cyber squatting. The study highlights ramification of such illicit practices and present corrective legal mechanism in Indian context. The study further analyses key cyber squatting cases resolved by Indian courts. Finally, it also recommends remedial measures to deal with cyber squatting.

Keywords: Domain name, Cybersquatting, WIPO, AntiCyber Squatting Consumer Protection Act (ACPA)

ANALYSIS OF CONVOLUTIONAL NEURAL NETWORKS FOR LUNG CANCER DETECTION USING CT-SCAN IMAGES.

Zayeema Masoom, Sakshi Saoji, Sakshi Karanjekar, Eniya Kulshreshtha, Anjali Naik

Abstract: Amongst all cancers, lung cancer is the most frequently occurring and death causing disease. Computed Tomography (CT) – scan, displays severity of the disease with the presence of pulmonary nodules. These nodules are round or oval-formed. Radiologists recognize such nodules from CT-scan. Adaption of Machine learning techniques have become a powerful tool in medical field. Deep learning has been used in many researches in cancer screening, based on medical imaging. This has led the patient correspondence and medical service experts to be propelled towards such technology. Analysis of Convolutional Neural Network would help in giving a second assessment to the radiologists and would be of significant assistance in lung cancer screening. In this research, analysis of the working of Convolutional Neural Network algorithm in MATLAB for detection of lung cancer is done. Analysis is done on the basis of learning rate, number of input images, with and without image processing, no of epochs, confusion matrix and accuracy.

Keywords: Computed Tomography, Lung Cancer, Convolutional Neural Network, Machine Learning and MATLAB.

RUMOR DETECTION USING VARIOUS DEEP LEARNING APPROACHES

Meena Talele, Smita Jangale and M Vijayalakshmi

Abstract: As the endless development in web 2.0 and ease of access methods, devices upcoming new technologies like Social Media, Mobile, Analytics and Cloud-generates infinite stream of data. The misinformation can spread widely and rapidly in online social network. Due to potential harm this circulate may bring to public, so false rumor detection is demanding and important. Previous studies are mainly based on various machine learning algorithms and deep learning techniques. In this paper, various rumor detection techniques using Deep Learning Models like Long Short Term Memory (LSTM), Convolutional Neural Network (CNN), CNN-LSTM, Bidirectional LSTM (BiLSTM) and CuDNNLSTM(layer with LSTM) on textual data are performed and analysis has been done. These models perform binary classification of tweets into rumors and non-rumors. Comparative Analysis has been done with results on same dataset by existing machine learning algorithms and our deep learning models. Our deep learning models outperforms the baseline machine learning algorithms.

Keywords: Rumor Detection, CNN LSTM BiLSTM CuDNNLSTM, social media, GloveVector

A BAND NOTCHED MICROSTRIP PATCH ANTENNA WITH DEFECTED GROUND STRUCTURE FOR ULTRAWIDE BAND COMMUNICATION

Sanjeev Maheshwari, Nikhil Gupta and Arvind Kumar Pandey

Abstract: In this paper, a microstrip patch antenna fed by a microstrip feed is proposed for ultrawideband application. The impedance and radiation characteristics of the proposed antenna are presented. It is shown that a microstrip patch antenna with defected ground structure can give an ultrawideband behavior and the slot with metal strip can be used to avoid interference from WLAN. Simulation analysis using ANSYS HFSS predicts an impedance bandwidth of 3.07 GHz- 11.58 GHz (116%) with a band notch 4.41 GHz- 5.34 GHz. This antenna shows linearly polarization and bidirectional radiation pattern. Simulated peak antenna gain of 2.2 dBi with no gain at band notch frequency is also predicted.

Keywords: UWB, Band Notch, Microstrip, Defected ground

BRAND -IMAGE DIMENSIONS AND BOTTOM OF PYRAMID-A HOLISTIC PERSPECTIVE

Biswajit Pattajoshi, Debadutta Das, Sangeeta Mohanty

Abstract: Consumers have now become more discriminating in their food product choices and have started emphasising more on convenience, freshness and quality of the products. With the emergence of the supermarket, and hypermarket culture consumer preferences for packaged food products has increased significantly in the recent years. Nowadays success is all about valued discrimination. This investigation will study the dimensions of brand image as perceived by consumers. By way of hypothesis it has been proposed in this investigation that these functions have a positive influence on the consumer's willingness to recommend the brand, pay a price premium, and accept brand extensions for select Agri-Food brands.

Keywords: Brand image, brand equity, consumer response, knowledge structures, brand dimension, bottom of pyramid

OPTIMIZATION OF PROCESS PARAMETERS USING MULTI-OBJECTIVE TAGUCHI ANALYSIS

Hari Om Sharma, Bodhisatwa Seal, Nadeem Ali and Mohit Agarwal

Abstract: Welding process can be performed on similar or dissimilar metals. Welding of dissimilar metals involves different types of metals with distinct chemical composition. In this research paper a brief review has been given on the work done on weld area and hardness of welded joints. Laser welding is a process where materials are heated to a molten state and are fused together. Lasers generate light energy that can be focused and absorbed into materials and converted to heat energy. By employing a light beam in the visible or near infrared portion of the electromagnetic spectrum, we can transmit this energy from its source to the material to be processed using fixed or fiber optic beam delivery optics. The parameters of laser welding play important role in determining quality of the weld and hence the quality of the product made in industry. Since the demand of a product depends mostly on its quality, the parameters of laser welding should be optimized properly to find good weld quality.

In today world the need for a optimized technique which can easily join two dissimilar materials in increasing day rapidly. In these research paper two dissimilar materials namely AISI 304 and AISI 202 were taken for laser welding in lap joint configuration. Three process parameters i.e. scan speed; pulse frequency and pulse diameter at four levels were taken for optimization. Two response parameters namely weld hardness and length of heat affected zone were considered for different combinations of process parameters. Grey Taguchi methodology with L16 orthogonal array was used to optimize specified parameters. It is found that laser welding with scan speed of 45 mm/min, pulse diameter of 0.3 mm and pulse frequency of 7 Hz yields the optimal quality characteristics. In these levels hardness of weld zone was found to be 304.77 HV and length of HAZ to be 0.0852mm.

Keywords: laser welding, material selection, grey taguchi analysis

FRICION STIR WELDING AND PROCESSING

Bodhisatwa Seal, Nadeem Ali, Hari Om Sharma, Mohit Agarwal

Abstract: Friction stir welding (FSW) is a relatively new solid-state joining process. This joining technique is energy efficient, environment friendly, and versatile. In particular, it can be used to join high-strength aerospace aluminum alloys and other metallic alloys that are hard to weld by conventional fusion welding. This paper focuses on Friction Stir Welding (FSW), a fairly recent technique, invented by The Welding Institute (TWI) in 1991, that utilizes a non-consumable rotating welding tool to generate frictional heat and plastic deformation at the welding location; thereby, affecting the formation of a joint while the material is in the solid state. The current state of understanding and development of the FSW and FSP are addressed. Particular emphasis has been given to: (a) mechanisms responsible for the formation of welds and micro structural refinement, and (b) effects of FSW/FSP parameters on resultant microstructure and final mechanical properties. While the bulk of the information is related to aluminum alloys, important results are now available for other metals and alloys. At this stage, the technology diffusion has significantly outpaced the fundamental understanding of micro structural evolution and microstructure–property relationships. FSW is a leap forward in manufacturing technology, some of the typical industrial applications of FSW in aerospace, shipbuilding and auto industries have also been presented.

Keywords: Friction stir welding, Friction stir processing, Welding

STEEL FOAM AID OF VARIOUS DISASTERS IN BUILDING CONSTRUCTION

Mohd Umair and Tanveer Ahmad Wani

Abstract: Be it excessive strength either concrete or steels and knitted materials by means of getting the sustainable structure as an end result these structure in the course of both disaster or contemporary time would create astonish wicked circumstances like loss of life, loss of fitness loss of material, loss of surroundings so on so forth. We are dwelling in 21 century & 2nd decade; we have developed many ways in term of hardology & softology. However material like metal foam could save the ground reality. It is no longer simply a material however it is a novel material, which has functionality to elude higher proportion above situations via using steel foam.

However Steel foam and amorphous steel, new materials are grew to become into products with better properties and reduced weight as per requirement. This cuts transport emissions. Meanwhile, accelerated procedure effective is decreasing the footprint of bulk production.

The projections of the future surroundings crisis, the urgency of attaining high quality efficiency alongside with higher development safety in construction industries and the wants of developing light weight building materials have attracted incredible consideration for ultra-light weight metallic foams. The execution of metallic foams in these industrial sectors depends to an immense extent upon their manufacturing cost, the environmental durability and fireplace retardant.

Water conservation in buildings seldom considers the water used in constructing building or in other phrases the simulated water content of buildings. There is very uncommon suggested lookup in this field, particularly in the Indian framework, in spite of the fact that water scarcity is a burning issue requiring pressing attention. Moreover here we additionally describe airborne pollution & their have an effect on thru construction old age materials. The paper attempts to provide a reference point study of simulated water content of urban constructions in India and its notion, how curtail the water as nicely as wind air pollution in the constructing building industry in India for the duration of the hard time of water crisis/human live disaster by way of implementing the material like steel foam it's additionally focus accidentology as nicely as enviromentology in the field of building industry.

Keywords: Strength, Structure, Building, Environment, Safety

APPLICATION OF STATISTICAL AND MANAGEMENT METHODOLOGIES IN A SMALL SCALE INDUSTRY AND THEIR AFTER EFFECTS

Anas Islam and Vijay Dwivedi

Abstract: The small scale industries play a crucial role in the country's economy. This paper deals with practically applying the engineering and scientific methods such as ABC analysis, JIT, 5s, lean manufacturing etc at a small scale industry. The large scale industries have a special position for the employees that could suggest the scientific methods so as to boost their overall production and improve the morale of the workers. As far as the small and medium industries are concerned they did not have any provision for the same and the only concern there is to complete the orders given by large industries. The small scale industries mostly act as vendors for manufacturing parts as per the instruction given to them by large industries. They did not have knowledge about any scientific approach so as to boost their overall output of production and eliminate or reduce the wastes that incurred during any process or cycle of their production. This results in the poor quality, greater lead time, delay in fulfilling the customer orders, thus the overall profitability and productivity reduces. Large scale and medium enterprises know the importance of these scientific methods to boost their overall output, due to this reason they have a special department for applying these methodologies in their company. On the contrary of that the small scale industries hardly care about these methodologies and their prime aim is to produce or according to the demand. The wastes, increased lead time thus causes a big impact on their overall reputation, thus it becomes difficult for most of the industries to survive or remained as a cottage industry even after several years of its formation. This results in the decreased morale of the employees and the employees continue to switch over from one to the other. Keeping in mind all the points mentioned above several techniques have been employed at Reliable tools- a small enterprise known for manufacturing locks and its parts. The process, methods and results of applying these technologies have also been discussed in the later parts of this paper.

Keywords: 5s, JIT, ABC analysis, Inventory control, Feedback, EOQ

LIFE CYCLE STUDY OF SOLAR PANEL USING LABVIEW

Salim Bhatti, Jyoti Ohri

Abstract: Due to the economic challenges in surging oil costs and natural concern India is facing huge growth in renewable energy resources. Deployment of solar photovoltaic (PV) has risen at exponential speeds since the early 2000s. By 2015 globally installed capacity is more than 222 gigawatts. It is predicted that by 2050 it reached to 4500GW. Major contributing countries are China (1,731 GW), India (600 GW), the United States (600 GW), Japan (350 GW) and Germany (110 GW) of total installed capacity today. This paper discusses comparative product life analysis of PV modules. Analysis of all PV module models is accomplished with the help of LabVIEW. This helps in comparison with the life cycle after deployment of solar PV at 10 years span.

Keywords: Solar Photo Voltaic (PV), Current and Power-Voltage Characteristics, LabVIEW

A REVIEW OF DIFFERENT VULNERABILITIES OF SECURITY IN A LAYERED NETWORK

Pankaj Kumar Gupta, Shweta Mittal, Prakhar Consul and Jitendra Kumar Jindal

Abstract: The engendering of systems to a massive populace has upgraded the system's simple entry for a greater segment of programmers to abuse. More grounded security strategies, for example, Advanced Encryption Algorithms, proficient confirmation strategy and assurance top to bottom methodology are being utilized to manage these dangers. This paper gives a short review of different vulnerabilities related to every single layer of the OSI Model. Issues identified with the "eighth layer" have likewise been incorporated. The creator proposes to do execution investigation of the aggregate impact of utilizing security systems kept up at all layers of the system.

Keywords: vulnerabilities, Security, Layered Network

DATA ANALYTICS : A VISIONARY APPROACH

Ajeet Singh, Ankur Rastogi, Saurabh Singhal and Amit Garg

Abstract: The most recent appearances of computerized advancements like Cloud Computing & Internet of Things are creating an enormous measure of information through most recent data frameworks consistently. A great deal of exertion is required for extraction and examination of this monstrous information so as to make compelling, productive and precise dynamics. In this way, examination in enormous information shapes a wide space for innovative work. Through the mode of this paper our goal is to recognize the effect of huge information difficulties, issues and apparatuses conveyed. As a result, this paper makes a stage for the investigation of huge information at various stages. Moreover, it likewise drove out specific issues that urge scientists to give arrangements against the issues and difficulties talked about.

Keywords: Analytics, Big Data, Hadoop

DESIGN AND ANALYSIS OF CHASSIS AND POWDER BASED ADDITIVE MANUFACTURING FOR CHASSIS OF UNDER WATER ROBOT

Aman Sharma, Kamal Sharma and Rohit Sharma

Abstract: In this paper a brief discussion, of Nano-level materials is been done. And the comparison of different nano materials over zirconium. Selection of Zirconium, its extraction from Hafnium and study of various properties like physical, chemical, thermal, and mechanical rigidity, structural load bearing, electrical conductivity, self-healing capabilities and corrosive properties is been done. The model is then analyzed on Ansys 15.0 and the conditions (pressure) were applied on the model these conditions are structural analysis of chassis for under water robot under the applied condition of hydrostatic and pressure conditions were analyzed and the results have been discussed under the subsequent sections later in this section. Study of different additive manufacturing techniques our main focus on selective laser sintering and Laser cladding process is been assessed for layering Zirconium on robot chassis. In this research firstly study of how hafnium is separated from zirconium because hafnium has bursting properties after that zirconium changes in powder form. While working on cladding is to be done with the help of laser cladding or selective laser sintering which provide material over robotic parts which provides a layer over layer. Laser cladding is the best technique for coating any shape and it increase the life time of wear parts.

Keywords: Design, Analysis, Hydrostatic pressure, Additive Manufacturing, Laser cladding, Properties, Zirconium

SENTIMENT ANALYSIS: A FRAMEWORK FOR TEXT MINING

Shailja Gupta, Sachin Lakra

Abstract: With the growth of users interest to share their opinion online, sentiment analysis has become a necessity to analyse user opinions. Online platforms being a huge source for data are used for text analysis by classifying the text as neutral, positive and negative. The proposed research work focusses on the different aspects of sentiment analysis, feature extraction framework for sentiment analysis, lexical resources and text granularities which can be ease a budding researcher in establishing an understanding of the task of sentiment analysis. This paper further discusses the challenges faced by sentiment annotations and application areas where the sentiment analysis can be applied.

Keywords: Text mining, sentiment analysis, opinion mining, feature extraction, feature categorization

DESIGN AND SIMULATION ANALYSIS OF GAS TURBINE BLADE WITH VARIATION IN BLADE ANGLE

Aman Sharma, Vijay Dwivedi, Anas Islam and Nikhil Sharma

Abstract: In impeccable gas turbine gases experience three thermodynamic procedures an isentropic pressure, an isobaric heat expansion process and isentropic development pursued by isobaric heat dismissal. Together these procedures compensate for the Brayton cycle yet there contrasts between this procedure cycle and the perfect Brayton cycle. There are a few existing systems for upgrading the general proficiency of gas turbines some of them are as per the following moistening procedure, evaporative cooling method, air-cooled pressure refrigeration procedure, single-sort out water-cooled absorption chiller methodology, two-orchestrate water-cooled maintenance chiller strategy. The system further talked about have assortment of sharp edge focuses this is clear and intriguing procedure yet to be new and extraordinarily less performed in this strategy Our guideline focus is to drive the profitability by changing the edge of the turbine, and the assessment of turbine bleeding edge and auxiliary examination , warm investigation, weariness examination on other hand stream investigation through familiar. The design of turbine blade profile is designed on solid works software with inlet angle of 22.5° and outlet angle of 45° . Our principle center is to propel the productivity by changing the edge of the turbine, and the examination of turbine cutting edge like structural analysis ,thermal analysis, fatigue analysis and flow analysis through fluent. Here on a very basic level we creation the essentially development or strategy of an assortment of bleeding edge focuses marginally state degrees each for breaks and checking the estimations of productivity and accomplice it with the ideal one. In this technique we are simply changing sharp edge point(the edge by which the center of edges tilt with the rotate of shaft) a tiny bit at a time by a little extension, tilting the center point of edges concerning the center of shaft by a wide edges and watching the effect of gas controls by adjusting the estimations of bay edge, outlet edge and redirection edge, and the adequacy of Gas turbine in a general sense depends on the sharp edge focuses and by changing the center of tilt we can adjust these edge edges. Edge causes various estimations of inlet and outlet speed which have the standard influence on the capability of the turbine..

Keywords: Turbine, Design, Blade angle, Efficiency, Analysis

DESIGN AND ANALYSIS OF MECHANICAL GRIPPER OF ARISTO-ROBOT FOR WELDING

Rishabh Chaturvedi, Anas Islam, Aman Sharma, Kamal Sharma and Rohit Sharma

Abstract: This work is about design and development of an advance weld gripper for Aristo Robot. The basic operations are automatic adjustment of height, to convert default curvilinear to linear path, automatic detection of consumption of electrode along-with arc adjustment, are required to perform by using the above mentioned weld gripper. Proximity, load, temperature and piezoelectric sensors are used for performing the above said basic operations. Furthermore a couple of helical torsion springs with a stiffness coefficient of 4 N-mm/Radian is being used for proper positioning of gripper at the time of weld operation. This paper focuses on the making of an advanced weld gripper for Aristo Robot. The Arm extension is being provided by attachment of a gripper, made up of Teflon material to gain the linear path motion of Robotic arm. Two helical torsion springs are used to support the motion of attached arm. The spring is used to make the electrode in contact with the work-piece so as to perform welding. The spring adjusts the height of electrode being consumed while welding. The proximity sensor is used for the height adjustments, Load sensors are used to know the decreasing load while welding electrode being consumed, and temperature sensor is used to know the arc formation. This paper describes our novel design of the sensor-instrumented gripper for Robotized Arc Welding process, along with its technical specifications and the other factors that has lead to make this design and its functioning possible. We have designed a gripper and attached it to the manipulator arm of the PUMA-type Industrial Robot, (Aristo™), post-fabrication. The basic operations of arc welding process, such as an automatic adjustment of height, controlling of path, automatic detection of consumption of electrode etc. have been performed by using proximity, load, temperature and piezoelectric sensors. The static structural analysis of gripper has been performed on Ansys 2015, to analyze the stresses and deformation in real-time. The value of deformation is found to be 0.89 mm (max).

Keywords: Robotics, Gripper, Design, Sensor, Material, Teflon

A STUDY ON IMPACT OF GOODS & SERVICE TAX ON THE MANUFACTURING SECTOR IN INDIA

Bibhu Prasad Sahoo and Upasana Dhanda

Abstract: India's manufacturing sector has been growing gradually since the early 2000s, generating new employment opportunities and uplifting the economy. GST has the capability to amplify this growth with its streamlined tax structure and positive effect on interstate sales. The campaign "Make in India" by Narendra Modi gives further momentum to the manufacturing sector. Furthermore, Price Waterhouse Coopers estimates that India will become the fifth largest manufacturing country in the world by 2020. In such a scenario, it would be intriguing to understand the effect of GST on the manufacturing sector. The article discusses both pros and cons of this tax regime on the manufacturing sector and throws light on the potential reasons for its success and failure.

Keywords: GST, manufacturing sector, India, tax regime, indirect tax

DISTINCTIVE APPROACHES FOR EVALUATING MAXIMAL POWER FROM PHOTOVOLTAIC ENERGY SYSTEM

Sonali Raj and Ramesh Kumar

Abstract: Ecofriendly green power technology i.e. Solar Photovoltaic based electricity generation is the rapid developing and a promising source of energy for today's and future world. This has been catalyzed due to the increment of global warming and the depletion of fossil fuel. In this paper, an extensive literature review is conducted for the evaluation of the maximum power point tracking techniques to get the maximal energy extracted from the Photovoltaic panel considering the effects of electrical and environmental parameters. Various algorithms for MPPT are reviewed and compared. The future research directions regarding the efficiency of energy conversion from the Photovoltaic Array are recommended.

Keywords: Photovoltaic (PV) Array, Maximum Power Point Tracker (MPPT) algorithms, Solar irradiation, Temperature

MACROECONOMIC DETERMINANTS AND STOCK MARKET VOLATILITY: EVIDENCES FROM INDIAN STOCK MARKET

Vijay Kumar, Bishwajeet Prakash, Ankit Srivastava, Neha Rajput

Abstract: The study investigates the relationship of macroeconomic determinants (Exchange rate, Index of industrial production, Inflation and Broad money supply) on Indian Stock Exchange (BSE Sensex) by using monthly data over the period of April 2012 to August 2019. The research analysis is based on the following time series analysis techniques i.e. unit root test, cointegration analysis, impulse response function, variance decomposition analysis and granger causality test. The Augmented Dickey-Fuller unit root test has been applied to transform data series into stationary property while the Johansens cointegration technique has been applied which confirms the presence of long run relationship among the variables. The result of Impulse response function show that Exchange rate, Inflation and Money supply does not have any significant impact on stock market index while Index of industrial production shows positive impact on stock market index in India in both short run and long run. The result also confirms that maximum shock in stock market is due to their fluctuation. The result of the Variance decomposition result shows that highest influence on stock market is recorded by Index of industrial production is 10.21 % in long run time period while the other macroeconomic determinants has very less influence on stock market in India. The result of the granger causality test further validate the result of Impulse response function and Variance decomposition analysis that Index of industrial production affect stock market index while Exchange Rate, Inflation & Money Supply does not affect Stock Market index. Thus the outcome of the study indicates that all these macroeconomic determinants have certain effect on stock market index in both short run and long run but Index of industrial production affects largely to Stock market index in India.

Keywords: Exchange rate, Industrial Production, Inflation, Money supply, Stock Market & Sensex etc.

ENHANCEMENT OF POWER QUALITY FOR WIND SYSTEMS IN GRID APPLICATION WITH SVPWM CONTROL

Tatikayala Vinay Kumar and Shishir Dixit

Abstract: SVPWM based control of a wind turbine machine linked to an industrial plant is mentioned in this paper, allowing a control structure that utilizes a 4-leg inverter linked to the grid side to inject the available power, and also active power filter mitigating load power disturbances and improving power quality. A 4-wire system is considered with three-phase and 1-phase linear and nonlinear loads. During the connection of the wind turbine, the grid-side controller is designed to compensate for the disturbances in presence of reactive, nonlinear, and unbalanced single and intra-phase loads, similarly providing active and reactive power as required. When there is no wind power available, the controller is supposed to improve the power quality using the DC-link capacitor with the power converter attached to the grid. The SVPWM approach is used to generate the pulses to the inverter and allows in reducing the harmonics. The essential difference of the proposed methodology with recognition to others inside the literature is that the proposed control structure is based on the conservative power theory decompositions. This preference provides decoupled power and current references for the inverter control, supplying very flexible, selective, and effective functionalities. The outcomes confirm our power quality enhancement control and allowed to exclude passive filters, contributing to a greater compact, flexible, and reliable implementation of a smart-grid based control.

Keywords: SVPWM, Space Vector Pulse Width Modulation, Conservative Power Theory

REGULATION OF POSITIVE EMOTIONS IN EMOTIONAL LABOUR PROCESS: PROCREATE AS A PROLIFERATOR OF INDIVIDUAL RESILIENCE

Patiraj Kumari, Anshika Sharma

Abstract: Emotional Labour is a process of managing emotions and feelings of a person who works in an organization. It is a process where emotions and feelings are modified according to the requirement of the job. Emotional labour is a challenging task whereby modification of real self takes huge efforts of a person. This whole process takes different stages from glowering to smiling, miserable to estimable, unenergetic to energetic, dull to sharp, sensitive to thick-skinned, pale to colourful and expressions to expressionlessness. The Journey of emotional labour is not that easy, it needs support or pillar to overcome its aftermaths. There are several models and theories developed by researchers. which supports the fact that positive emotions make a person more resilient. The Resilience of an individual helps to conquer the bad effects of emotional labour. Resilience is something within the individual and it is something that will develop in an individual through different learning, training programs, mentoring, and motivational techniques. Resilience sometimes needs to regulate by individual or by some other person when its hidden or unknown to the individual. self-driven positive resilience which is inside the individual or sometimes it needs to regulate in an individual which is already resided in blindfold (self/spot) of an individual for which the person himself/herself is unaware while others are aware of it if properly managed can solve many problems and create a positive environment. Various models and techniques are developed by scientists and researchers to build positive emotions which helps organizations and people in building resilience and boosts their morale to focus on their work with positive energy and thoughts. The main objective of this paper is to illuminate the positive emotions which boosts individual resilience. This paper also brings into light the relation of positive emotions and resilience which help in building the atmosphere of positive emotional labour.

Keywords: Emotional Labour, Resilience, Proliferator

ENHANCING THERMO-ACOUSTIC REFRIGERATION SYSTEM WITH THE HELP OF VAPOUR ABSORPTION REFRIGERATION SYSTEM

Aishwarya Khare, Ashish Gupta, Anshraj Singh, Gourav Patel

Abstract: This thesis will deal with the modification required to thermo acoustic refrigerator to increase its COP, so that it can be used on daily basis. The manufacturing will be explained along with the reasons for using specific modification for better performance. The setup consists of 3 units including thermo acoustic refrigerator, a cooling tower and Vapour absorption system. It further also explains the manufacturing of every single unit.

Keywords: Refrigeration, Thermoacoustic refrigerator, sound, performance and Conventional source of energy

A ROBUST SPEECH WATERMARKING TECHNIQUES USING ARNOLD TRANSFORM BASED ON MULTI-DIMENSION MULTI-LEVEL DWT METHOD

Rajeev Kumar and Jainath Yadav

Abstract: Today growing popularity of speech-based watermarking applications such as Internet multimedia, personal speech recorders, etc. has enhanced the requisition for the safe transmission of speech. This paper presents an effective speech watermarking techniques based on first and second levels of Discrete Wavelet Transform (DWT) decomposition, Arnold Transform, and Singular Value Decomposition (SVD) methods. The original/cover speech signal is echeloned into frames. Thereafter, each frame is separated into detail and the approximation sub-bands using the first level 1D-DWT method. Afterwards, the second level decomposition of approximation sub-band into two sub-bands. The approximation band is selected for matrix formation for further applying the 2D-DWT and SVD. The detail sub-bands are used for the remake of the watermarked speech signal. We selected a color image as watermark and later on to make a gray-scale image, and Arnold transform is applied on the gray-scale image. Finally, the watermark data is inserted into a selected region. The proposed approach has low enumeration time, and it gives better results using the combined concept of DWT-SVD and Arnold transform. PSNR value of watermarked and watermark signal is 45.099 dB, and 34.352 dB, respectively.

Keywords: DWT, SVD, Arnold Transform, PSNR, BER

EVALUATION OF THEORY BASED HANDWRITTEN ANSWERS THROUGH BFO MODEL FOR PIXELS AND PRUNED SCALE INVARIANT CHARACTER FEATURES

Rajesh Agrawal, Harvir Singh, Vijay Singh Rathore and Saurabh Maheshwari

Abstract: Handwritten theory examinations are essential but they come with the complexity of evaluation by subject experts. It requires time consuming efforts from expert evaluators to check answer sheets of many students. Automation has been brought by evaluation of scanned sheets manually by evaluator through an online portal still the effort of evaluator is same and sometimes even more difficult due to problems associated with screen reading. This complete system needs automation such that the system has skills and intelligence equivalent to an expert evaluator to generate scores for the specific subjects. It is essential to recognize handwritings of thousands of candidates, each having unique features. The proposed method has thought of an innovative method to train the system for every subject and also evaluate the paragraph answer written by the subjects. Segmentation of characters from continuous handwritten text has been done through a novel method inspired from Bacteria Foraging optimization (BFO). The BFO based pixel model spreads bacterial colonies over the text. Healthy colonies are used to identify valid characters while the unhealthy colonies are eliminated. The offspring bacterial colonies produce optimal characters. Final colony arrangements are compared with each other for character recognition through proposed pruned scale invariant features-based method. Handwritten text obtained from standard dataset for more than 50 subjects have been segmented, recognized and scored with optimistic accuracy comparative to the prevalent handwriting recognition methods.

Keywords: Handwritten text recognition, character segmentation, character recognition, SIFT, examination evaluation, scanned answer sheet evaluation

GREEN COMPOSITE FILM FOR FOOD PACKAGING APPLICATIONS

K. Jayaraj, Jackcina Stobel Christy, Anitha Pius

Abstract: In this study, isolation and characterisation of nano cellulose from peanut shell was carried out. A new biodegradable antimicrobial film was developed using nano cellulose extracted from peanut shells, Chitosan and iron oxide. Nano cellulose obtained from peanut shells was used as filler and iron oxide as anti microbial reinforcer for chitosan. Another set of green composite film was also prepared by surface modification of nano cellulose and tested for antimicrobial property. Both films were characterized using Fourier transform infrared (FTIR) spectroscope, X-ray diffraction (XRD) method, Scanning electron microscope (SEM), thermo gravimetric analysis (TGA) and contact angle measurements. Antibacterial activity of the prepared green composite films was conducted against *Staphylococcus aureus* ATCC 25923 and *Escherichia coli* ATCC 25922 by agar diffusion method. The results indicated that Peanut shell waste could become a viable source of commercially valuable nano cellulose. It was also found that cellulose derived from Peanut shells improved mechanical properties like tensile and impact tests. The higher degradation temperature of nano composite indicated superior thermal stability. All the characterization studies emphasized that carboxy methylated nanocellulose reinforced composite film exhibited greater sensitivity and can be effectively used as packaging material to enhance the shelf life of food materials.

Keywords: Antimicrobial Activity, Peanut shell, Food Packaging, Nano composites, Iron nano particles

MORE FOR LESS PARADOXICAL SITUATION IN TRANSSHIPMENT PROBLEM WITH MIXED CONSTRAINTS

Nikky Kumari

Abstract: This paper deals with searching the possibility of reducing the optimal cost of transshipment problem with mixed constraints by increasing the rim requirements. The existence of the corresponding solution is termed as more-for-less (more-for-same) solution. The existing situation is termed as a more-for-less paradoxical situation. A method has been developed for finding the more-for-less solution by introducing a parameter corresponding to an equal type of constraints.

Keywords: Transportation problem, Transshipment problem, mixed constraints, more-for-less, (more-for-same), optimal solution

SRD-LB: A SMART ROUTE DETERMINING ALGORITHM WITH LOAD BALANCING FOR SMART CITIES IN INDIA

Utsav Upadhyay, Saurabh Maheshwari and Geeta Sikka

Abstract: Traffic congestion has emerged as one of the major problems in developing countries like India. It has a very negative effect on the economy, life of the citizens and the quality of services. Traffic congestion can furthermore, increases the response time of emergency services. Some of the main reason for the emergence of this problem are due to exponential increase in number of vehicles in the past decade, lack of adequate infrastructure, insufficient parking space and inefficient law enforcement leading to traffic congestion. Researchers have been trying hard to come up with an efficient solution to the problem. This work presents a Smart Route Determining algorithm with Load Balancing (SRD-LB) based on real time traffic data analysis, road conditions and environmental factors to reduce the travel time. The simulation results proved the efficiency of SRD-LB in successfully reducing the travel time and avoiding traffic congestion.

Keywords: traffic load balancing, smart route finding, smart traffic management, smart city, SUMO, OSM

PREPARATION AND PROPERTIES OF WATERPROOF COATED FABRICS USING NON-WOVEN FABRIC AS BASE MATERIAL

Gurumurthy.B. Ramaiah, Parashuram S Chillal and Ashok P. Ari

Abstract: : Waterproof coated fabrics find numerous engineering applications in day to day life. In this research work acrylic polymer coating material is used with non-woven fabric as base material to develop a waterproof coated fabric. Non-woven fabric with varying layers and thickness is used in preparation of waterproof coated fabrics. Roller method of coating is employed in this research to develop waterproof coated fabrics. Numerous properties like water repellency tests, thickness test, chemical tests, peeling test, Air permeability test, coating hardness tests, thermal property tests and SEM test to observe changes in surface morphology of coated fabrics is employed. Results show that the coated fabrics possess good water repellency characteristics, resistance to chemical degradation, breaking strength, and excellent durability for wear and tear.

Keywords: Water repellent properties, adhesion bond strength, Thermal properties, Acrylic polymer, binder, Water repellency test

HR : DIGITAL TRANSFORMATION 2020

Dr. Apoorva Trivedi and Dr. Lalitha Pillai

Abstract: This paper will study the concept of digital transformation in Human resources management and how different technologies are serving different HR functions and its employees. The study is descriptive in nature and secondary data has been used like company reports, web sources, expert blogs and research papers. The study has investigated the concept of “SMACI” the practice of Artificial Intelligence (AI), HR Chatbots, Machine Learning, Robot process automation (RPA) in formulating the basic functions of human resource management (recruitment, screening, interviewing, Onboarding) smarter, faster and effective. The study also interposed in the literature by reconnoitring the various tools which are used by the companies for the development and expansion of HR department. The advantages of having digital transformation in Human resource management, possible barriers or challenges a company has to meet while transformation and solutions to overcome those challenges has also been explored with the examples of Indian companies and their novelty in businesses.

Keywords: SMACI, HR Chatbots, Artificial Intelligence, Robot Process Automation, Machine learning

HUMAN RESOURCE PRACTICE AND PATIENT EMPOWERMENT: MEDIATING ROLE OF QUALITY OF PATIENT CARE

Dr. Sunil Kumar, Ms. Abha Gupta and Mr. Manoj Kumar Mishra

Abstract: :The purpose of this paper is to analyze the role of human resource practices on patient empowerment along with mediating effect of quality patientcare.

Design/Methodology: The study uses the sample of 203 employees of the hospitals working as staff nurse, ward boys, office administrators and HR professionals. To performs Structural Equation Modeling to assess the links between HRM practices, quality of patient care and patient empowerment. Mediation of quality of patient care is assessed using PROCESS Macro.

Findings: The study finds a significant relationship between HRM practices and patient empowerment. Quality of patient care has significant impact on patient empowerment. Lastly it is evident from the result of the study that quality of patient care has mediating effect between HRM practices and patient empowerment.

Research limitations /Implications: The study is done with a sample of 203 employees of the selected hospitals in the Delhi -NCR Region.

Practical Implications: The findings of the study suggest management practices has significant impact on patient empowerment. It is not about looking after various other dimensions ignoring the importance of HR practices in a hospital setting. The finding of the study is useful for hospital administration to take care of hospital staffs and they will take care of patients.

Keywords: Human resource practice, Patient Empowerment, Quality of patient care, India, Health

UNDERSTANDING AND ANALYZING CONSENSUS ALGORITHMS FOR BLOCKCHAIN

Nipun Bansal, Mrinal Singhal, Mohak Rastogi and Lakshay Arora

Abstract: Consensus algorithm form an integral part of the blockchain technology. However, with the increasing numbers of these algorithms, there is an urgent need to study them in a systematic way, which will enable us to select an algorithm suited to our needs. In this paper, we study and analyse 15 consensus algorithms and compare them on various parameters and present our findings in a tabular form. We further present our observations on the suitability of the consensus algorithms.

Keywords: Blockchain technology, consensus algorithm, cryptocurrency

DESIGNING OF A HYBRID MACHINE LEARNING ALGORITHM FOR LIVER DISEASE PREDICTION

Shubham Gupta, Vishal Bharti Priyanka Dahiya, Anil Kumar

Abstract: Early prediction of liver disease is very important due to ambiguous symptoms of liver disease as many people might be suffering from liver damage but might feel healthy, hence saving human life and taking proper action to control the disease is important. Liver is the body's largest organ. The liver helps in food digestion, nutrient absorption. Inability to identify disease can mislead to inappropriate medication and treatment. This research investigates the early prediction of liver disease using different algorithms i.Knn, Baggng method , Boosting method and a hybrid algorithm that combined the results of the class label assigned by individual classifiers and it was observed that Hybrid classifier performed the best amongst the remaining classifier with an accuracy of 69.14% and recall score of 1.

Keywords: Machine Learning, Hybrid, K Nearest Neighbour

THE MEDIATING EFFECT OF JOB SATISFACTION ON EMPLOYEE PERFORMANCE AND ORGANIZATIONAL COMMITMENT IN RELATION TO HRM PRACTICES IN BANKING SECTOR IN INDIA

P. Vakula Kumari, Pushkar Dubey

Abstract: :The aim of this research is to analyze the effect of human resource practices (HR) on employee performance and organizational commitment under the mediating effect of job satisfaction. A total of 400 employees (200 managerial and 200 non-managerial from four public sector and four private sector banks sector responded to the questionnaire. The findings come from both descriptive statistics and inferential statistics using cross-sectional data which was performed at the feasibility of the scholar. Confirmatory factor analysis (CFA) was performed using structural equational modeling (SEM) to obtain the results of the study. This study has found that HR practices: career planning, training and development, performance appraisal, rewards & compensation and employee participation have direct and significant effect on employee performance and organizational commitment through job satisfaction. The impact of these HR practices has widely been studied and their importance has acknowledged. However, the number of studies addressing this issue in banking sector is extremely scarce. This study has addressed that gap and is expected to improve employee performance and organizational commitment in relation to HRM Practices. The study is anticipated to have enriched the body of knowledge on the mediating effect of job satisfaction on the relationship of HRM practices with employee performance and organizational commitment in the target population and has validated past findings

Keywords: HRM Practices, organizational commitment, employee performance, job satisfaction.

CHATBOT AS AN INNOVATION OF MACHINE LEARNING

Saksham Bhambri, Muskan Ahuja, Vishakha Sehdev and Ankit Verma

Abstract: Artificial Intelligence in today's era is a very challenging discussion. Today it involves the development of those machines which have intelligence of their own and from which they can help a whole community. In this paper, we are going to learn about the new approach of Artificial intelligence which has the concept of connecting to different users in different ways according to the needs of the user. These systems are commonly known as Chatbots (or Chatterbots). Chatbots present a new way for the users to interact with the Systems. A Chatbot will allow a user to ask different questions in the same manner that they would ask a human and the chatbot will answer those questions as if an expert is present inside the machine or the system and he is the one who is answering your queries.

Keywords: Chatbot, Turing Test, Virtual Assistant

ABNORMALITIES ANALYSIS OF EEG SIGNALS FOR SEIZURE DETECTION USING LOGISTIC REGRESSION MODEL AND A COMPARATIVE ANALYSIS OF NEURAL NETS AND SUPPORT VECTOR MACHINES

Ruchi Sharma, Khyati Chopra

Abstract: The brain is the first entity to detect the abnormalities by electroencephalogram to record the electrical pulses. The variations in EEG can easily detect the disorders of brain like seizures, brain tumors, epilepsy, Parkinson, alzheimers etc. The doctors can easily detect these disorders by observing, EEG patterns of the patients. To detect the brain diseases is a challenging process to analyze. We propose a dynamic system to detect the brain abnormalities. Proposed work is a useful tool to analyse the normal and abnormal seizure patients. The logistic regression is a linear classifier. It is a forward approach to classify different sets of data and their belong-ability. The accuracy of this system can be analysed easily while looking at the different eeg waves i.e. beta, alpha, theta, delta etc. This accurate detection of abnormality will reduce the efforts by doctors for diagnosing the disorder. The maximum accuracy attained by svm algorithm is 98.34% and 95.65 by the neural nets, considered to be a good accuracy rate. This suggested system obtained a better accuracy rate.

Keywords: EEG, seizure, neural nets, svm

A COMPREHENSIVE REVIEW ON HUMAN STRESS ANALYSIS USING BRAIN SIGNALS

Ruchi Sharma, Khyati Chopra

Abstract: :During stressful situations or in panic states, the human brain gets activated. The central nervous system gets activated and transmits signals to other body organs. The signal generated in the brain known as neural signal could be used to detect the presence of stress. Through Electroencephalography, neural signals could be obtained which can characterize the stress state in human brain. EEG works well for the detection of various brain diseases. The Electroencephalograph signals are random, complex and non linear in nature, so they cannot be used directly but need some preprocessing. This paper reviews the work done till now to measure the stress from EEG signals. Various parameters and measures from previous studies have been taken into account in this paper.

Keywords: EEG, Stress, Neural Signals

THE ORGANIZATIONAL ATTACHMENT SURVEY: INSTRUMENT DEVELOPMENT AND EXPLORATORY FACTOR ANALYSIS

Puja Khatri and Neha Verma

Abstract: Organizational attachment is a stabilizing psychological force that ties an individual to an organization. It is a well-established fact that organizational attachment is very essential for the organization to decrease the turnover and to strengthen the commitment of the employee towards the organization. Despite the role of organizational attachment being so prominent in the organizations, it is ironic that most of the studies have been conducted in western countries only. Whereas in India, the concept is relatively new. Furthermore, there is a lack of validated measurement of the construct. Therefore, the purpose of the present study is to explore and validate the major dimensions of organizational attachment by using the Principal component analysis technique. 231 respondents were selected from the population of IT/ITES sector professionals in the Delhi/NCR region, India to answer a self-developed instrument. The study has successfully identified four factors with 65 % percent of the total variance explained. Cronbach Alpha of the same came out to be 0.847.

Keywords: Organizational attachment, principal component analysis, IT/ITES Sector, Exploratory, Factor Analysis.

BOLT BASED SMART BULB FOR HOME AUTOMATION USING INTERNET OF THINGS (BULBIFI)

Juginder Pal Singh, Anubhav Bansal and Neeraj Varshney

Abstract: IoT, is a class of “worldwide neural system” in cloud which connects various things like RFID technology sensor machines, objects and other devices. The home automation system has accomplished great fame in the last few years as it growths the comfort and value of life. In this paper a summary of current and developing home computerization systems is conferred. Nowadays most home automation systems are controlled by a smartphone and microcontroller. A smart phone app or cloud servers are used to governor and monitor the home appliances using different type of communiqué channels. The working principle of different type of wireless communication techniques such as Wi-Fi, Cloud, Bolt Module, relay have been analyzed and the features have been compared so that users can make an informed choice of the expertise to build homebased automation systems.

Keywords: RFID, Bolt, Smart Home

RESISTANCE IN FUNCTIONING OF SUBORDINATE COURT BY ADVOCATES IN INDIA: ILLEGAL AND UNETHICAL PRACTICES

Sourav Subba , R.S. Solanki, Bhupal Bhattacharyya

Abstract: Instant article discusses about the practice and tendency of observing the cease work, strike and boycotts of law court by the advocates in subordinate court or district judiciary in India. The article also highlights the causes of cease work, strike and boycotts of law court and its adverse impact upon the justice delivery system and common litigants of this country. The main object of article is to highlights the available anti-cease work or strike law in India and to fill up the lacuna or deficiencies in the existing system by giving some suggestion to enact appropriate laws and to adopt the necessary initiative to cure the existing illness in the administration of justice system by the subordinate court or district judiciary in India.

Keywords: Cease Work, Court Practice, Impact on Justice delivery system, Court Litigations

IN-WHEEL EPICYCLIC REGENERATIVE BRAKING SYSTEM

Abdul Majid Khan, Aditya Pandey, Aman Burman, Adnan Khan, Gourav Patel

Abstract: In the response to changing global landscape, energy has become a primary focus of the major world powers. One such technology which has proved to be a very efficient way in energy recovery is the regenerative braking system. However, the efficiency of a conventional regenerative braking lies in the range of 16% to 4% with respect to the braking effort, i.e. from maximum to minimum. This is where we find the purpose of our project in increasing the range of generative braking torque at the point of maximum braking effort. The major modification that we have done in the system is that we have introduced an in-wheel planetary gear train. With the help of this mechanical modification, we are aiming to achieve energy recovery twice that of the conventional regenerative braking system. When the driver steps on the brake, the vehicle's motor switches to generator mode. The wheel transmits the energy to the generator through the planetary gear train which is in turn converted to electrical energy. This electrical energy is stored in the battery packs. With this we are aiming to achieve a 143% of increase with respect to conventional regenerative braking system..

Keywords: Regenerative braking system, Epicyclic gear train, overrunning clutch

DESCRIBED A FACIAL EXPRESSION RECOGNITION IN REAL TIME USING MACHINE LEARNING ALGORITHM

Ms. Malika Falak Naaz and Dr. Krishan Kumar Goyal

Abstract: :The purpose of this paper is to analysis of facial expression recognition using with Machine learning algorithm models. It has been observed from past few years that lots of scholar have shown Interest in research activities related to face expression recognition, as such there has been increase in multiple research with different algorithm proposed, after the tragedy of 9/11, 2001 when twin tower were destroyed in an attack by American airliner, need for face identification application to recognized suspected matrix, were felt necessary, as such the demand of such applications increased rapidly. then evaluated of many algorithm technics were generated, initially machine learning techniques using as statically matching which is controlling photographs like in a "MugsShots Matching." (an informal term for police photograph or booking photograph) it is a photographic portrait of a person.[1] Images deducting, for authentication of banking, CCTV Video and security model refinery [2] have also shown growing advance analysis techniques, like wavelets, HOG and neural networks, models ,techniques with robust software tool, that are important categories, well proposed so many techniques increasingly. In this research work I tried to survey and evaluation an important method that is known as "Face recognition", earlier it can be introduced eigenface, elastic matching, neural networks, pattern recognition or facial expression recognition. The goal of this paper is to study facial expression recognized emotions with given images and also explore real time images, that include expression of human emotions like, sad, happy, angry and so on. This activity can be used in real life environment. In this research work the main objective is to use of particular algorithm or models along with these libraries "PyTorch, Keras, TensorFlow, and OpenCV", one of the libraries for FER analysis its name is Emopy toolkits for facial expression recognition in real time, video base images for motion recognized.

Keywords: Scikit, Keras, TensorFlow, OpenCV EmoPy

STATISTICAL DECODING THE WINNERS BASED ON MATCH PARAMETERS IN THE GAME OF CRICKET

Harshita Khangarot and Alok Kumar

Abstract: Prior planning and decision by a team leader in a match are crucial for a favorable result. Successful teams are those who adapt themselves according to the changing conditions at the ground by making appropriate judgments. The major decision to make before the start of any match is the toss to select the choice of the chase. This study explores the effect of toss win, making the decision and first inning score on the outcome of the match. There is evidence in the data with the 5% significance level that the match outcome has a strong association (p-value: $1.30e-05$) with the aforementioned parameters. On the contrary, the study didn't find any evidence that the lead in the first inning of a test-match or run scored in first-over decides the winner.

Keywords: Toss decision, sports analytics, match outcome, performance, inning

AN ANALYSIS OF BATTING PERFORMANCE OF THE CRICKET PLAYERS

Harshita Khangarot and Alok Kumar

Abstract: This study aims to determine the effect of batting performance on winning the game. Rating to the batsman based on their run-rate acts as a natural way of quantifying the performance. But in the team game, it is always important to score according to the situation demands. Batting against strong bowling line-up or at the initial stage of the game deserves more credit. In this paper, we have taken ball-by-ball data of cricket and reveal the importance of first over in the innings and opening partnership.

Keywords: winning the game, situation demands, opening partnership

A STATISTICAL ANALYSIS ON BOWLING PERFORMANCE OF PLAYER IN PROFESSIONAL CRICKET

Harshita Khangarot, Alok Kumar

Abstract: Measuring the performance of the bowler according to wickets taken is the natural way of quantifying their performance. Apart from it, the situation at which they scored is the match-winning event. The performance of a bowler could evaluate by determining the ability to take wickets against strong batting line up. In this paper, we present an analysis of the performance of a bowler. Many parameters play a key role in analyzing the bowling performance. These include venue conditions, extras runs, the number of dismissals, type of dismissal of a batsman, especially during power-play and death-over. The testing supports the hypothesis with 95% confidence interval for the first, death and power-play over and also not found any evidence in the data for finding the equal probability for fall of wickets in both the innings.

Keywords: Bowling-performance, death-over, wicket, dismissal, sports analytics

STARTUPS BRANDING IN DEARTH OF FINANCE: REINVENTING STRATEGIES

Sapna Yadav and Mohit Gupta

Abstract: Marketing strategy of any company always depend on several factors: product, market and business model. But eventually, it always comes down to money. It is difficult to argue the fact that budget dictates the strategy. On an average 800 startups start out their business every year, but only less than 20 percent of that number survive at the end of it. In an already crowded market place setting a startup apart will be crucial to its survival and success. One such example is of uber which practiced “Growth Hacking” in which it gives prominence to its product enhancement instead of its promotion This paper reinvents the outlook of startups for their branding strategies in case of financial dearth.

Keywords: Reinventing Strategies, Financial Dearth , Startups Branding ,Growth Hacking

GLOBALIZATION FAIL – BARRIERS TO FREE INTERNATIONAL TRADE

Neha Bobde, Bhupal Bhattacharya

Abstract: :It is an well acknowledged fact that no country can survive in isolation and to achieve an economically strong and stable position in the era of globalization , participation in international trade is a must . Though there are international organisations and bodies governing the trade relations between countries , there are still a number of barriers that come in the way of free trade . These barriers can be categorised as ‘Tariff’ and ‘Non-Tariff’ barriers . This paper covers some of the most relevant non-tariff barriers, i.e. technical barriers to trade and sanitary and phyto-sanitary measures as well as its effects on the domestic and the international markets of different nations . Along with this , the present paper also critically evaluates other regulatory provisions of WTO relevant to the subject. The researcher has tried to elucidate how the developed countries use the WTO Agreements to their advantage creating unnecessary obstacles to trade for the developing countries . It also highlights how the states have been exploiting the concept of ‘Globalization’ for their own benefits but in disguise and how in literal sense the concept of ‘Globalization is Failing’. This work is an attempt to prove that the literature and theory of International laws differs from what is practiced to a very large , rather extreme limits .The researcher has also tried to discuss the focus areas wherein no relevant literature is available and much work needs to be done in International scenario as far as unearthing and interpreting literature from the trade perspective of developing and least developing countries is concerned .

Keywords: Globalization, International Trade, Free Trade, World Trade Organization, Barriers To Trade, Non Tariff Barriers, Developing Countries

QUANTUM INSPIRED GENETIC ALGORITHM TO SOLVE MULTIPROCESSOR TASK SCHEDULING PROBLEM

Rashika Bangroo, Kushal Gupta, Priyanka Dahiya, Anil Kumar

Abstract: Multi-processor task scheduling problem is a complex combinatorial NP-Hard optimization problem in the field of parallel computing. Many heuristics and meta-heuristics have extensively been used by researchers in order to solve this problem optimally. However, genetic algorithm is one of the most widely adopted technique to solve such problems. But genetic algorithm has known to show certain drawbacks which limits its use in such problems. Thus this paper presents a modified version of the genetic algorithm i.e, Quantum Genetic Algorithm to solve the Multi-processor task scheduling problem. The results obtained have also been compared with the other meta-heuristics to prove its effectiveness.

Keywords: Multi-processor DAG Scheduling problem, Quantum Genetic Algorithm, Gauss Jordan , elimination, LU Decomposition

ON FUZZY SOFT STRONGLY BAIRE SPACES

E. Poongothai and S. Divyapriya

Abstract: :: In this paper the concepts of fuzzy soft strongly nowhere dense sets and fuzzy soft strongly First category sets, fuzzy soft strongly residual sets in FSTS are introduced and studied. By means of fuzzy soft strongly nowhere dense sets, the notion of fuzzy soft strongly Baire space is defined and several characterizations of fuzzy soft strongly Baire space are obtained.

Keywords: Fuzzy soft dense sets, Fuzzy soft strongly nowhere dense sets, Fuzzy soft simply open sets, fuzzy soft strongly first category sets, fuzzy soft strongly second category sets, fuzzy soft strongly, residual sets

ENSURING DATA SECURITY IN INTERNET OF THINGS THROUGH BIG DATA ANALYTICS

Sunita Choudhary and Anand Sharma

Abstract: : The development in the quantity of devices associated with the Internet of Things (IoT) and the exponential increment in information utilization just reflect how the development of huge information splendidly covers with that of IoT. The administration of enormous information in a constantly extending system offers ascend to non-unimportant concerns with respect to information gathering proficiency, information preparing, examination, and security. Specially, the IoT framework need to offer any form of privacy control for the service so that the sensitive information such as service type, device owner's identity, device hostname, business data, business communication and more kept secure. To address this issue, analysts have analyzed the difficulties related with the fruitful arrangement of IoT with respect to security. This paper investigates the use of big data analytics in enormous information security aspects for IoT frameworks just as the key necessities for overseeing huge information and for empowering investigation in an IoT domain.

Keywords: Internet of things, big data analytics, networking, data security

A SYSTEMATIC LITERATURE REVIEW ON REQUIREMENT CHANGE MANAGEMENT CHALLENGES FACED BY DEVELOPERS

Sohail Ahmad

Abstract: Requirements are the baseline for every project. Generally, requirements change process results from evaluating, updating, removing, managing, interpreting, adding, controlling and analyzing etc. requirements are basically client's statements of interest.

In this paper researcher conducted a systematic literature review by analyzing the 10 related research articles and define the main challenges which are faced by developers in the process of RCM. Re-searcher highlights the RCM challenges as well as their solutions which in return can improve the ability to make good decision and resolve the RCM problem. Evaluating RCM challenges will help to draw a road map for further researchers to seeking optimal solutions.

Keywords: Requirement Change Management, Developers, RCM

AN INTERNET OF THING BASED E-HEALTH CARE SYSTEM INCORPORATE WITH BLOCKCHAIN TECHNOLOGY

Vishal Sharma, Niranjana Lal

Abstract: Now a day IoT and ehealth care system becomes a hot research topic. Due to use of these technologies, the risk of privacy preservation and security of patient's sensitive data transfer and the logging of data transactions are becoming challenging. So, in this paper we integrate the benefits of Blockchain technology with Internet of Things (IoT) to make a secure and privacy preserve ehealth care system. Our aim in this paper is to progress the challenges of storing patients' data captured by wearable IoT devices to support the health care provider to take the better-informed decisions based on the well-organized record-keeping of healthcare data. The privacy and security model in our work is based on progressive cryptographic methods. We also provide the analysis of our proposed working model.

Keywords: IoT, e-Healthcare, Blockchain, Privacy, Security

A REVIEW OF PROPOSED SOLUTIONS FOR WORMHOLE ATTACK IN MANET

Nisha Sharma, Dr. Manish Sharma, Dr. Prof. (Dr.) D.P. Sharma

Abstract: All around the world, Majority of people depends upon wireless adhoc network. So it becomes the most priority to reduce the vulnerability of Wireless network. Wireless networks are exposed to many different types of attacks out of which wormhole attack is most dangerous. Unlike many other attacks on ad hoc routing, wormhole attack is very powerful and cannot be prevented with cryptographic means because intruders does not modify the packet data ,it simply replays the packets. A strategic placement of the wormhole can result in a significant breakdown in communication. In this paper, study of some existing techniques for detection and prevention of wormhole attack is presented.

Keywords: Ad-Hoc Network, Wormhole attack, Tunneling, Malicious nodes, counter measures

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