3.3.1

Link for Research Paper/Journal/Website/URL of the Print Journal (2019)

Greater Noida Institute of Technology (Engg. Institute)

Plot No. 7, Knowledge Park II, Greater Noida
Uttar Pradesh 201310 India

3.3.1 Number of research papers published per teacher in the Journals notified on UGC website during the last five years

Title of paper	Name of the author/s	Department of the teacher	Name of journal	Year of publication	ISSN number	Link to the recognition in UGC enlistment of the Journal / Digital Object Identifier (doi) number		
						Link to website of the Journal	Link to article / paper / abstract of the article	Is it listed in UGC Care list
Lead time for cities of Northern India by using multi parameter EEW algorithm	Rakhi Bhardwaj	ECE	International journal of Geophysics	2018	0908-6205	https://www.hindawi.com/journals/ijge/	https://doi.org/10.1155/2018/9086205	Yes
Experimental Investigation and Optimization of Process Parameters for Shear Strength of Compound Cast Bimetallic Joints	Sudhir Kumar	ME	Transactions of the Indian Institute of Metals	2018	0972-2815, 0975-1645	https://www.springer.com/journal/12666	https://doi.org/10.1007/s12666-018-1349-1	Yes
Experimental Investigation and Optimization of Process Parameters for Impact Strength of Compound Cast Bimetallic Joints	Sudhir Kumar	ME	International Journal of Metal casting	2018	2163-3193 1939-5981	https://www.springer.com/journal/40962	DOI 10.1007/s40962-017-0190-3	Yes
MICROSTRUCTURE EVALUATION, THERMAL AND MECHANICAL CHARACTERIZATION OF HYBRID METAL MATRIX COMPOSITE	Sudhir Kumar	ME	Journal of Science and Engineering of Composite Materials	2018	2191-0359	https://www.degruyter.com/journal/key/secm/html	https://doi.org/10.1515/secm-2017-0210	Yes
Characterization and microhardness evaluation of A356/Mg joint produced by vacuum assisted sand mold compound casting process	Sudhir Kumar	ME	International Journal of Metal Casting	2018	2163-3193 1939-5981	https://www.springer.com/journal/40962	https://doi.org/10.1007/s40962-018-0264-x	Yes
Experimental Investigation and Evaluation of Joint Strength of A356/Mg Bimetallic Fabricated Using Compound Casting Process	Sudhir Kumar	ME	International Journal of Metal casting	2018	2163-3193 1939-5981	https://www.springer.com/journal/40962	https://doi.org/10.1007/s40962-018-0288-2	Yes
New Dynamic Metrics Suite To Measure Complexity Of Component Based Software	Anjali Chaudhary	CSE	International Conference on Emerging Trends in Science, Engineering & Technology with VSRD International Journal of Technical and Non-technical Research Volume IX	2018	0976-7967	https://www.vsrdjournals.com/jms/home.php?ii=12	https://www.vsrdjournals.com/jms/home.php?ii=12	Yes
An efficient algorithm for CBIR using clustering techniques for large dataset	Monika Jain	CSE	IEEE Explore via conference published in IEEE Xplore	2018	NA	https://www.aconf.org/conf_147077/abstract.html	https://www.aconf.org/conf_147077/abstract.html	Yes
Analysis and Impact of Social Media and it's Privacy on Big Data	Shilpi Bansal	CSE	IEEE Explore via International Conference on Advances in Computing and Communication Engineering (ICACCE), Paris, 2018	2018	NA	https://www.aconf.org/conf_147077/abstract.html	https://www.aconf.org/conf_147077/abstract.html	Yes
Blockchain -the Technology of Crypto Currencies	Shilpi Bansal	CSE	IEEE Explore via International Conference on Advances in Computing and Communication Engineering (ICACCE), Paris, 2018	2018	NA	https://www.aconf.org/conf_147077/abstract.html	https://www.aconf.org/conf_147077/abstract.html	Yes
Study and comparison of performance of Shell and Tube Heat Exchanger with Two Numerical Methods	Navin Kumar	ME	International journal for research in applied science and engineering technology (IJRASET)	2018	2321-9653	https://www.ijraset.com/	https://www.ijraset.com/	Yes
A MIG welding testing on tensile and hardness using Taguchi method	Navin Kumar	ME	International journal of Advanced Research in Electronics and Communication Engineering (IJARECE)	2018	2278-909X	https://journals.indexcopernicus.com/journal/34390	https://journals.indexcopernicus.com/journal/34390	Yes
Performance enhancement for scale-up of Gas hydrate forming reactors using stirred tank reactors	Navin Kumar	ME	International journal of Advanced Research in Electronics and Communication Engineering (IJARECE)	2018	2278-909X	https://journals.indexcopernicus.com/journal/34390	https://journals.indexcopernicus.com/journal/34390	Yes
A review on phytoconstituents and medicinal properties of Emblica officinalis	Dipti Bharti	AS	Annals of Horticulture Journal	2018	0976-4623	https://www.indianjournals.com/ijor.aspx	10.5958/0976-4623.2018.00002.6	Yes
Air Quality Index Analysis and Solutions for High Traffic, Industrial and Residential Regions in Delhi/NCR	Tabish Quadri	CE	Journal of Advances and Scholarly Researches in Allied Education (JASRAE)	2019	2230-7540	http://ignited.in/J/JASRAE	http://ignited.in/J/JASRAE	Yes

SFDR Enhancement of 120o Phase Angle Based RoF Link by using Linear Polarizers	Shelly Garg	ECE	IEEE PhotonicsTechnologyLetters,	2019	1041-1135	https://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=68	10.1109/lpt.2019.2904726	Yes
Mitigating the effects of non linear distortion using polarizers in microwave photonic link	Shelly Garg	ECE	Journal of Optical Communication	2019	2191-6322	https://www.degruyter.com/journal/key/joc/html	https://doi.org/10.1515/joc-2019-0244	Yes
SNDR Optimization of Linearized Mach Zehender Modulator For Multi-Tone RoF System	Shelly Garg	ECE	Journal of Optics, SpringerScience,	2019	0974-6900 0972-8821	https://www.springer.com/journal/12596	https://doi.org/10.1007/s12596-019-00524-2	Yes
Intercultural Competence In Lahiri's 'Hell Heaven'	Shivani Kaul	ASHU	THINK INDIA JOURNAL	2022	0971-1260	Think India Journal (thinkindiaquarterly.org)	Think India Journal (thinkindiaquarterly.org)	Yes
Ball Pen Ink level Indicator	YATIN KUMAR AGARWAL	CSE	IJRTE	2019	2277-3878	https://thinkindiaquarterly.org/	Think India Journal (thinkindiaquarterly.org)	Yes
Multiple Object Detection and Tracking	YATIN KUMAR AGARWAL	CSE	IJRECE	2019	2393-9028	http://www.i2or-ijrece.com/	http://www.i2or-ijrece.com/	Yes
A Review: Cryptography and Steganography for data hiding in images	YATIN KUMAR AGARWAL	CSE	JETIR	2019	2349-5162	http://www.i2or-ijrece.com/	http://www.i2or-ijrece.com/	Yes
Online retreival and indexing of images using multi feature vectors	YATIN KUMAR AGARWAL	CSE	International Journal of Innovative Technology and Exploring Engineering (IJITEE)	2019	2349-5162	https://www.ijitee.org/	https://www.ijitee.org/	Yes
Systemetic analysis of semantic web search based on ontology modeling and its search engines	ARUN MITTAL	CSE	JETIR	2019	2349-5162	http://www.i2or-ijrece.com/	http://www.i2or-ijrece.com/	Yes
Self-optimization in LTE: An Approach to Reduce Call Drops in Mobile Network	Divya Mishra	CSE	FTNCT 2018, Springer (CCIS Series)	2019	1865-0929 1865-0937	https://link.springer.com/book/10.1007/978-981-13-3804-5	https://link.springer.com/book/10.1007/978-981-13-3804-6	Yes
Performance Enhanced and Improvised Approach to Reduce Call Drops Using LTE-SON	Divya Mishra	CSE	RAACE 2017, Springer (Singapore)	2019	978-981-32-9584-1	https://link.springer.com/book/10.1007/978-981-32-9585-8	https://doi.org/10.1007/978-981-32-9585-8_15	Yes
Fine tuning of MapReduce jobs using parallel K Map clustering	Divya Mishra	CSE	Journal of Emerging Technologies and Innovative Research (UGC)	2019	2349-5162	https://www.jetir.org/	https://www.jetir.org/	Yes
Automated Car Parking with Empty Slot Detection Using IoT	Shilpi Bansal	CSE	International Conference on Advances in Engineering Science Management & Technology (ICAESMT) - 2019,Uttaranchal University, Dehradun, India.	2019	NA	https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3403921	https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3403921	Yes
A Review on Software Effort Estimation Techniques	Dhwani Agrawal	CSE	International Research Journal of Management Science and Technology	2019	2395-0072	https://www.irjet.net/	https://www.irjet.net/archives/V6/i4/IRJET-V6I41063.pdf	Yes
An Evolution on Software Effort Estimation Techniques	Abhishek Singh	CSE	International Research Journal of Management Science and Technology	2019	2250-1959 2348-9367	http://www.irjmst.com/	http://www.irjmst.com/	Yes
A Review on Software Effort Estimation Techniques	Reena Chaudhary	CSE	International Research Journal of Management Science and Technology	2019	2250-1959 2348-9367	http://www.irjmst.com/	http://www.irjmst.com/	Yes
A Review on Software Effort Estimation Techniques	Rashmi Chaudhary	CSE	International Research Journal of Management Science and Technology	2019	2250-1959 2348-9367	http://www.irjmst.com/	http://www.irjmst.com/	Yes
Prediction Analysis Techniques of Data Mining: A Review	Rajiva Ranjan Divivedi	CSE	International Conference on Advance Computing and Software Engineering ICACSE-2019 Organized by Kamla Nehru Institute of Technology Sultanpur.	2019	NA	NA	NA	Yes
Classification Technique for Heart Disease Prediction in Data Mining	Rajiva Ranjan Divivedi	CSE	International Journal of Recent Technology and Engineering (IJRTE)	2019	2277-3878	https://www.ijrte.org/	https://www.ijrte.org/	Yes
SARLA - A 3-TIER ARCHITECTURAL FRAMEWORK BASED ON THE ACO FOR THE PROBABLISTIC ANALYSIS OF THE REGRESSION TEST CASE SELECTION AND THEIR PRIORITIZATION	Neha Kashyap	CSE	International Conference on Advancements in Computing & Management (ICACM-2019) SSRN	2019	NA	NA	NA	Yes
Audio Steganography using ASCII Code and GA	Amba	CSE	ICTUS 2017, DUBAI	2019	NA	NA	NA	Yes

Development and comparison of tensile and compressive strength and percentage shrinkage of glass-jute hybrid fibre reinforced polymer composites	Navin Kumar	ME	IOP Journal of Physics: Conference series	2019	1742-6596	https://iopscience.iop.org/journal/1742-6596	DOI 10.1088/1742-6596/1240/1/012123	Yes
Analytical study on any gate logic function as a pull-up network of pMOS transistors and a pull down tetwork of nMOS transistors	Navin Kumar	ME	IOP Journal of Physics: Conference series	2019	0094-243X (PRINT) 1551-7616 (WEB)	https://pubs.aip.org/aip/acp	https://doi.org/10.1063/1.5122363	Yes
Study on transistors transistors logic with reference to their circuits and noise margin	Navin Kumar	ME	ICABS 2019 ,International conference held at GDC memorial college, Behal, Bhiwani, HR	2019	NA	NA	NA	Yes
Role of Fe2O3 and MoO3 content on optical properties of lead borate glasses	Navin Kumar	ME	AIP Conference Proceedings	2019	0094-243X (PRINT) 1551-7616 (WEB)	https://pubs.aip.org/aip/acp	https://doi.org/10.1063/1.5122426	Yes
Synergistic Effects of Some Medicinal Plants and Transition Metal Ferrocyanides on Some Selected Fungus	Dipti Bharti	ASH	Journal of Pharmacognosy and Phytochemistry	2019	2278-4136	https://www.phytojournal.com/	https://www.phytojournal.com/	Yes
Adsorption of hazardous dye crystal violet from industrial waste using low cost adsorbent Chenopodium album	Dipti Bharti	ASH	Desalination and Water Treatment	2019	1944-3986	https://www.deswater.com/home.php	doi: 10.5004/dwt.2019.24595	Yes
A Novel Cryptographic Data Security Approach for Banking Industry to Adopt Cloud Computin	Anuranjan Misra	CSE	International Journal of Recent Technology and Engineering (IJRTE)	2019	2277-3878	https://www.jetir.org/	https://www.jetir.org/	Yes
Linearization of Photonic Link Based on Phase-Controlled Dual Drive Dual-Parallel Mach–Zehnder Modulator	Shelly Garg	ECE	Wireless Personal Communications	2020	0929-6212	https://www.springer.com/journal/11277	https://doi.org/10.1007/s11277-020-07351-w	Yes
Cooperative Spectrum Sensing Optimization Using Meta-heuristic Algorithms	Vivek Gupta	ECE	Wireless Personal Communications	2020	0929-6212	https://www.springer.com/journal/11277	https://doi.org/10.1007/s11277-020-07290-6	Yes
Bio – Inspired Optimal Weighted Fusion in Cooperative Spectrum Sensing For Cognitive Radio	Vivek Gupta	ECE	International Journal of Advanced Science and Technology	2020	2005-4238	http://sersc.org/journals/index.php/IJAST/index	http://sersc.org/journals/index.php/IJAST/index	Yes
Conventional Combining Scheme in Cooperative Spectrum Sensing	Vivek Gupta	ECE	International Journal of Innovative Technology and Exploring Engineering (IJITEE)	2020	2278-3075	https://www.ijitee.org/	https://www.ijitee.org/	Yes
Third Order Intermodulation Power Variations Of Radio Over Fiber Link By Employing Mzm And Dd-Mzm Modulator	Shelly Garg	ECE	Telecommunications and Radio Engineering	2020	0040-2508 1943-6009	https://www.dl.begellhouse.com/journals/0632a9d54950b268.html	DOI: 10.1615/TelecomRadEng.v79.i14.40	Yes
Dynamic Range Measurement Of Radio Over Fiber Link By Employing 120° Phase Shift Method	Shelly Garg	ECE	Telecommunications and Radio Engineering	2020	0040-2508 1943-6009	https://www.dl.begellhouse.com/journals/0632a9d54950b268.html	DOI: 10.1615/TelecomRadEng.v79.i2.20	Yes
Analysis And Implementation FPGA Implementation For Image Processing Algorithm.	Shelly Garg	ECE	Journal of Critical Reviews	2020	ISSN- 2394-5125	https://www.jcreview.com/index.php	doi: 10.31838/jcr.07.14.514	Yes
Performance Comparison Of High Speed And Low Power Forward Error Correction (Fec) Through Viterbi Decode Communication Channel Through Xilinx.	Shelly Garg	ECE	Journal of Critical Reviews	2020	ISSN- 2394-5125	https://www.jcreview.com/index.php	doi: 10.31838/jcr.07.13.517	Yes
Implementation of PID Controller Using An FPGA	Shelly Garg	ECE	Journal of Critical Reviews	2020	ISSN- 2394-5125	https://www.jcreview.com/index.php	https://www.jcreview.com/admin/Uploads/Files/61b3143f450950.95102316.	Yes
A Novel Hybrid Fuzzy PD-TID Controller for Load Frequency Control of a Standalone Microgrid	Bhuvnesh Khokhar	EE	Arabian Journal for Science and Engineering	2020	ISSN-2193-567X	https://www.springer.com/journal/13369/	https://doi.org/10.1007/s13369-020-04761-7	Yes
A novel fractional order proportional integral derivative plus second-order derivative controller for load frequency control	Bhuvnesh Khokhar	EE	International Journal of Sustainable Energy	2020	1478-6451	https://www.tandfonline.com/journals/gsol20	10.1080/14786451.2020.1803861	Yes
A Robust Cascade Controller for Load Frequency Control of a Standalone Microgrid Incorporating Electric Vehicles	Bhuvnesh Khokhar	EE	Electric Power Components and Systems	2020	1532-5008	https://www.tandfonline.com/toc/uemp20/current	10.1080/15325008.2020.1797936	Yes
Nuglets: A Virtual Currency	Dhwani Agrawal	CSE	International Research Journal of Engineering & Technology	2020	2395-0072 2395-0056	https://www.irjet.net/	NA	Yes
Nuglets: A Virtual Currency	Abhishek Singh	CSE	International Research Journal of Engineering & Technology (IRJET)	2020	2395-0072 2395-0056	https://www.irjet.net/	NA	Yes

A Survey on Various Machine Learning Algorithms	Dhwani Agrawal	CSE	International Research Journal of Engineering & Technology	2020	2395-0072 2395-0056	https://www.irjet.net/	NA	Yes
A Survey on Various Machine Learning Algorithms	Abhishek Singh	CSE	International Research Journal of Engineering & Technology	2020	2395-0072 2395-0056	https://www.irjet.net/	NA	Yes
Removal of crystal voilet from aqueous solution using iron based metal organic framwork	Dipti bharti	ASH	Desalination and water Treatment	2020	1944-3994	https://www.deswater.com/	10.5004/dwt.2020.26387	Yes
A Study on Coal Ash Slurry Flow at Higher Solid Concentrations in Pipeline	Navin Kumar	ME	Proceedings of International Conference in Mechanical and Energy Technology pp 817-822	2020	ISBN 978-981-15-2647-3	https://link.springer.com/book/10.1007/978-981-15-2647-3	https://link.springer.com/chapter/10.1007/978-981-15-2647-3_77	Yes
Optimization of process parameters of A-359 aluminium alloy in EPS-assisted-investment casting process using Taguchi method	Girendra Bhati	ME	IOP Conference Series: Materials Science and Engineering	2020	1757-899X	https://iopscience.iop.org/journal/1757-899X	doi:10.1088/1757-899X/804/1/012020	Yes
Antimicrobial Potential of Some Selected Medicinal Plants Collected from Himachal Pradesh	Dipti Bharti	AS	Research Journal of Chemistry and Environment	2020	0972-0626	https://ores.su/en/journals/research-journal-of-chemistry-and-environment/	NA	Yes
Post Quantum Cryptography: A Literature Review	Shipra Srivastava	IT	Shodh Sarita	2020	0974-5823	https://kalaharijournals.com/ijme.php	NA	Yes
A study and Comarative analysis of some advanced symmetric Block Cipher Techniques	Shipra Srivastava	IT	International Journal of Creative Research Thoughts	2020	2320-2882	www.ijert.org	NA	Yes
"Medical Image Security Analysis and Enhancement for Telemedicine Applications"	V.K.PALLAW	MCA	European Journal of Molecular & Clinical Medicine	2020	2515-8260	https://ejmcm.com	NA	Yes
Risk Management in Metro Rail Construction Case Study : Delhi Metro Corridor from Kalkaji to Botanical Garden	Tabish Quadri	CE	INTERNATIONAL RESEARCH JOURNAL OF ENGINEERING AND TECHNOLOGY (IRJET)	2020	ISSN: 2395-0056	https://www.irjet.net/	NA	Yes
A Prototype for Data Integrity in Cloud Environmen	Anuranjan Misra	CSE	EAI Endorsed Transactions on Cloud Systems	2020	2410-6895	https://eudl.eu/	doi/10.4108/eai.7-9-2020.166287	Yes
Blockchain Enabled E-Voting System	Anuranjan Misra	CSE	Dogo Rangsang Research Journal	2020	2347-7180	https://www.journal-dogorangsang.in/	NA	Yes
A Comparative Study on the Seismic and Cost Analysis of RCC and Composite Structure in India	Anuj Sharma	CE	International Journal of All Research Education & Scientific Methods	2020	2455-6211	http://www.ijaresm.com/	NA	Yes
Rigid Triaxial Rotor Model Description of yy-Band in Some Even Nuclei	Moti Singh	ASHU	Physics of Particles and Nuclei Letters, Springer	2021	1547-4771	https://www.springer.com/journal/11497	https://doi.org/10.1134/S154747712202011X	Yes
Using Waste Polymer for Soil Stabilization	Taranpreet Kaur	CE	International Journal of Innovative Science and Research Technology	2021	2456-2165	https://www.ijisrt.com/	NA	Yes
Soil Stabilization Using Plastic Chips, Granules & Sugarcane Bagasse Ash Mixture	Arvind Kumar	CE	International Journal for Research in Applied Science & Engineering Technology (IJRASET)	2021	2321-9653	https://www.ijraset.com/	NA	Yes
Comparison of Concrete made through TSMA using Metakaolin and GGBS vs Normal Concrete made through NMA	Anuj Sharma	CE	International Research Journal of Engineering and Technology (IRJET)	2021	2395-0072	https://www.irjet.net/	NA	Yes
Dynamic Analysis of G+15 Multi-storied RCC Commercial Buildings with Different Plan Configuration in Seismic Zone V using ETABS 2018	Anuj Sharma	CE	International Research Journal of Engineering and Technology (IRJET)	2021	2395-0072	https://www.irjet.net/	NA	Yes
Evaluation on Risk Assessment on Indoor Air Pollution: A Case Study of Delhi-NCR Region	Tarun Kumar	CE	IOP Conf. Series: Earth and Environmental Science 796 (2021) 012055	2021	NA	https://iopscience.iop.org/journal/1755-1315	doi:10.1088/1755-1315/796/1/012055	Yes
Influence of Incorporating Industrial Byproducts/Wastes on Mechanical Properties and Durability Characteristics of Self-Consolidating Concrete: A Review	Rajesh Kumar Sharma, Saurav Yadav	CE	Recent Trends in Industrial and Production Engineering, Springer	2021	ISBN: 978-981-16-3330-0	https://link.springer.com/book/10.1007/978-981-16-3330-0	https://link.springer.com/chapter/10.1007%2F978-981-16-3330-0_16	Yes
Load frequency control of a microgrid employing a 2D Sine Logistic map based chaotic sine cosine algorithm	Bhuvnesh Khokhar	EE	ELSEVIER	2021	1568-4946	https://www.sciencedirect.com/journal/applied-soft-computing	https://doi.org/10.1016/j.asoc.2021.107564	Yes

An Application of Analytical Hierarchy Process in Selection of Coating Material Composition in Lost Foam Casting Process	Gagan Varshney	ME	IOP Conf. Series: Materials Science and Engineering	2021	1757-899X	https://iopscience.iop.org/journal/1757-899X	doi:10.1088/1757-899X/1168/1/012010	Yes
An Application of Analytical Hierarchy Process in Selection of Coating Material Composition in Lost Foam Casting Process	Syed Qaisar Husain	ME	IOP Conf. Series: Materials Science and Engineering	2021	1757-899X	https://iopscience.iop.org/journal/1757-899X	doi:10.1088/1757-899X/1168/1/012010	Yes
An Application of Analytical Hierarchy Process in Selection of Coating Material Composition in Lost Foam Casting Process	Avinash Ravi Raja	ME	IOP Conf. Series: Materials Science and Engineering	2021	1757-899X	https://iopscience.iop.org/journal/1757-899X	doi:10.1088/1757-899X/1168/1/012010	Yes
An Application of Analytical Hierarchy Process in Selection of Coating Material Composition in Lost Foam Casting Process	Girendra Bhati	ME	IOP Conf. Series: Materials Science and Engineering	2021	1757-899X	https://iopscience.iop.org/journal/1757-899X	doi:10.1088/1757-899X/1168/1/012010	Yes
Application of thermal spraying process in advancement of welding Technology	Syed Qaisar Husain	ME	IOP Conf. Series: Materials Science and Engineering	2021	1757-899X	https://iopscience.iop.org/journal/1757-899X	doi:10.1088/1757-899X/1168/1/012021	Yes
Application of thermal spraying process in advancement of welding Technology	Gagan Varshney	ME	IOP Conf. Series: Materials Science and Engineering	2021	1757-899X	https://iopscience.iop.org/journal/1757-899X	doi:10.1088/1757-899X/1168/1/012021	Yes
Application of thermal spraying process in advancement of welding Technology	Girendra Bhati	ME	IOP Conf. Series: Materials Science and Engineering	2021	1757-899X	https://iopscience.iop.org/journal/1757-899X	doi:10.1088/1757-899X/1168/1/012021	Yes
Application of thermal spraying process in advancement of welding Technology	Avinash Ravi Raja	ME	IOP Conf. Series: Materials Science and Engineering	2021	1757-899X	https://iopscience.iop.org/journal/1757-899X	doi:10.1088/1757-899X/1168/1/012021	Yes
Estimation of temperature during TIG welding of titanium	Avinash Ravi Raja	ME	IOP Conf. Series: Materials Science and Engineering	2021	1757-899X	https://iopscience.iop.org/journal/1757-899X	doi:10.1088/1757-899X/1168/1/012023	Yes
Estimation of temperature during TIG welding of titanium	Anuj Dixit	ME	IOP Conf. Series: Materials Science and Engineering	2021	1757-899X	https://iopscience.iop.org/journal/1757-899X	doi:10.1088/1757-899X/1168/1/012023	Yes
Estimation of temperature during TIG welding of titanium	Syed Qaisar Husain	ME	IOP Conf. Series: Materials Science and Engineering	2021	1757-899X	https://iopscience.iop.org/journal/1757-899X	doi:10.1088/1757-899X/1168/1/012023	Yes
Estimation of temperature during TIG welding of titanium	Gagan Varshney	ME	IOP Conf. Series: Materials Science and Engineering	2021	1757-899X	https://iopscience.iop.org/journal/1757-899X	doi:10.1088/1757-899X/1168/1/012023	Yes
High-efficiency thermodynamic cycles for Kalina power generation systems: A comprehensive review	Alok Manas Dubey	ME	IOP Conf. Series: Materials Science and Engineering	2021	1757-899X	https://iopscience.iop.org/journal/1757-899X	doi:10.1088/1757-899X/1168/1/012030	Yes
Optimization of FDM 3D printing process parameters using Taguchi technique	M S Rawat	ME	IOP Conf. Series: Materials Science and Engineering	2021	1757-899X	https://iopscience.iop.org/journal/1757-899X	doi:10.1088/1757-899X/1168/1/012022	Yes
Optimization of FDM 3D printing process parameters using Taguchi technique	Kapil Kumar	ME	IOP Conf. Series: Materials Science and Engineering	2021	1757-899X	https://iopscience.iop.org/journal/1757-899X	doi:10.1088/1757-899X/1168/1/012022	Yes
Optimization of FDM 3D printing process parameters using Taguchi technique	Kumar Rishi Singh	ME	IOP Conf. Series: Materials Science and Engineering	2021	1757-899X	https://iopscience.iop.org/journal/1757-899X	doi:10.1088/1757-899X/1168/1/012022	Yes
Heat Transfer Analysis And Optimisation Of 2-Wheeler Engine Cyclinder Head Fins Using FEA	Avinash Ravi Raja	ME	IOP Conf. Series: Materials Science and Engineering	2021	1757-899X	https://iopscience.iop.org/journal/1757-899X	doi:10.1088/1757-899X/1168/1/012012	Yes
Designing E-learning Portal: How Academics come efficiently into Practice	Shipra Srivastava	IT	IJCRT	2021	2320-2882	https://ijcrt.org	https://ijcrt.org/viewfull.php?&p_id=IJCRT2106487	Yes
Lightweight Cloud Storage Auditing With Deduplication Supporting Strong Privacy Protection	Shipra Srivastava	IT	IJCRT	2021	2320-2882	https://www.ijcrt.org	https://www.ijcrt.org/papers/IJCRT2103474.pdf	Yes
Used car price prediction	Ramveer Singh	IT	IJARIIT	2021	2454-132X	https://www.ijariit.com	https://www.ijariit.com/manuscript/used-car-price-prediction/	Yes
Used car price prediction	Shipra Srivastava	IT	IJARIIT	2021	2454-132X	https://www.ijariit.com	https://www.ijariit.com/manuscript/used-car-price-prediction/	Yes
Next Generation AI based Virtual	Shipra Srivastava	IT	IJRASET	2021	2321-9653	https://www.ijraset.com	https://www.ijraset.com/fileserve.php?FID=33663	Yes
GANAKA: WEB BROWSER	Shipra Srivastava	IT	IRJET	2021	2395-0056	https://www.irjet.net	https://www.irjet.net/archives/V8/i7/IRJET-V8I7327.pdf	Yes
Security and Automation using Raspberry Pi and Arduino for Home	Shipra Srivastava	IT	IRJET	2021	2395-0056	https://www.irjet.net	https://www.irjet.net/archives/V8/i7/IRJET-V8I7232.pdf	Yes
A Novel Approach Based on EMD to improve the Performance of SSVEP Based BCI System	MUKESH kUMAR OJHA	ECE	Wireless Personal Communication	2021	2455–2467	https://www.springer.com/journal/11277	https://doi.org/10.1007/s11277-021-08135-6	Yes

An explicit output current-mode quadrature sinusoidal oscillator and a universal filter employing only grounded passive components- A minimal realization	Shiv Narain Gupta	ECE	Advances in Electrical and Electronic Engineering	2021	1804-3119	http://advances.utc.sk/index.php/AEEE	10.15598/aeee.v19i3.4121	Yes
Big Data Security Problem and Its Solution	Anuranjan Misra	CSE	International Journal of Engineering and Advanced Technology (IJEAT)	2021	2249-8958	https://www.ijeat.org/	NA	Yes
Importance of Security in Big Data Log Files on Cloud	Anuranjan Misra	CSE	International Journal of Engineering and Advanced Technology (IJEAT)	2021	2249-8958	https://www.ijeat.org/	NA	Yes
Queing Theory: Effective and Efficient Tool to Reduce the Waiting Time in Hospital	Shikha Srivastava	ASH	International journal of analytical and experimental modal analysis	2021	0886-9367	https://ijaema.com/	DOI:18.0002.IJAEMA.2021.V13I6.200001.015685903002	Yes
Queing Theory: Effective and Efficient Tool to Reduce the Waiting Time in Hospital	Renu Kaushik	ASH	International journal of analytical and experimental modal analysis	2021	0886-9367	https://ijaema.com/	DOI:18.0002.IJAEMA.2021.V13I6.200001.015685903002	Yes
IMPACT OF COVID – 19 ON INDIAN EDUCATION SYSTEM: A STUDY WITH SPECIAL REFERENCE TO GREATER NOIDA SCHOOLS AND COLLEGES	Renu Kaushik	ASH	International journal of analytical and experimental modal analysis	2021	0886-9367	https://ijaema.com/	DOI:18.0002.IJAEMA.2022.V14I05.200001.015685971377	Yes
IMPACT OF COVID – 19 ON INDIAN EDUCATION SYSTEM: A STUDY WITH SPECIAL REFERENCE TO GREATER NOIDA SCHOOLS AND COLLEGES	Shikha Srivastava	ASH	International journal of analytical and experimental modal analysis	2021	0886-9367	https://ijaema.com/	DOI:18.0002.IJAEMA.2022.V14I05.200001.015685971377	Yes
EFFECT OF QUEUING THEORY APPLICATION: WITH SPECIAL REFERENCE OF BANKING SECTOR	Renu Kaushik	ASH	International journal of analytical and experimental modal analysis	2021	0886-9367	https://ijaema.com/	DOI:18.0002.IJAEMA.2021.V13I8.200001.01568590499	Yes
Study of mechanical properties of pultruded Jute-glass reinforced unsaturated polyester bio- composites with hybrid filler loading	Navin Kumar	ME	World Journal of Engineering	2021	1708-5284	https://www.emerald.com	https://www.emerald.com/insight/content/doi/10.1108/WJE-04-2020-0127/full/html	Yes
Tribological characterization of pultruded hybrid glass-jute fibre reinforced plastic composites from room tempearture to 75.C	Navin Kumar	ME	World JournalofEngineering	2021	1708-5284	https://www.emerald.com	https://www.emerald.com/insight/content/doi/10.1108/WJE-03-2021-0147/full/html?utm_source=rss&utm_medium=feed&utm_campaign=rss_journalLatest	Yes
parametric optimization of friction stir processing on micro hardness of Al/B4C composite	Kapil Kumar	ME	International Journal of Materials Research	2021	2195-8556	https://www.degruyter.com/journal/key/ijmr/html	https://doi.org/10.1515/ijmr-2020-8027	Yes
Scheduling in Fog Computing: A Survey	Navin Kumar	ME	Design Engineering	2021	0011-9342	NA	NA	Yes
Study on Effect of variation of Goographical and Climatic Conditions on Chemical Constituents and Biological Activity of Emblica officinalis	Dipti Bharti	AS	Research Journal of Chemistry and Environment	2021	0972-0626	https://ores.su/en/journals/research-journal-of-chemistry-and-environment/	DOI:10.25303/2510rjce114120	Yes
PM2.5 AND PM10: EXISTANCE, TREATMENT AND PROBLEMS	Anuj Sharma	CE	Journal of Emerging Technologies and Innovative Research (JETIR)	2021	2349-5162	https://www.jetir.org/v	NA	Yes
Semiconductor devices	Dr. Dhiraj Gupta, Nikhil Gupta	EE	Journal of Innovative Science and Research Technology	2021	2456-2165	https://www.ijisrt.com	NA	Yes
Vehicle Accident Spotting and Rescue System using Internet of Things	Nikhil Gupta	EE	International Research Journal of Engineering and Technology (IRJET)	2021	2395-0056	https://www.irjet.net	NA	Yes
Enhancement in properties of concrete by Silica fumes.	Arvind Kumar	CE	International Research Journal of Engineering and Technology (IRJET)	2022	2395-0056	https://www.irjet.net/	NA	Yes
Study of Bond Ash Properties of Concrete utilizing Fly Ash, Marble and Granite Powder	Shreeja Kacker	CE	International Journal of Innovative Research in Science, Engineering and Technology (IJIRSET);	2022	2319-8753 2320-6710	http://www.ijirset.com/	NA	Yes
Design of Road & Transportation System in Surjkund Area (Faridabad)	Shreeja Kacker	CE	International Journal of All Research Education & Scientific Methods	2022	ISSN: 2455-6211	https://www.citefactor.org	NA	Yes
Optimum Replacement of Coarse Aggregate by Steel Slag and Fie Aggregate by Waste Glass Powder	Shreeja Kacker	CE	International Research Journal of Engineering and Technology (IRJET)	2022	2395-0056	https://www.irjet.net/	NA	Yes

Effect of Steel Fibre and Marble Dust on the Mechanical Properties of High Strength Concrete (HSC)	Anuj Sharma	CE	International Research Journal of Engineering and Technology (IRJET)	2022	2395-0056	https://www.irjet.net/	NA	Yes
Design & Development of Maglev Girder Bridge & Vehicle	Anuj Sharma	CE	International Journal of Innovative Research in Science, Engineering and Technology (IJIRSET);	2022	2319-8753 2320-6710	http://www.ijirset.com/	NA	Yes
Manufacturing of Bricks with Solid Waste	Tabish Quadri	CE	International Journal of Innovative Research in Science, Engineering and Technology (IJIRSET);	2022	2319-8753 2320-6710	http://www.ijirset.com/	NA	Yes
A Study on Plastic Waste for Replacement of Coarse Aggregate with Soft and Hard Plastic in Concrete	Saurav Yadav	CE	International Journal of Innovative Research in Science, Engineering and Technology (IJIRSET);	2022	2319-8753 2320-6710	http://www.ijirset.com/	NA	Yes
Load Frequency Control of a Multi-Microgrid System Incorporating Electric Vehicles	Bhuvnesh Khokhar	EE	Electric Power Components & Systems, Taylor & Francis	2022	1532-5008	https://www.tandfonline.com/journals/uemp20	https://doi.org/10.1080/15325008.2022.2049648	Yes
Detection of SSVEP Frequency component using Filter Bank Approach for EEG Based BCI System	Mukesh Kumar Ojha	ECE	Neuroquantology	2022	1303-5150	https://www.neuroquantology.com	https://10.14704/nq.2022.20.6.NQQ22359	Yes
Detection of SSVEP Frequency component using Filter Bank Approach for EEG Based BCI System	Dhiraj Gupta	ECE	Neuroquantology	2022	1303-5150	https://www.neuroquantology.com	https://10.14704/nq.2022.20.6.NQQ22359	Yes
Detection of SSVEP Frequency component using Filter Bank Approach for EEG Based BCI System	Priyesh Tiwari	ECE	Neuroquantology	2022	1303-5150	https://www.neuroquantology.com	https://10.14704/nq.2022.20.6.NQQ22359	Yes
Cuckoo Search Constrained Gamma Masking for MRI Image Detail Enhancement (SCIE, SCOPUS)	Mukesh Kumar Ojha	ECE	Traitement du Signal, IIETA	2022	0765-0019, 1958-5608	https://www.iieta.org/	https://doi.org/10.18280/ts.390433	Yes
Cuckoo Search Constrained Gamma Masking for MRI Image Detail Enhancement	Dhiraj Gupta	ECE	Traitement du Signal, IIETA	2022	0765-0019, 1958-5608	https://www.iieta.org/	https://doi.org/10.18280/ts.390433	Yes
Cuckoo Search Constrained Gamma Masking for MRI Image Detail Enhancement	Priyesh Tiwari	ECE	Traitement du Signal, IIETA	2022	0765-0019, 1958-5608	https://www.iieta.org/	https://doi.org/10.18280/ts.390433	Yes
Relative Result and Design Analysis of SPV Tracking System on Simulink Platform	Priyesh Tiwari	ECE	ADBU Journal of Engineering Technology (AJET)	2022	2348-7305	https://journals.dbuniversity.ac.in/ojs/index.php/AJET/index	https://journals.dbuniversity.ac.in/ojs/index.php/AJET/article/view/3611	Yes
Predicting Carbon Residual in Biomass Wastes Using Soft Computing Techniques	Preety Verma	CSE	Adsorption Science & Technology	2022	0263-6174, 2048-4038	https://www.hindawi.com/journals/ast/	https://doi.org/10.1155/2022/8107196	Yes
Service Providers for Home Appliances	Indradeep Verma	CS-IoT	Journal of Positive School Psycology	2022	2717-7564	https://journalppw.com/index.php/jpsp	NA	Yes
Green Manufacturing: An Insight	Iqbal Ahmend Khan	ME	GIS Science Journal	2022	1869-9391	https://gisscience.net/	NA	Yes
A new CMOS compatible high performance first-order all-pass filter realisation	Shiv Narain Gupta	ECE	Australian Journal of Electrical and Electronics Engineering	2022	2205-362X	https://www.tandfonline.com/journals/tele20	https://doi.org/10.1080/1448837X.2022.2068487	Yes
First Order Mixed Mode MOS-C All-Pass Frequency Selective Analog Network with Electronic Tuning	Shiv Narain Gupta	ECE	Walailak Journal of Science and Technology	2022	2774-0226	https://tis.wu.ac.th/index.php/tis/index	https://doi.org/10.48048/tis.2022.4616	Yes
CMOS Transistors based First-Order Voltage-Mode All-pass Filter with Tunable Transformation Possibility	Shiv Narain Gupta	ECE	Journal of Circuits, Systems, and Computers	2022	1793-6454	https://www.worldscientific.com/worldscinet/jcsc	https://doi.org/10.1142/S0218126622502942	Yes
Treatment of thyroid disease through machine learning predictive model	Ajay Kumar Sahu	IT	International Journal of Health Sciences	2022	2550-6978 2550-696X	https://sciencescholar.us/journal/index.php/ijhs/index	https://doi.org/10.53730/ijhs.v6nS8.12813	Yes
Treatment of thyroid disease through machine learning predictive model	Shivani Dubey	IT	International Journal of Health Sciences	2022	2550-6978 2550-696X	https://sciencescholar.us/journal/index.php/ijhs/index	https://doi.org/10.53730/ijhs.v6nS8.12813	Yes
Analysis of Stock Market Prediction by using PSO Algorithm Optimizing LS- SVM	Shivani Dubey	IT	International Journal of Computer Sciences and Engineering	2022	2347-2693	https://www.ijcseonline.org/	https://doi.org/10.26438/ijcse/v10i2.2630	Yes
Analysis of Stock Market Prediction by using PSO Algorithm Optimizing LS- SVM	Amit kumar agrawal	CSE-AIML	International Journal of Computer Sciences and Engineering	2022	2347-2693	https://www.ijcseonline.org/	https://doi.org/10.26438/ijcse/v10i2.2630	Yes
Implementation of IoT based Automatic Street light illumination by using IR sensor	Shivani Dubey	IT	GIS Science Journal	2022	1869-9391	https://gisscience.net/	NA	Yes
Case Study: An Efficient Survey on Security Analysis of Social Networking	Shipra Srivastava	IT	TCS transactions	2022	1938-6737 1938-5862	https://iopscience.iop.org/journal/1938-5862	DOI:10.1149/10701.15533ecst	Yes
Production of Ethanol From Jaggery	Syed Qaisar Husain	ME	International Journal for Research in Applied Science & Engineering Technology IJRASET	2022	2321-9653	https://www.ijraset.com/	NA	Yes

A survey on Crane wire rope Failure	Syed Qaisar Husain	ME	International journal of recent Technology Science and Management	2022	2455-9679	http://sjifactor.com/passport.php?id=19039	NA	Yes
A survey on Crane wire rope Failure	Avinash Ravi Raja	ME	International journal of recent Technology Science and Management	2022	2455-9679	http://sjifactor.com/passport.php?id=19039	NA	Yes
Design and Analysis on Crane wire ropes by Using FEA methods	Syed Qaisar Husain	ME	International journal of recent Technology Science and Management	2022	2455-9679	http://sjifactor.com/passport.php?id=19039	NA	Yes
Design and Analysis on Crane wire ropes by Using FEA methods	Avinash Ravi Raja	ME	International journal of recent Technology Science and Management	2022	2455-9679	http://sjifactor.com/passport.php?id=19039	NA	Yes
MIMO Antennas: Design Approaches, Techniques and Applications	Preeti Sharma	ASHU	MDPI, SENSOR	2022	1424-8220	https://www.mdpi.com/journal/sensors	doi.org/10.3390/s22207813	Yes
Dual-band trident shaped MIMO antenna with novel ground plane for 5G applications	Preeti Sharma	ASHU	AEU - International Journal of Electronics and Communications	2022	1434-8411 1618-0399	https://www.sciencedirect.com/journal/aeu-international-journal-of-electronics-and-communications	doi.org/10.1016/j.aeue.2022.154364	Yes
Automated Health Monitoring System Using GSM and IOT	Akshika Jain	CSE-AIML	International Journal of Scientific Research in Computer Science, Engineering and Information Technology	2022	2456-3307	https://ijsrcseit.com/	doi : https://doi.org/10.32628/CSEIT228126	Yes
Emotions specified Automatic Report Generator for Psychiatrist	Pooja Sharma	CSE-AIML	International Journal of Scientific Development and Research	2022	2455-2631	www.ijsdr.org	www.ijsdr.org	Yes
Implementation of IoT based Automatic Street light illumination by using IR sensor	Shivani Dubey	CSE-AIML	GIS Science Journal	2022	1869-9391	https://gisscience.net/	https://gisscience.net/	Yes
Automated Irrigation System for monitoring the Soil Moisture Content via Automatic Watering by using Microcontroller Node MCA ESP8266	Shivani Dubey	CSE-AIML	Journal of Emerging Technologies and Innovative Research	2022	2349-5162	www.jetir.org	www.jetir.org	Yes
Multi-Resolution based Singular Value decomposition approach for Breast Cancer Image Classification	Vijay Shukla	CSE	BioMd Research International Journal, Q2, Indexing in Web of Science, SCIE, Scopus (Publisher: Hindwai)	2022	NA	https://pubmed.ncbi.nlm.nih.gov/	https://www.hindawi.com/journals/bmri/2022/6392206/	Yes
Design and Optimization of 4-Bit Array Multiplier with Adiabatic Logic Using 65 nm CMOS Technologies	Mukesh Ojha	ECE	IETE Technical Review	2022	2307-1877	https://www.tandfonline.com/journals/tijr20	https://doi.org/10.1080/03772063.2023.2204857	Yes
X-Ray Image Authentication Scheme Using SLT and Contourlet Transform for Modern Healthcare System	V. K. PALLAW	MCA	Journal of Universal Computer Science (SCI IF-1.05).	2022	0948-6968	https://academic-accelerator.com/Impact-of-Journal/Journal-of-Universal-Computer-Science	103897/jucs.94132	Yes
A Novel adaptive intelligent MPC scheme for frequency stabilization of a microgrid considering SoC control of EVs	Bhuvnesh Khokhar	EE	Applied Energy	2022	0306-2619	https://www.sciencedirect.com/journal/applied-energy	doi.org/10.1016/j.apenergy.2021.118423	Yes
Smart Chatbot	Sonam Sirohi	ECE	Journal of Emerging Technologies and Innovative Research (JETIR)	2022	2349-5162	https://www.jetir.org/	https://www.jetir.org/	Yes
Removal of Error by finding deffect in RGB image	Anil Kumar Debey	ECE	Journal of Emerging Technologies and Innovative Research (JETIR)	2022	2349-5162	https://www.jetir.org/	https://www.jetir.org/	Yes
Face Mask Detection	Shiv Narain Gupta	ECE	Journal of Emerging Technologies and Innovative Research (JETIR)	2022	2349-5162	https://www.jetir.org/	https://www.jetir.org/	Yes
Plant Disease Detection Using Machine Learning	Shiv Narain Gupta	ECE	Journal of Emerging Technologies and Innovative Research (JETIR)	2022	2349-5162	https://www.jetir.org/	https://www.jetir.org/	Yes
AI Based Chess Engine	Anil Kumar Debey	ECE	Journal of Emerging Technologies and Innovative Research (JETIR)	2022	2349-5162	https://www.jetir.org/	https://www.jetir.org/	Yes
Real-Time Face Recognition using openCV	Anil Kumar Debey	ECE	Journal of Emerging Technologies and Innovative Research (JETIR)	2022	2349-5162	https://www.jetir.org/	https://www.jetir.org/	Yes
ROAD SAFETY PLAN FOR HAIRPIN CURVES	Sushant Kumar	CE	International Research Journal of Engineering and Technology (IRJET)	2022	2395-0056	https://www.irjet.net	https://www.irjet.net	Yes

Seismic Response study of multi-storied reinforced concrete building with fluid viscous dampers	Shreeja Kacker	CE	International Research Journal of Engineering and Technology (IRJET)	2022	2395-0056	https://www.irjet.net	https://www.irjet.net	Yes
MHD FLOW OF DUSTY VISCOUS FLUID THROUGH A POROUS MEDIUM BOUNDED BY AN OSCILLATING POROUS PLATE IN SLIP FLOW REGIME	Dr. Kirti	AS	International Research Journal of Engineering and Technology (IRJET)	2022	2395-0056	https://www.irjet.net	https://www.irjet.net	Yes
Energy Meter	Dr. Dhiraj Gupta, Nikhil Gupta	EE	International Journal of Innovation Science and Research Technology	2022	2456-2165	https://www.ijisrt.com	https://www.ijisrt.com	Yes
GSM Based Smart Home Appliances	Aneep Kumar	EE	International Journal for Scientific Rouch & Development	2022	2821-4613	https://www.ijsrd.com	https://www.ijsrd.com	Yes
Bill Board Wifi Based Bill Board Led Display	Dr. Dhiraj Gupta, Nikhil Gupta, Aastha Dixit	EE	International Journal of Inovative Science and Research Technology	2022	2456-2165	www.ijisrt.com	www.ijisrt.com	Yes
Comparative Performance Analysis of MPPT Techniques For Solar Power Extraction Using Zeta Converter	Dr. Dhiraj Gupta, Nikhil Gupta	EE	International Journal of Research in Engineering and Science (IIRES)	2022	2320-9156	www.nes.org	www.nes.org	Yes
Scrolling Display GSM based Messages Crolling Led Display	Dr. Dhiraj Gupta, Nikhil Gupta	EE	International Journal of Innovative Science and Research Technology	2022	2456-2165	https://www.ijisrt.com	https://www.ijisrt.com	Yes
LED DISPLAY SCROLLING BOARD BASED ON GLOBAL SYSTEM FOR MOBILE COMMUNICATION	Dr. Dhiraj Gupta	EE	International Research Journal of Modernization in Engineering Technology and Science	2022	2582-5208	www.irimets.com	www.irimets.com	Yes
GSM BASED MESSAGE SCROLLING LED DISPLAY	Nikhil Gupta	EE	International Research Journal of Engineering and Technology (IRJET)	2022	2395-0056	www.irjet.net	www.irjet.net	Yes

Journal of Advances and Scholarly Researches in Allied Education
Vol. 16, Issue No. 6, May-2019, ISSN 2230-7540

Air Quality Index Analysis and Solutions for High Traffic, Industrial and Residential Regions in Delhi/NCR

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Abstract – Air Quality monitoring is important aspect these days as high pollution is causing bad health effects in the Delhi/NCR region. It is necessary to take steps for improve the air quality of the capital and also preserve natural trees for making the environment pollution free. There are a lot of traffic issues, industrial pollution and household pollution which contributes to the bad air quality index. Monitoring is generally done using devices which have sensors like ozone, PM10, PM2.5, CO, SO2, etc. here, a device with IOT is used to measure the sensor values and then convert to Air Quality Index. In this thesis, air quality index is calculated for various areas in Delhi/NCR which are namely, industrial area Patparganj, a high traffic area Wazirpur and a green area near Jawaharlal Nehru stadium. It is seen that there is high pollution in the areas of Patparganj due to industries and in Wazirpur are because of roads connecting major parts of the city and also in the area of Jawaharlal Stadium as its residential area in the surroundings and has greenery has lower pollution level. The analysis is performed for 5 days in each area. Hence, for these areas solution is provided to improve the air quality by the major use of filters and plantation is required in these areas.

Keyword: - Air Quality Index, Delhi/NCR, PM10, PM2.5, Oxygen

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INTRODUCTION

Natural contamination and related human medical problems and environmental harm zone genuine worries since they have turned into a risk to biodiversity as well as become a danger to human populace itself. [1][2] These ecological issues are of uncommon significance since they influence both widely varied vegetation including individuals. They decrease anticipated existence of individuals, hinder development of the youngsters and aggravate the whole economic advancement process. The World Health Organization (WHO) evaluated that in excess of 25 percent of all mortalities in the creating scene are because of natural elements which is very disturbing. [3] The issue turns out to be much additionally exasperated because of spontaneous development of modern groups/townships wherein huge numbers of the ventures have been spurning standards and standards. The significant test in executing any strategy of Environment Action Plans (EAP) is the recognizable proof of contaminating ventures and their area. [4] This can be accomplished by evaluating the current contamination discharges started from various industry sources and taking remedial measures in like manner. Be that as it may, it is likewise a troublesome errand for controlling organizations because of absence of dependable data on the nature and sort of contamination radiating from various modern plants and production lines.

The open air contamination is a developing worry for some urban areas in created and creating nations of the world. While the created and creating nations vary as far as their encompassing models for different contaminations (the dimension at which they believe the contamination to be destructive), the general thought behind the gauges is to know about the harm caused to the general wellbeing and the earth. The urban air toxins emerge from a wide assortment of sources, however fundamentally connected to the burning procedures. [5] The biggest sources incorporate the engine vehicles, assortment of assembling forms (businesses, for example, block furnaces, concrete, metal handling, tanning, and so forth., private fuel utilization, biomass consuming and street dust (particularly in the creating nation urban communities). [6][7] The traffic-produced toxins incorporate nitrogen oxides (NOx), carbon monoxide (CO), unstable natural mixes (VOCs) and particulates (PM). Given the blend of NOx and VOC discharges, joined with solid daylight amid the

SFDR Enhancement of 120° Phase Angle-Based RoF Link by Using Linear Polarizers

Parvin Kumar, *Member, IEEE*, Shelly Singla, and Sanjay Kumar Sharma, *Member, IEEE*

***Abstract*— A new scheme to improve spurious free dynamic range (SFDR) of high-performance radio over fiber (RoF) link based on 120° phase angle has been proposed and investigated. The proposed link consists of a dual electrode Mach–Zehender modulator (DE-MZM), linear polarizers, and optical filter. The performance is improved by generating an optical single sideband (OSSB) signal using 120° phase angle in DE-MZM. The suppression of third-order intermodulation (IM3) and other harmonics are significantly controlled by adjusting the state of polarization of both the polarizers. The resulting SFDR shows an improvement of 13.4 dB for the proposed linearized link when compared with conventional 90° phase angle-based DE-MZM link.**

***Index Terms*— Radio over Fiber (RoF), dual electrode Mach Zehender modulator (DE-MZM), third order intermodulation (IM3), spurious free dynamic range (SFDR).**

I. Introduction

THE demanded key elements of future fifth generation wireless communication network are capacity, data rates, dynamic range of link, low losses, reliability, cost effective, eco-friendly, flexibility in design and implementation of link etc. [1]–[13]. The RoF link can become an important substitute in view of these requirements and it needs a high degree of linearity to attain demanded link performance [1]–[13]. But, nonlinearity of the optical modulator presents harmonic and intermodulation distortion in sub carrier modulation link which degrade the performance of RoF link significantly. Many researchers have contributed to reduce this nonlinear distortion [14]–[19]. However, it is still required to reduce IM3 in order to improve dynamic range of RoF Link. Due to optical fiber chromatic dispersion degradation, the OSSB technique is most desirable for long distance RoF link and this technique is free from frequency dependent power fading in comparison with optical double sideband technique [3]–[6], [8], [13], and [15]. In view of this, the OSSB RoF link has been investigated based on 120° hybrid coupler and DE-MZM which is considered as high performance link. A RF Signal is divided by the 120° hybrid coupler into two parts with equal power and a phase difference of 120°. Then, it is fed to the two RF ports of the DE-MZM. A phase difference of $n * 2\pi/3$-$\emptyset_0$ between optical components in upper and lower arm of DE-MZM is maintained, where n represents the order of sideband and $\emptyset_0$ is an additional phase difference through dc bias. An OSSB signal with -1^{st} and $+2^{nd}$ order sidebands suppressed is generated when $\emptyset_0 = \pi/3$ because the -1^{st} sideband in the two arms of the modulator have a $-180°$ phase difference and they destructively interfere while combining at the output port of DE-MZM. Similarly, $+2^{nd}$ order sideband also destructively interfere due to the phase difference of $+180°$ [14]–[17].

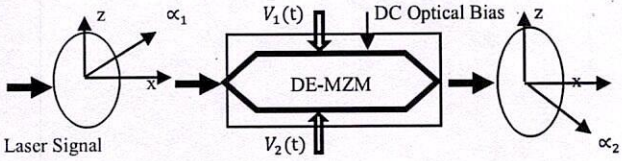

Fig. 1. Proposed linearized 120° phase angle based OSSB RoF link.

Fig. 1 shows the proposed mixed polarization based RoF link consisting of DE-MZM with two linear polarizers, placed before and after modulator adjusted an angle of α_1 & α_2, respectively. Further, linearization of OSSB RoF link based on 120° phase angle is achieved using two linear polarizers. It is identified that z-cut $LiNbO_3$ MZM exhibits an electrooptic coefficient r_{31} along the x-(TE) axis, which is approximately 1/3 of r_{33} coefficient of the z-(TM) axis. This anisotropy will allow for the RF signal to be simultaneously modulated in the both orthogonal polarized states by different amounts. The optical signal entering the modulator passes through a linear polarizer set to an angle α_1 with respect to z-axis, this will excite a superposition of TE and TM modes that will be modulated to different modulation depths. In other terms, the z-(TM) axis will carry more IM3 distortion, while the x-(TE) axis will carry less IM3 distortion. The optical signal is then passed through a second linear polarizer that is set to angle α_2 with respect to z- axis. The two angles are related to each other, so they will be selected in such a way as to maximize the RF subcarriers and suppress IM3 distortion. By carefully selecting α_1 and α_2 of the two linear polarizers, the combined IM3 distortion from two arms of MZM can be eliminated [15]. A significant improvement in SFDR confirms the performance enhancement of proposed link with mixed polarization.

Manuscript received December 2, 2018; revised February 22, 2019; accepted March 9, 2019. Date of publication March 13, 2019; date of current version March 27, 2019. *(Corresponding author: Parvin Kumar.)*

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Digital Object Identifier 10.1109/LPT.2019.2904726

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Mitigating the Effects of Non-Linear Distortion Using Polarizers in Microwave Photonic Link

https://doi.org/10.1515/joc-2019-0244
Received September 17, 2019; accepted December 02, 2019

Abstract: A scheme to suppress nonlinear intermodulation distortion in microwave photonic (MWP) link is proposed by using polarizers to compensate inherent non-linear behavior of dual-electrode Mach-Zehnder modulator (DE-MZM). Insertion losses and extinction ratio have also been considered. Simulation results depict that spurious free dynamic range (SFDR) of proposed link reaches to 130.743 dB.Hz$^{2/3}$. A suppression of 41 dB in third order intermodulation distortions and an improvement of 15.3 dB is reported when compared with the conventional link. In addition, an electrical spectrum at different polarization angles is extracted and 79° is found to be optimum value of polarization angle.

Keywords: MWP, polarizer, DE-MZM, IMD, SFDR

1 Introduction

Due to exponential rise in advancements of communication technologies, the techniques having potential to provide best services to the users can only survive in this present era. Due to wide range of applications offered by MWP link, it has got a concrete ground to stay longer in this modern time. These applications are merely antenna-remoting, signal processing, delay lines, low phase noise RF generation and frequency detection of RF signals [1–3]. Performance of MWP links are subjected to various impairments that can be induced due to nonlinearities in the transmission lines and optical modulator [4–6]. These errors could be linear or non-linear but non-linear errors such as harmonic distortion (HD) and inter modulation distortions (IMD) are of much concern as they have severe effect on SFDR, which is considered an important performance measurement parameter for MWP links [7–9].

Large no. of techniques has been demonstrated to suppress IMD3 components using Mach-Zehnder modulator (MZM), polarization and phase modulator in different ways viz. pre-post distortion method, adaptive predistortion and single DE-MZM employing direct detection [10–14]. Some other approaches incorporated single, dual, cascaded and parallel combinations of various modulators [15–19]. Main drawback of above techniques is the requirement of proper biasing control to suppress IMD3 and more no. of modulator increases the cost and complexity of system [20–23].

In this paper, we have demonstrated analytical model to improve link performance that consists of a DE-MZM and two polarizers, driven by two sinusoidal RF tone along with photodetector. A phase shift of 90° is introduced through hybrid coupler between two electrode inputs of DE-MZM which leads to optical single-sideband (OSSB) modulation. As optical double sideband modulation is susceptible to dispersion induced power fading, OSSB is preferred over the same. Also, polarizers polarizes optical signal before and after modulation at polarization angles θ_1 and θ_2 in order to maximize fundamental component and minimize third order IMD (IMD3) terms. The value of polarization angles is chosen carefully so that net IMD3 components are cancelled out at the output of second polarizer. A mathematical expression is derived for optimum value of polarization angles at which the maximum suppression in IMD3 components is reported. Simulation results are appended in sound consonance with analytical analysis. Furthermore, performance of proposed & conventional link is measured against IMD3 in term of SFDR.

2 Principle & system model

Figure 1 shows schematic of considered MWP link based on DE-MZM incorporating polarizers for the linearization

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J Opt (June 2019) 48(2):224–231
https://doi.org/10.1007/s12596-019-00524-2

RESEARCH ARTICLE

SNDR optimization of linearized Mach–Zehnder modulator for multi-tone RoF system

Shelly Singla[1] · **Parvin Kumar**[2]

Received: 16 February 2018 / Accepted: 23 April 2019 / Published online: 3 May 2019

Abstract Radio-over-fiber (RoF) system will be recognized as backbone for next-generation networks by offering capacity, simplicity in design, cost-effectiveness, green communication, etc. But the crucial performance degrading bound for RoF system is third-order intermodulation (IM3) error when high signal input power is employed. In this regard, this paper presents an analytical analysis with verified simulation of three radio frequency signals incorporating dispersion and single sideband modulation technique. This paper illustrates the results to reduce nonlinear distortion errors by selecting the medium values of the modulation index and proper fixed frequency differences between input signals for transmission distances of 25 km and beyond. The performance of multi-tone RoF system is further improved by employing linearization technique. The two linear polarizers are placed before and after Mach–Zehnder modulator. The IM3 can be significantly suppressed by properly selecting the angles between two linear polarizers.

Keywords Radio over fiber (RoF) · Third-order intermodulation (IM3) · Radio frequency (RF) · Linearized Mach–Zehnder modulator (MZM) · Single sideband (SSB) and linear polarizer

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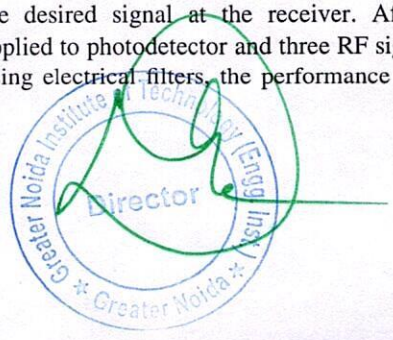
Introduction

Multi-tone RoF systems can be used for a wide range of applications such as CATV, wireless LANs and mm-wave applications. This is a consequence of the fact that the modulation technique used and data carried on each subcarrier are independent of the subcarriers used. The intermodulation error which is due to nonlinearity of MZM produces severe impact on the performance of multi-tone RoF systems [1–5].

The second-order intermodulation is filtered by symmetrical DE-MZM, but third-order intermodulation (IM3) terms need to be minimized and have severe impact [6–11]. Many attempts have been made in reducing IM3, and in this paper, nonlinear distortion errors are reduced by selecting values of the modulation index. Figure 1 shows schematic of RoF system using SSB modulation using MZM with three input RF signals. Here, three RF signals drive an MZM. Three RF signals are applied to $\pi/2$ hybrid circuit to get composite modulating signal. This composite modulating signal is applied to both electrodes of the MZM, with a 90° relative phase shift between the two arms. A dc bias is used to set the modulator at the quadrature point. Further, the linearization is employed in MZM. The proposed linearized MZM contains two linear polarizers: first fixed at angle $\propto_1$ and second fixed at angle $\propto_2$. The γ_1 is a dimensionless ratio of less than one and $\gamma_1 = \frac{1}{3}$ for $LiNbO_3$ as well as many poled electro-optic polymers [12]. With $\gamma_1 = \frac{1}{3}$ and properly selecting $\propto_1$ and $\propto_2$ angles, the IM3 from two arms of MZM can be significantly suppressed. An optical filter is used to filter out the desired signal at the receiver. After this signal is applied to photodetector and three RF signals are extracted using electrical filters, the performance of the system has



THINK INDIA JOURNAL

ISSN:0971-1260
Vol-22-Issue-04-October-2019

Intercultural Competence In Lahiri's 'Hell Heaven'

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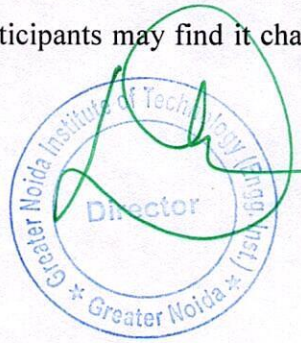
Abstract

With the advent of globalization, concepts like diaspora, displacement, identity have become prominent topic of discussion.In search of identity, diasporas make compromises, negotiations. Thepresent paper intends to explore the concept of identity and cultural hybridity in the works of JhumpaLahiri. An eminent Indo-American writer, Lahiri herself is a child of immigration and multiculturalism which enables her to portray the characters both in the light of native and alien culture. Her works project realities of human existence in a beautiful manner. In spite of being in a constant struggle of confusing identity, and dilemma between two worlds, the protagonists of her story strive towards a happier world full of zeal and zest. The story under analysis is „Hell-Heaven".The analysis reveals that Lahiri is a master playwright who depicts the lives of diasporas in an intricate manner.

Introduction

Under the influences of globalization, now-a-days it is quite common that the participants meet new and unfamiliar elements in their familiar context or even coming across new communicative contexts where the participants do not share but construct meanings is also not something unexpected. Under such circumstances, the normal behavior of a person may be interpreted differently by the other person and the participants may find it challenging to



International Journal of Innovative Technology and Exploring Engineering (IJITEE)
ISSN: 2278-3075, Volume-8, Issue-11S, September 2019

Online Retrieval and Indexing of Images using Multi Feature Vectors

Yatin Kumar Agarwal, Dilkeshwar Pandey, Manoj Singhal

Abstract*— In technology proliferated era of modern world, health care has witnessed huge developments. The cutting edge technologies have paved way for sophisticated and feature rich image processing in medical field using colour tomography and medical resonance imaging. The images obtained using radiological techniques can be stored in a database and the features and implications can be recorded in the database after the analysis of those images by physicians. These databases can be used in obtaining the meaningful analysis of the images obtained through radiology in rural areas of developing countries like India, where sophisticated medical facilities are a dream for many in developing nations. The dataset of images can be divided into training and testing set. Training set of data is utilized to obtain multi feature vectors based on Caffe. Caffe is used in this training with a focus on image recognition. The image feature is a simple image pattern based on which the description of image can be obtained. The features of an image are transformed to a vector space using computer vision algorithms. Moreover a framework has been evolved in this paper to extract the features from image using image descriptors-white box algorithms and neural nets-black box algorithms. We also present the pros and cons of our novel framework for online retrieval and indexing of images using multi feature vectors.

Keywords: Image processing, vectors, caffe, image descriptors, neural nets.

I. INTRODUCTION

In many applications of image processing, it is very much important to store images in a database. After storing in the database, it becomes necessary in many occasions to retrieve the images from database. For further processing or retrieval, mainly content based concept is employed but for indexing, most of the time concept based /description based or text based image indexing [1] is utilized. In text based image indexing keywords, description of images, captions or natural language text is used. In the image indexing methodologies, mostly a set of attributes of an image stored in the database [2] is used. In the second approach, an integrated feature extraction/object recognition subsystem was utilized. The third and relatively less used approach consists of image annotation [3]. Moreover, low level image features are utilized in the few of the image indexing approaches.

These image indexing techniques find widespread applications in the medical domain and health care sector , as huge data storage is available at low cost. Advancements in image acquisition techniques paved way for large sized image datasets. Especially in large sized image datasets in healthcare sector, lot of image analysis needs to be carried out, to extract meaningful information. This medical domain is considered to be one of the main areas where Content Based Image Retrieval (CBIR) has found huge application.

After indexing of images and the storage of images in databases, image retrieval techniques are applied for selecting and displaying the matching images. One of the oldest techniques used in image retrieval is text based. In this text based retrieval of images, the keywords may be image name, date of addition, deletion and modification. The fundamental problems faced in text based image retrieval include certain intangible components such as feelings, emotions and multiple expressions, with homonyms and misspellings. One of the recently and widely used techniques in image retrieval in today's applications include CBIR.

This paper is organized into many sections. Section 2 of this paper deals with the corresponding literatures in the field of image indexing and retrieval. Section 3 discusses about the approach taken by us in extracting various features using multi vectors. Section 4 presents the experimental results of our approach in the context of precision and accuracy using WEKA and provides a comparative analysis with three other approaches that are widely used in healthcare. The final section of the paper deals with the conclusion of the paper.

II. LITERATURE REVIEW

This section of the paper will deal with the analysis of various approaches that were followed in the literature.

Messaoudi et al [4], discussed about medical image indexing based on the reports obtained from various experts. Their work concentrated on the removal of unavailability of expert medical facilities in rural and semi urban areas. This paper had proposed a kind of comments' summary keywords-based method. The comments based keywords are very relevant to the comments or annotations provided by physicians.

These keywords that are extracted provide robust image indexation. His approach proposed by the authors is referred as Terminology Extraction of Annotation (TEA) mixed approach.

R.Chbeir et al [5], proposed another efficient method for image indexing in medical application. The authors have addressed the spatial and evolutionary issues of images using different types of relations. This method is considered to be highly explanatory and reliable mechanism for indexing images.

Revised Manuscript Received on September 10, 2019.

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Conference Title

Automated Car Parking with empty slot detection using IoT

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ARTICLE INFO

Article history:
Received 00 December 00
Received in revised form 00 January 00
Accepted 00 February 00

Keywords:
IoT
Digital Device
Open source hardware
Infrared Sensor

ABSTRACT

Nowadays the number of cars on road are increasing which leads to various problems of which one of them is parking. The public faces various problem such that parking has vacant slot or not. By using the proposed system one can preemptively know whether there is an empty slot or not by looking the LCD display outside the premises as well as android application which will show all the vacant parking slots. The system uses IR sensors alongside engines, LCD and microcontroller for controlling the system. The lcd shows void spaces to new car at gate of parking. On the off chance that no parking spot is accessible the system does not open the door and lcd says parking full.If space is vacant system enables car to enter the parking and shows void openings where client can stop. To identify vehicle opening inhabitance the system utilizes IR sensors. Additionally System utilizes IR sensors to distinguish vehicles touching base at stopping gates,to open the doors naturally on vehicle landing. The microcontroller is utilized to encourage the working of the whole system. Android application can also be used to find alternate parking premises in the area by displaying number of vacant parking slots in them too. It also allow user to book parking slot 15 minutes before user arrives else it will get cancelled if the user doesn't arrive in the specified time.

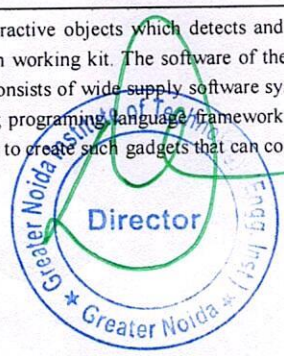
1. Introduction

As the population in the cities are increasing, thenumber of vehicles got increased dramatically. It causes issues for parking in the public places like cinema halls, hotels especially during festivals. Now a days driver invests around 10 min to park his vehicle because he isn't able to find free slot which leads to 30-40 minutes to congestion. Here we are going to see the solution of the above problem. This problem is a issue of significance not only on a local level and at the higher level of planning. This task aims to solve this problem of car parking.To solve this problem we have created this system which uses open source hardware, sensors,and computers to understand the output. In addition an android application is created to check priorly whether there is a free slot or not and the person has an option to book a free parking slot.

2. Technology Used

2.1. Arduino (ATmega380P)

Arduino is an open-source Computer equipment/programming stage for creating digital devices and interactive objects which detects and control the environment surrounding it. It consists of an open supply device that allow the clients to create their own working kit. The software of the Arduino is applicable to a huge range of activity frameworks like Ubuntu, Microsoft OS, and Macintosh. It likewise consists of wide supply software system feature that allows tough software framework developers to use the Arduino code to execute with the prevailing programming language framework and can be extended and altered. For Starters, it is extremely easy to use as well as economical.t very well may be used to create such gadgets that can cooperate with the surrounding to make use of the sensors and modern actuators. Like, ROBOTS, Motion Detectors ,etc.



An Evolution on Software Effort Estimation Techniques

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Abstract— **The effort estimation is most important aspect for software project development. In the past literatures, there are many methods to estimate effort. Accuracy is still the issue for the estimation, since the data available is incomplete in many cases. In this paper, a systematic review is given of major estimation models, their strength and weaknesses are discussed. The literature review shows the algorithmic models and non-algorithmic models such as COCOMO, Function Point Analysis, expert judgement, fuzzy logic etc. Cost is the major feature in estimation, so both overestimation and under estimation are dangerous for software development team. In this paper, various techniques are elaborated and hence it is concluded that by using combination of two or models effort can be estimated accurately.**

Key words: Effort Estimation, Accuracy, COCOMO, Function Point Analysis, Fuzzy logic, Neural Networks.

I. INTRODUCTION

Software effort estimation has always been a major part of software development, since it has the crucial effect on development process. Accuracy is the main concern in the effort estimation because inaccurate effort can cause drastic outcomes. It is not only necessary for project development, but also to keep record of progress, planning and resources.

Although, it is not an easy to calculate effort accurately. In case of over estimation, there are wastage of resources or in case of under estimation, project cannot be complete on time because of lack of resources. So, accurate cost prediction to develop a project is very risky and very important task for any organization.

Even with the perfect estimation process, it is still very difficult to estimate perfect cost estimation because of many probabilities at the time of estimation. The effort which is calculated for a software development relies on may different factors, some of them are probabilistic factors which cannot be report in advance, such as illness of staff, but some of them are non-probabilistic in nature which can be report in advance.

Due to the relationship between the factors is very complex, it is surely affecting the process of estimation. Sometimes, it is lower than estimation, sometimes it goes higher. So, it is difficult to estimate but because of this, the process of development becomes easy since programmer already knew the resources which are going to be used in the project.

II. EFFORT ESTIMATION MODELS

A. ALGORITHMIC MODELS:

Algorithmic models used mathematical equations to calculate effort. Mathematical equations are based on a research and use some input to process. There are multiple models such as COCOMO, COCOMO II and Function Point Analysis to predict cost. These models try to map the relationship between effort and one or more project characteristics.

COCOMO Model: Known as Constructive Cost Model, introduces by Berry Boehm in 1981, it is the well-known model for effort estimation. The mathematical equation for basic COCOMO is simple:

$$\text{Man-Months} = a\,(\text{KLOC})^{b} \qquad \text{(i)}$$

Where, the value of a and b is depending upon the which development mode of COCOMO is used in the project. The three modes are: Organic, Semi-detached and Embedded. Organic mode is used when the size of the project is relatively small, requirements are well-known and environment is stable. Semi-detached mode is in between organic and embedded mode. Embedded mode is used for relatively large-scale projects. These are the complex projects where requirements are changing constantly.

The Intermediate COCOMO Model: Basic COCOMO model was good and quick but it lacks in accuracy. So, intermediate version is introduced to enhance the accuracy. It has 15 cost drivers which are divided into four categories and each cost driver has its rating associated with it. This rating goes from very low to very high (in total, six ratings). The adjusted effort is then estimated through these cost factors by multiplying the cost factors with value for cost estimates.

The 15 cost drivers are as follows:

1. Product Attributes:
   a. RELY: Required Software Reliability.
   b. DATA: Database Size
   c. CPLX: Product Complexity.
2. Computer Attributes:
   a. TIME: Execution Time Constraints.
   b. STOR: Main Storage Constraint
   c. VIRT: Virtual Machine Volatility

Article

SARLA – A 3-Tier Architectural Framework Based on the ACO for the Probablistic Analysis of the Regression Test Case Selection and Their Prioritization

January 2019 · SSRN Electronic Journal
DOI: 10.2139/ssrn.3462523

Prashant Vats · Neha Kashyap · Manju Mandot

Abstract

No abstract The abstract for this research item is not available.

Role of Fe_2O_3 and MoO_3 content on Optical Properties of Lead Borate Glasses

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Abstract. Glasses with compositions xM.(40-x)PbO.60B_2O_3 (M= Fe_2O_3 and MoO_3) have been synthesized by standard melt-quenching technique. The amorphous nature of the each sample was ascertained by XRD patterns. The absorption edge ($\lambda_{cut\text{-}off}$) shifts toward longer wavelengths with an increase in Fe_2O_3 as well as MoO_3 content in the glass matrix. The Urbach's energy is used to characterize the degree of disorder in amorphous solids. The values of optical band gap energy for indirect allowed and forbidden transitions have been determined and it was found that it decreases faster in Fe_2O_3 based samples than the samples containing MoO_3 Content. From these results, it was observed that Fe_2O_3 to be a better probe to generate non-bridging oxygens (NBOs) than MoO_3 content in the present study.

INTRODUCTION

It is well known that the borate glasses are generally insulating in nature and addition of transition metal oxides (TMO) such as Fe_2O_3 and MoO_3 make these glasses semiconducting [1]. The introduction of TMO in the glass system may enter either as a network former or as a modifier. The interest for the present glass systems is determined by the presence of network forming oxide, the classical network former B_2O_3 and PbO. It was observed in earlier studies that when PbO is added to other network forming oxide glasses, it acts mainly the network modifier (with PbO_6 structural units) and by network former in both covalent and ionic bondings with $PbO_{4/2}$ pyramidal units connected in puckered layers, depending upon its concentration in the glass [2-3]. In oxide glasses, B_2O_3 is a basic glass former because of its higher bond strength, lower cation size, smaller heat of fusion and trivalancy of boron. In these glasses, the boron (B^{3+}) ions are triangularly coordinated by oxygens to form glasses easily. The main structural units of vitreous B_2O_3 glasses are BO_3 triangles forming six membered boroxol ring connected by B-O-B linkage [4]. It has also been reported that addition of network modifier (e.g. PbO) in borate glasses could convert some of the triangular BO_3 structural units to BO_4 tetrahedra with a coordination number of 4, which are incorporated in more complex cyclic groups such as biborate, triborate, tetra or pentaborate along with the formation of non-bridging oxygens (NBOs) atoms [5-6]. Iron and Molybdenum oxide has been added as a transition metal oxide, inside the PbO- B_2O_3 to form Fe_2O_3-PbO-B_2O_3 and MoO_3-PbO-B_2O_3 glass systems respectively. Ternary borate glasses are very interesting for glass scientists and technologists due to their wide range of technological applications such as memory switching devices and gas sensors [7]. The glasses containing transition metal ions, such as Fe_2O_3 and MoO_3, have attracted interest because of their potential use in electrochemical, electronic and electro-optic devices [8-9]. In Fe_2O_3-PbO-B_2O_3 glasses, Fe_2O_3 [10-11] enters the structure in two forms: as a network former and/or a network modifier. But, the Molybdenum ions in the present glasses exist in only Mo^{6+} valence state is observed from EPR studies [12]. The molybdenum cations could act as a network former as

Advances in Basic Science (ICABS 2019)
AIP Conf. Proc. 2142, 070034-1–070034-6; https://doi.org/10.1063/1.5122426
Published by AIP Publishing. 978-0-7354-1885-1/$30.00

Journal of Pharmacognosy and Phytochemistry

Available online at www.phytojournal.com

E-ISSN: 2278-4136
P-ISSN: 2349-8234
JPP 2019; SP2: 1010-1014

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Synergistic effects of some medicinal plants and transition metal ferrocyanides on some selected fungus

Dipti Bharti

Abstract
Transition ferrocyanides were synthesized and characterized by IR spectra, magnetic susceptibility and XRD studies. The medicinal plants which contain natural antimicrobial properties such as Phyllanthus emblica, Psidium guajava, Jatropha gossypifolia, Mangifera indica were showed synergistic effect with transition metal ferrocyanides. These plant extracts with metal ferrocyanides complexes were found to be having more antifungal property in comparison to metal ferrocyanides and plants extract individual. Antifungal activities of medicinal plants and metal hexacyanoferrate (II) compounds were tested against Rhizoctonia solani causing black scurf in potato. Cadmium ferrocyanide with Phyllanthus emblica extract and nickel ferrocyanide with Mangifera indica extract complexes were found to have maximum and minimum antifungal property, respectively.

Keywords: Medicinal plants, transition metal ferrocyanides, synergistic effects, *Rhizoctonia solani*.

Introduction

Phytochemicals are bioactive compounds found in vegetables, fruits, cereal grains, and plantbased beverages such as tea and wine. Phytochemical consumption is associated with a decrease in risk of several types of chronic diseases due to in part to their antioxidant and free radical scavenging effects. Because it is hypothesized that the beneficial health effects observed from phytochemicals are related to the synergistic mixture of phytochemicals and other nutrients found in whole foods and its components, consumption of variety of plant-based foods is encouraged (Chopra, 1956) [4]. Researchers are exploring the use of phytochemicals to product economically important crops against various pest and pathogens. Potato is world's fourth economically important food crop after wheat, rice and maize because of its greater yield potential and high nutritive value. Its constituents nearly half of the worlds annul output of all root and tuber crops. A large percentage of potential production is reportedly destroyed by pests and pathogens. Annual yield loss of potato crop quality is due to *Rhizoctonia solani* infection can be 15-20 % (Rauf, 1999 and Beagle-Ristaino *et al*., 1985) [1, 3]. *Rhizoctonia solani is* a fungus that attacks tubers, underground stems and stolons of potato plants. Although it probably occurs wherever potatoes are grown, it causes economically significant damage only in cool, wet soils (Frank, 1986) [2].

Rhizoctonia is a soil borne fungus with more or less continuous vegetative growth of brown threadlike branching mycelium in warm, moist soil conditions. These fungal strands grow between the soil particles and in dead non-living plant material to promote its decay and breakdown of organic matter in temperate production areas, losses from *R. solani* are sporadic and occur only when weather is cold and wet in the weeks following planting. In northern areas, where growers often must plant in cold soils, black scurf caused by *R. solani* is a more consistent problem. Poor stands, stunted plants, reduced tuber number and size, and misshapen tubers are characteristic of the black scurf disease (Frank, 1986) [2].

The use of medicinal plants as a source for relief from illness can be traced back over five millennia to written documents of the early civilization in China, India and the near east, but it is doubtless an art as old as mankind. Neanderthals living 60,000 years ago in present day Iraq used plants such as holly back, these plants are still widely used in ethno medicine around the world (Khare, 2007) [8].

Phyllanthus emblica L. (syn. *Emblica officinalis*) is commonly known as Indian gooseberry. All parts of this plant are used for medicinal purposes, especially the fruit which has been used in Ayurveda as a potent Rasayana (rejuvenator) (Neeraj *et al*., 2017) [5]. *P. emblica* contains phytochemicals including fixed oils, phosphatides, essential oils, tannins, minerals, vitamins, amino acids, fatty acids, glycosides, etc. Various pharmaceutical potential of *P. emblica* has been reported previously including antimicrobial, antioxidant, anti-inflammatory, analgesic and antipyretic, adaptogenic, hepatoprotective, antitumor and antiulcerogenic

Desalination and Water Treatment
www.deswater.com

doi: 10.5004/dwt.2019.24595

167 (2019) 324–332
November

Adsorption of hazardous dye crystal violet from industrial waste using low-cost adsorbent *Chenopodium album*

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Received 17 August 2018; Accepted 18 June 2019

ABSTRACT

The present article describes the use of *Chenopodium album* ash (wildly growing weed) as effective adsorbent for the removal of a hazardous dye, crystal violet, from its aqueous solutions. This paper presents an experimental study and discussion of the adsorption characteristics of this dye on the plant ash. Two techniques, that is, batch and column operations have been used to explain the removal process. Column capacity is found to be lesser than the batch adsorption capacity. Batch adsorption studies were conducted as a function of adsorbent dose, equilibrium pH, contact time, initial dye concentration, kinetics and Freundlich isotherms. Extent of adsorption has been found to be greater at neutral pH. Kinetic studies indicate that the overall adsorption process is best described by pseudo-first-order kinetics. The adsorption data were fitted to linearly transformed Freundlich isotherm with R^2 (correlation coefficient) 0.999. Values of Freundlich parameters n and K_f have been found to be 1.642 and 14.253, respectively. These results indicate that ash of *Chenopodium album* can be used as an effective and low-cost adsorbent for the treatment of wastewaters contaminated with organic dye crystal violet.

Keywords: Crystal Violet; *Chenopodium album*; Adsorption; Dye removal; SEM; Isotherm

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