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3.3.1

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

3.3.1.1. **Number of research papers in the Journals notified on UGC CARE list year wise during the last five years**

HEI Input :

2022-23	2021-22	2020-21	2019-20	2018-19
15	16	11	10	10

DVV Clarification:

• Link landing to the research paper • Link to the journal website.
• URL of the content page in case print journal.

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HEI Response:

As per DVV suggestions supporting documents are attached.

Supporting Documents: -

Annexures			
Annexures No	**Description**	**Link**	**Digital page No**
Annexures-1	Link landing to the research paper	**Annexure -I**	03
Annexures-2	Link to the journal website	**Annexure -II**	12

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Annexure -I Link landing to the research paper

Sr No	Name of faculty	Title of Paper	Year	ISSN Number	Name of journal as per UGC care list/WOS	Link	Digital Page No
1.	Dr. R S Pawar	A DFT investigation on transition metal (Co, Cr, Cu, Mn, Mo and Nb) doped Bismuth Ferrite Oxide (BiFeO3) for CO gas adsorption	2022-23	ISSN: 1432-2234	Theoretical Chemistry Accounts	https://www.researchsquare.com/article/rs-2878095/v1	1
2.	Dr. R S Pawar	Surface Characteristics of finish Hobbed Gear-a Review	2022-23	ISSN: 2456-236X	International Journal of Interdisciplinary	IJIIRD Template	4

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					Innovative Research &Development (IJIIRD)		
3.	Dr. R S Pawar	Assessing the Impact of Green Supply Chain Management on Reducing Carbon Emissions and Mitigating Climate Change	2022-23	ISSN: 2063-5346	European Chemistry Bulletin,	https://scholar.google.co.in/citations?view_op=view_citation&hl=en&user=zQPxvjIAAAAJ&sortby=pubdate&citation_for_view=zQPxvjIAAAAJ:Zph67rFs4hoC	6
4.	Dr.G Sunil Kumar	Power control and optimization for power loss reduction using deep learning in microgrid systems	2022-23	ISSN; 1532-5008	Electric Power Components and Systems	https://doi.org/10.1080/15325008.2023.2217175	8
5.	Dr.G Sunil Kumar	Optimized CNN-based Brain Tumor Segmentation and Classification using Artificial Bee Colony and Thresholding	2022-23	ISSN; 1841-9836	CCC Publications	(PDF) Optimized CNN-based Brain Tumor Segmentation and Classification using Artificial Bee Colony and Thresholding (researchgate.net)	10
6.	Dr.G Sunil Kumar	Automatic Detection of Brain Tumors Using Genetic Algorithms with Multiple	2022-23	Online ISSN 1841-9844	INTERNATIONAL JOURNAL OF COMPUTERS	https://doi.org/10.15837/ijccc.2023.1.4577	12

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		Stages in Magnetic Resonance Images			COMMUNICATIONS & CONTROL		
7.	Prof. Harshad D Shelke	Enhanced Photocatalytic Activity of the Cu2SnS3 + GO Composite for the Degradation of Navy Blue ME2RL Industrial Dye	2022-23	Vol. 13, No. 3, pp. 522	MDPI Coatings	https://doi.org/10.3390/coatings13030522	14
8.	Prof.Harshad D Shelke	Simulation of p-CdTe and n-TiO2 Heterojunction solar cell efficiency	2022-23	Vol. 2, No. 1, pp. 35-42	Journal of Computers, Mechanical and Management	https://doi.org/10.57159/gadl.jcmm.2.1.23036	16
9.	Prof.Harshad D Shelke	Efficient Electrochemical Water Splitting Through Self-Supported Copper Selenide Nanosheets on Cu Foil: Effect of Immersion Time	2022-23	Vo. 11, No. 6, pp. 1-15	Energy Technology	http://dx.doi.org/10.1002/ente.202201300	18
10.	Prof.Harshad D Shelke	Chemical synthesis of manganese ferrite thin films for energy storage application	2022-23	Vol. 35, No. 5, pp. 1-11	Journal of Materials Science: Materials in Electronics	https://doi.org/10.1007/s10854-023-11706-x	20
11.	Dr. Ajeet Kumar	Capacitive Extensometry for the Estimation of Meaningful Stretch-	2022-23	ISSN: 1558-4135	IEEE Transactions on Dielectrics and Electrical Insulation	https://ieeexplore.ieee.org/abstract/document/10024919	22

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		Dependent Dielectric Strength of Dielectric Elastomer					
12.	Dr. Ajeet Kumar	Energy harvesting by piezoelectric polyvinylidene fluoride/zinc oxide/carbon nanotubes composite under cyclic uniaxial tensile deformation	2022-23	ISSN: 1548-0569	Polymer Composites	https://4spepublications.onlinelibrary.wiley.com/doi/abs/10.1002/pc.27437	24
13.	Pramodkumar bagade	Numerical Analysis of Vertical Axis wind Turbine with Different Profiles	2022-23	ISSN : 0022-2755	Journal of Mines, Metals and Fuels,	https://informaticsjournals.com/index.php/jmmf/article/view/36040/23191	26
14.	Dr.D.B.Jasutkar	Greywater Treatment By Using Coconut Shell	2022-23	ISSN: 2455-3778	International Journal for Modern Trends in Science and Technology	http://www.ijmtst.com/volume8/issue04/69.IJMTST0804198.pdf	28
15.	Dr. R S Pawar	CYBER-PHYSICAL SYSTEMS FOR RESILIENT SUPPLY CHAIN MANAGEMENT IN THE FACE OF DISRUPTIONS	2022-23	ISSN 2063-5346	Eur. Chem. Bull. 2022, 11(Regular Issue 8), 327 - 345	https://scholar.google.co.in/citations?view_op=view_citation&hl=en&user=zQPxvjIAAAAJ&sortby=pubdate&citation_for_view=zQPxvjIAAAAJ:4DMP91E08xMC	30

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1.	Dr. R S Pawar	MODERN SUPPLY CHAIN MANAGEMENT AND ITS ADVANTAGES FOR EFFICIENT WORKING IN INDUSTRIES	2021-22	ISSN 2063-5346	European Chemistry Bulletin	https://scholar.google.co.in/citations?view_op=view_citation&hl=en&user=zQPxvjIAAAAJ&sortby=pubdate&citation_for_view=zQPxvjIAAAAJ:mVmsd5A6BfQC	32
2.	Dr. R S Pawar	DESIGN AND TESTING OF LIGHTWEIGHT SANDWICH T-JOINT OF COMPOSITE MATERIAL USING FEA AND EXPERIMENTAL TECHNIQUE	2021-22	ISSN: 0363-8057	GRADIVA REVIEW JOURNAL	https://m.growingscience.com/beta/esm/6585-finite-element-analysis-and-design-optimization-of-composite-t-joints-for-enhanced-maritime-and-aerospace-applications.html	34
3.	Dr. R S Pawar	Adsorption of gas molecules (CO, CO, NO, NO, and CH) on undoped and Ag-doped bismuth ferrite oxide (BFO) by DFT investigation	2021-22	ISSN: 2044-5326	Journal of Materials Research	https://link.springer.com/article/10.1557/s43578-022-00800-1	36
4.	Ajeet Kumar, Karali Patra	Proposal of a generic constitutive model for deformation-dependent dielectric constant of dielectric elastomers	2021-22	2215-0986	Engineering Science and Technology, an International Journal	https://impactfactorforjournal.com/ugc-approved-journal-list/	38

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5.	Anup Sankar Sadangi, Ajeet Kumar, Karali Patra	Analysis of Stretch-Dependent Capacitance and Its Effects on Energy Conversion of a Donut-Shaped Dielectric Elastomer Generator	2021-22	1557-9662	IEEE Transactions on Instrumentation and Measurement	https://impactfactorforjournal.com/ugc-approved-journal-list/	40
6.	Shah MS, Saha P.	Investigation on performance characteristics of micro-EDM dressing for the fabrication of micro-rod (s) on Ti-6Al-7Nb biomedical material	2021-22	10910344	Machining Science and Technol.	https://www.tandfonline.com/journals/lmst20	42
7.	Shah MS, Saha P.	Assessment of vibration-assisted micro-EDM dressing process-stability by monitoring and analyzing debris evacuation during Ti-6Al-7Nb machining	2021-22	1526-6125	Journal of Manufacturing Processes.	https://www.sciencedirect.com/journal/journal-of-manufacturing-processes	44
8.	Sandhya K.Swamy	Thermoelastic bending analysis of laminated plates subjected to linear and non linear thermal loads	2021-22	ISSN 2287-528X	International Journal on Emerging trends in technology	https://doi.org/10.12989/aas.2021.8.3.213	46

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9.	Ms. Mrunal.S. Mane Prof. S.V. Bodake	Managing Federated Privacy preserving Crowdsourcing platform on blockchain	2021-22	2350 – 0808	Biomedical Signal Processing and Control 68	https://ijariie.com/AdminUploadPdf/Handling_Federated_Privacy_preserving_Crowdsourcing_platform_on_blockchain_ijariie15252.pdf	48
10.	Joshi, Vaishali M., and Rajesh B. Ghongade	EEG Based Emotion Detection using Fourth Order Spectral Moment and Deep learning	2021-22	1746-8094	Journal of King Saud University-Computer and Information Sciences	https://www.sciencedirect.com/science/article/abs/pii/S1746809421003529	50
11.	Dr.R.R.Sorate	Development of Road Traffic Accident Prediction Model by Using Artificial Neural Network: A Case Study of Mumbai-Pune Expressway |	2021-22	E-ISSN: 2230-9659	Journal of Advances in Science and Technology | Science & Technology	http://ignited.in/I/a/305742	52
12.	Dr.R.R.Sorate	Traffic Accident System Analysis: Optimization and Interpretation of traffic studies using Pattern Search Recognition Case Studies	2021-22	E-ISSN: 2230-9659	Journal of Advances in Science and Technology | Science & Technology	http://ignited.in/I/a/305789	53
13.	Dr. Udaykumar Phatak	Green Solid Waste Management	2021-22	ISSN 2230-9659	Journal of Advances in Science and Technology	https://ignited.in/I/a/305767	55

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14.	Dr. Udaykumar Phatak	Study of Construction Material Wastage, its Causes, Amendment and Financial Impacts	2021-22	ISSN 2230-9659	Journal of Advances in Science and Technology	https://ignited.in/I/a/305786	56
15.	A.K.Kadu	Study Project on Transforming Highways into Renewable Resources Case Study on MumbaiPune Expressway (20Km Talegaon to Kamshet)	2021-22	ISSN: 2456-4184	International Journal of Novel Research and Development	IJNRD2205130.pdf	57
16.	Pravin Khandare	Optimization and Characterization of Ni-B Coating of Using RSM Method	2021-22	2321-9653	International Journal for Research in Applied Science and Engineering Technology	https://doi.org/10.22214/ijraset.2022.48188	59
1.	Dr.G Sunil Kumar	ENHANCEMENT OF SPEECH SIGNAL BY USING VARIABLE STEP SIZE NORMALIZED DIFFERENTIAL LMS (VSSNDLMS) ALGORITHM	2020-21	ISSN: 0974-5823	International Journal of Mechanical Engineering	APRIL_30.pdf (kalaharijournals.com)	61
2.	Dr.G Sunil Kumar	A NOVEL NOISE REDUCTION FRAMEWORK FOR SPEECH SIGNALS IN ADAPTIVE	2020-21	ISSN: 0974-5823	International Journal of Mechanical Engineering	FebV7_I2_396.pdf (kalaharijournals.com)	63

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		CHANNELS USING VARIABLE STEP SIZE NORMALIZED DIFFERENTIAL LMS (VSSNDLMS) ALGORITHM					
3.	Dr.G Sunil Kumar	ANC BASED ON VARIABLE STEP SIZE NORMALIZED DIFFERENTIAL LMS ALGORITHM	2020-21	ISSN: 2455-3778	Semantic Scholar	[PDF] ANC BASED ON VARIABLE STEP SIZE NORMALIZED DIFFERENTIAL LMS ALGORITHM | Semantic Scholar	65
4.	Dr.D.B.Jasutkar	Design of Advance Constructed Wetland to Purify Domestic Wastewater by using Activated Carbon	2020-21	ISSN: 2455-3778	International Journal for Modern Trends in Science and Technology	(ijmtst.com)	66
5.	Dr. P. M. Bagade	Review paper on Prosthetic leg design, material selection and Cost	2020-21	2456 - 6470	IJSREM	www.ijtsrd.com	68
6.	Dr. P. M. Bagade	PARAMETRIC ANALYSIS OF AIR COOLER USING EXPERIMENTAL TECHNIQUE	2020-21	2582-3930	Int. J. Scientific Development and Research	www.ijsrem.com	70

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7.	Joshi, Vaishali M., and Rajesh B. Ghongade	IDEA: Intellect database for emotion analysis using EEG signal	2020-21	1319-1578	Biomedical and Pharmacology Journal 13, no. 2	https://www.sciencedirect.com/science/article/pii/S1319157820304870#:~:text=(Li%20et%20al.%2C%202019a,emotions%20in%20the%20subject%20mind.&text=For%20emotion%20detection%2C%20they%20used,and%20ECG%20of%2023%20subjects.	72
8.	Joshi, Vaishali M., and Rajesh B. Ghongade	Optimal Number of Electrode Selection for EEG Based Emotion Recognition using Linear Formulation of Differential Entropy	2020-21	0974-6242	Biomedical Signal Processing and Control 68	https://biomedpharmajournal.org/vol13no2/optimal-number-of-electrode-selection-for-eeg-based-emotion-recognition-using-linear-formulation-of-differential-entropy/	74
9.	Joshi, Vaishali M., and Rajesh B. Ghongade	Deep BiLSTM neural network model for emotion detection using cross-dataset approach	2020-21	1746-8094	Gradiva Review Journal	https://www.sciencedirect.com/science/article/abs/pii/S1746809421010041#:~:text=A%20deep%20neural%20network%2DBiLSTM,system%20to%20a%20positive%20extent.	76
10.	S.M.Kulkarni, D.S.Bormane S.L.Nalbalwar	Prediction of Natural Disaster using Long Short Term Memory (LSTM) network	2020-21	0363-8057	International Journal of Recent Technology and Engineering (IJRTE)	http://gradivareview.com/gallery/grj%202536.pdf	78

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11.	Vaishali M. Joshi, Rajesh B.Ghongade	Emotion Detection with Single Channel EEG Signal using Deep Learning Algorithm	2020-21	2277-3878	International Journal of Science, Technology, Engineering and Management–A VTU Publication	https://www.ijrte.org/wp-content/uploads/papers/v8i6/F9044038620.pdf	80
1.	Dr. Udaykumar Phatak	Green Solid Waste Management	2019-20	ISSN 2230-9659	Journal of Advances in Science and Technology	https://ignited.in/I/a/305767	82
2.	Dr. Rashmi R	Design and Development of control strategy for stepper motor head lamp leveling device used in automobile	2019-20	2582-5844	International Journal of Science, Technology, Engineering and Management	http://www.ijesm.vtu.ac.in/index.php/IJESM/article/view/524	84
3.	Dr. Rashmi R	Automatic Driving cars using AI andmachine learning	2019-20	0367-6234	Journal of Harbin Institute of Technology	https://hebgydxxb.periodicales.com/index.php/JHIT/article/view/1059	86
4.	Dr. Rashmi R	HEADLAMP LEVELING DEVICES AND ITS EFFECT ON NIGHT SAFETY IN INDIA-A SURVEY	2019-20	0970-2555	Journal of Xidian University	https://iiiejournal.org/index.php/iiie/issue/view/11	88
5.	Dr. R. N. Todkar	Colour Coded Plant Health Monitoring System and Pesticide Spraying Mechanism	2019-20	1001-2400	JETIR	https://doi.org/10.37896/jxu14.8/020	90

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6.	Prof. D. C. Desle	INVESTIGATION OF DYNAMIC CHARACTERISTICS OF 2-WHEELER SUSPENSION USING PNEUMATIC EXCITATION	2019-20	2349-5162	JETIR	www.jetir.org	92
7.	Prof. D. C. Desle	Effect of lead angle on push force of snap joint using nonlinear analysis and 3D printing	2019-20	2349-5162	IJTSRT	http://www.jetir.org	94
8.	Shah MS, Saha P.	Assessment of vibration-assisted micro-EDM dressing process-stability by monitoring and analyzing debris evacuation during Ti-6Al-7Nb machining	2019-20	1526-6125	Journal of Manufacturing Processes.	https://www.sciencedirect.com/journal/journal-of-manufacturing-processes	96
9.	Dr. C. M. Sedani	Analysis of Weight Optimization of Automobile shaft by using Aluminum and Glass Fibre Composite Material	2019-20	2582-6026	Innovative journal for Opportunities and Development in Science and Technology	www.ijods.com	98
10.	Dr. C. M. Sedani	Analysis of Torsional Stiffness of an Automobile	2019-20	2455-2631	Innovative journal for Opportunities and Development in	www.ijsdr.com	100

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		Drive Shaft by Composite Material with FEA			Science and Technology		
1.	Prof. N.D.Kale	Hybrid based cluster head selection for maximizing network lifetime and energy efficiency in WSN	2018-19	-	Journal of King Saud University-Computer and Information Sciences	https://www.sciencedirect.com/science/article/pii/S1319157818310875	102
2.	Mrs. Shilpa Dhanorkar	An Efficient and secure finger vein Recognition Techniques using Intrnet of Things Era	2018-19	-	Journal of Advanced Research in Dynamical and control system	Finger vein recognition techniques: a comprehensive review | Multimedia Tools and Applications (springer.com)	104
3.	Mr. S.M. Kullkarni	Performance assessment of video stabilization algorithms based on L1-L2 optimization	2018-19	-	International Journal of Scientific Research and Review 64650	https://ieeexplore.ieee.org/abstract/document/9057924	106
4.	Mrs. S.S. Waghchoure	Bilateral filtering using New Histogram and Nerast Neighbour searching	2018-19	-	Journal of Advanced Research in Dynamical and control system	chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://ijarcce.com/wp-content/uploads/2016/02/IJARCCE-84.pdf	108
5.	Mrs. S.S.Vasekar	A Method Based on Background Subtraction and Kalman Filter Algorithm for Object Tracking	2018-19	-	2018 Fourth International Conference on Computing	A Method Based on Background Subtraction and Kalman Filter Algorithm	110

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					Communication Control and Automation (ICCUBEA)		
6.	Prof. R. N. Todkar	Thermal Performance of Wickless Heat Pipe Flat Plate Solar Collector with Nanofluid	2018-19	-	Journal of Nano Science, Nano Engineering & Applications	hermal Performance of Wickless Heat Pipe Flat Plate Solar Collector with Nanofluid | Waghulde | Journal of Nanoscience Nanoengineering and https://www.researchgate.net/publication/332811995_Development_of_nickel_bi-porous_wicks_for_miniature_loop_heat_pipe_applications(stmjournals.in)	112
7.	Dr. Kamlesh Sorate	Corrosion Behavior of Automotive Materials with Biodiesel: A Different Approach	2018-19	-	SAE Int. J. Fuels Lubr.	https://www.jstor.org/stable/26554703	114
8.	Dr. C. M. Sedani	Development of nickel bi-porous wicks for miniature loop heat pipe applications	2018-19	-	World Journal of Engineering	https://www.researchgate.net/publication/332811995_Development_of_nickel_bi-porous_wicks_for_miniature_loop_heat_pipe_applications	116

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9.	Prof. N.D.Kale	Architectural analysis for lifetime maximization and energy efficiency in hybridized WSN model	2018-19	-	International Journal of Engineering & Technology, 7 (2.7) (2018) 494-501	https://www.researchgate.net/publication/332811995_Development_of_nickel_bi-porous_wicks_for_miniature_loop_heat_pipe_applications	117
10.	Prof. R. N. Todkar & Prof. S. K. Kolase	Experimental determination of Forced Convection Heat Transfer Over a Plate with Nozzle Plate	2018-19	-	Journal of Thermal Engineering and Applications	https://www.sciencedirect.com/science/article/abs/pii/S2214785321045788	119

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Annexure -II : Link to the journal website

Sr No	Name of faculty	Title of Paper	Link	Digital Page No
1.	Dr. R S Pawar	A DFT investigation on transition metal (Co, Cr, Cu, Mn, Mo and Nb) doped Bismuth Ferrite Oxide (BiFeO3) for CO gas adsorption	https://www.researchgate.ne	1

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2.	Dr. R S Pawar	Surface Characteristics of finish Hobbed Gear-a Review	https://www.atlantis-press.com	4
3.	Dr. R S Pawar	Assessing the Impact of Green Supply Chain Management on Reducing Carbon Emissions and Mitigating Climate Change	https://scholar.google.co.in/citations?view_op=view_citation&hl=en&user=zQPxvjIAAAAJ&sortby=pubdate&citation_for_view=zQPxvjIAAAAJ:Zph67rFs4hoC	6
4.	Dr.G Sunil Kumar	Power control and optimization for power loss reduction using deep learning in microgrid systems	https://www.tandfonline.com	8
5.	Dr.G Sunil Kumar	Optimized CNN-based Brain Tumor Segmentation and Classification using Artificial Bee Colony and Thresholding	https://www.researchgate.net	10
6.	Dr.G Sunil Kumar	Automatic Detection of Brain Tumors Using Genetic Algorithms with Multiple Stages in Magnetic Resonance Images	https://www.researchgate.net	12
7.	Prof. Harshad D Shelke	Enhanced Photocatalytic Activity of the Cu2SnS3 + GO Composite for the Degradation of Navy Blue ME2RL Industrial Dye	https://www.mdpi.com	14
8.	Prof.Harshad D Shelke	Simulation of p-CdTe and n-TiO2 Heterojunction solar cell efficiency	https://www.mdpi.com	16

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9.	Prof.Harshad D Shelke	Efficient Electrochemical Water Splitting Through Self-Supported Copper Selenide Nanosheets on Cu Foil: Effect of Immersion Time	https://www.mdpi.com	18
10.	Prof.Harshad D Shelke	Chemical synthesis of manganese ferrite thin films for energy storage application	https://www.mdpi.com	20
11.	Dr. Ajeet Kumar	Capacitive Extensometry for the Estimation of Meaningful Stretch-Dependent Dielectric Strength of Dielectric Elastomer	https://ieeexplore.ieee.org	22
12.	Dr. Ajeet Kumar	Energy harvesting by piezoelectric polyvinylidene fluoride/zinc oxide/carbon nanotubes composite under cyclic uniaxial tensile deformation	https://4spepublications.onlinelibrary.wiley.com	24
13.	Pramodkumar bagade	Numerical Analysis of Vertical Axis wind Turbine with Different Profiles	https://4spepublications.onlinelibrary.wiley.com	26
14.	Dr.D.B.Jasutkar	Greywater Treatment By Using Coconut Shell	http://www.ijmtst.com	28
15.	Dr. R S Pawar	CYBER-PHYSICAL SYSTEMS FOR RESILIENT SUPPLY CHAIN MANAGEMENT IN THE FACE OF DISRUPTIONS	https://scholar.google.co.in	30

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A DFT investigation on transition metal (Co, Cr, Cu, Mn, Mo and Nb) doped Bismuth Ferrite Oxide (BiFeO3) for CO gas adsorption

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Abstract

Using density functional theory, the structural and electronic configuration of transition metal atom (Co, Cr, Cu, Mn, Mo, and Nb) doped $BiFeO_3$(BFO) perovskite for adsorption of CO gas molecules have been studied in a systematic way. A detailed analysis of energy, geometry and an electronic configuration of transition metal atoms doped in A site of BFO perovskite structure towards CO adsorption is carried out. The CO gas molecule adsorption phenomenon on transition metal-doped BFO are investigated in terms of adsorption energy after geometry optimization, adsorption distance, charge density difference, and the spectrum of the density of states. Our results revealed that CO gas is chemisorbed on Mo-doped $BiFeO_3$ perovskite structure. Also, calculation results indicates that CO preferably adsorbs on Mo-doped $BiFeO_3$ with an adsorption energy of -1.0532 eV. Further results from the Density of states plot (DOS) suggest that Mo-doped BFO (010) can be introduced as a promising candidate in chemiresistive gas sensing devices for detecting CO gas molecule.

1.0 Introduction

Transition metals play a significant role in improving efficiency and effectiveness of catalytic oxidation of some gas pollutant molecules like CO and NOx. They are often considered as excellent catalysts [1]. Studying the adsorption or chemical kinetics mechanism of pollutants on the surface of metals and their compounds is significant for enhancing the sensitivity and selectivity of materials to detect gases because it helps in understanding the interactions between gas molecules and the surface of the material. This understanding is crucial for developing materials that can selectively and sensitively detect specific gases Computational techniques have revealed undiscovered scenarios and allowed for designing complex experiments that would otherwise be costly and error-prone. Computational techniques have revealed previously unknown scenarios and allowed for the design of complex experiments that would otherwise be costly and error-prone. They have permitted things that were hard to do with direct experimentation. Computational tools have evolved as a cheaper and faster solution to complicated issues. In addition, computational techniques have also enabled the simulation of dangerous or inaccessible scenarios, providing valuable insights into phenomena that would be impossible to observe directly. These tools have revolutionized many fields, from drug discovery to climate modeling [2]. Computational tools have helped us learn more about physical and chemical phenomena by simulating them on computers using numerical analysis and theoretical considerations. These tools are powerful precursors to lab investigations and have helped us understand physical and chemical phenomena better. These computational tools have also made it much cheaper and faster to do experiments, which has made it possible to look into a wider range of conditions and situations. Because of this, they have become an important part of many scientific and engineering fields [3]. Density functional theory (DFT), a method of electronic-level computational simulation based on quantum mechanics, has

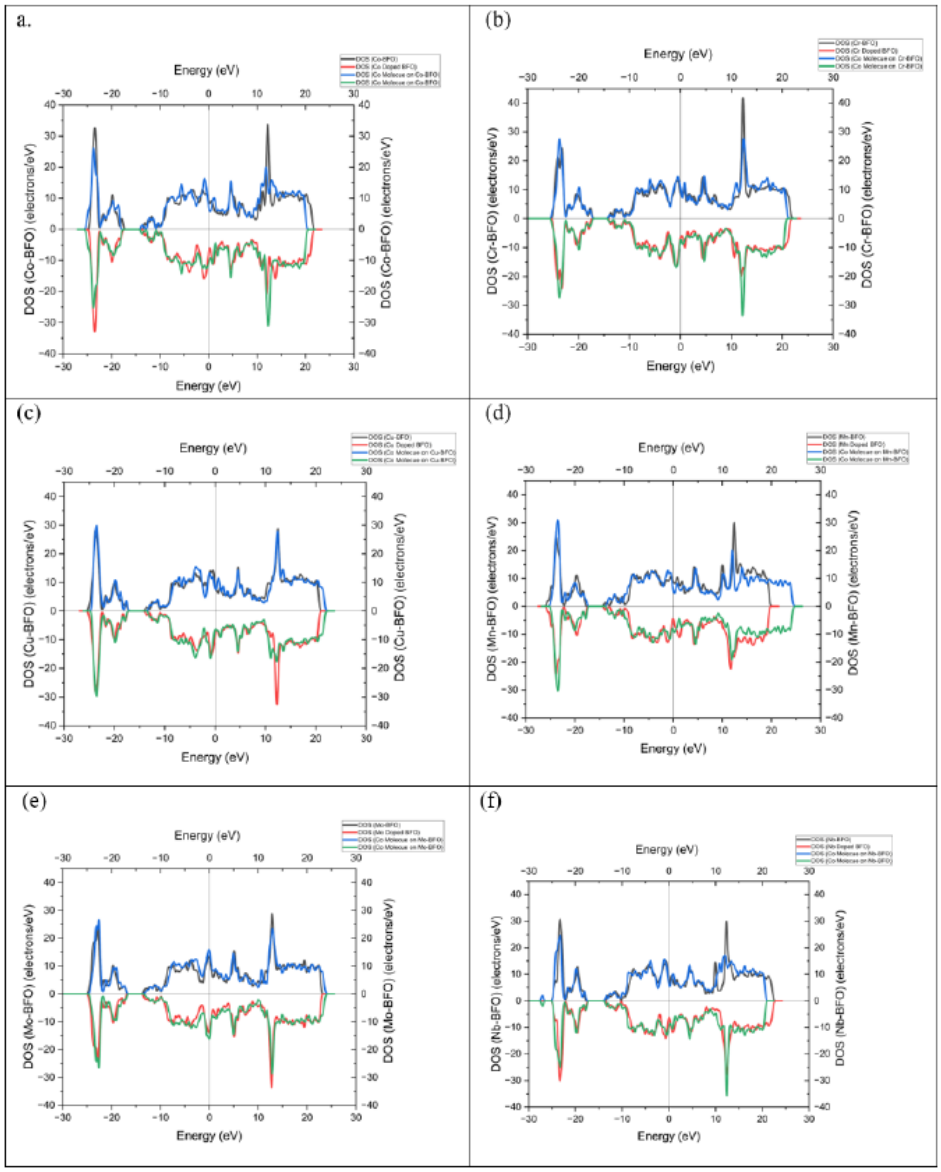

Figure 3

Figure 1: Density of states plot of the CO gas Molecule over transition metal doped BFO surface (a) CO on Co-

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Surface Characteristics of Finish Hobbed Gear- A Review

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ABSTRACT

Design and manufacturing methodologies are already decided in the manufacturing industry. In order to transmit power and motion, gear is a crucial component. It should be error-free. For effective power transmission, the teeth's surface properties should be optimal. Grinding is eliminated by CNC finish hobbing machines, making it simpler to make the gear with the necessary surface qualities. Analysing process-wide variations can be used to evaluate the quality of machined gears. Process parameter optimisation enhances gear hobbing. Treatment and research on cutting tools, cutting fluid, cutting parameters, and workpiece parameters can enhance the quality of hobbed gear. According to the study, giving the hob cutter a cryogenic treatment will improve gear hobbing. Comparative investigations should be conducted both before and after cryogenic treatment on the hob. Finding the ideal cutting conditions for Pfauter Gear Hobbing is essential for achieving optimal productivity, quality, and tool life. The gear hobbing machines studied in the past have improved productivity by enabling quicker cutting rates and longer tool lifetimes. The American Gear Manufacturing Association (AGMA), the Deutsches Institut für Normung (DIN), and the Japanese Industrial Standards (JIS) have established the most widely used standards for describing gear quality. Microgeometric deviations are used to measure gear accuracy and quality. Runout error, which determines the form and location of the gear teeth, as well as pitch errors related to the actual positioning of the gear teeth are examples of microgeometric deviations.

Keyword - Gear hobbing, CNC Finish hobbing, DIN, Gear Quality, Gear teeth

1. INTRODUCTION

Manufacturing methods for gears for transmissions include hobbing, milling, and shaping forged stock. Utilising a spinning cutter known as a hob, gear hobbing creates gear teeth. It is used to make splines, helical, spur, and worm gears. A high surface quality is required for the gear tooth flank. Gear hobbing enables the production of gears with various module configurations, weights, and diameters. The blank is first dragged inward towards the hob during gear hobbing until the correct depth is obtained. Once the depth is reached, both the gear and the hob are fed across the face of the gear until the teeth are finished.

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Assessing the Impact of Green Supply Chain Management on Reducing Carbon Emissions and Mitigating Climate Change

Section A-Research paper
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Assessing the Impact of Green Supply Chain Management on Reducing Carbon Emissions and Mitigating Climate Change

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Keywords:
Supply Chain Management, Carbon Emission, Climate Change

ABSTRACT

The growing concern over climate change and its adverse effects on the environment has prompted a shift towards more sustainable business practices, especially in supply chain management. Green Supply Chain Management (GSCM) has emerged as a strategic approach to integrate environmental considerations into supply chain operations and reduce carbon emissions. This research article assesses the impact of GSCM on carbon emissions reduction and its potential in mitigating climate change.

Through a comprehensive literature review, the study explores a wide range of quantitative and qualitative studies evaluating the effectiveness of GSCM initiatives in reducing carbon emissions within supply chains. The analysis reveals compelling evidence of the positive relationship between GSCM adoption and decreased carbon footprints. Companies that embrace sustainable practices and green technologies demonstrate significant improvements in environmental performance, leading to tangible carbon emissions reductions.

The study emphasizes the importance of GSCM in addressing the urgent need for climate change mitigation. Sustainable practices within supply chains play a pivotal role in promoting resource efficiency, waste reduction, and energy optimization. By adopting GSCM practices, businesses can align their operations with climate action goals, contribute to global efforts to combat climate change, and improve their overall environmental footprint.

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Power Control and Optimization for Power Loss Reduction Using Deep Learning in Microgrid Systems

Puralasetty Ashok Babu, Javanna Latheef Mazher Iqbal, S. Siva Priyanka, Machana Jithender Reddy, Gaddam Sunil Kumar & Rajaram Ayyasamy

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Optimized CNN-based Brain Tumor Segmentation and Classification using Artificial Bee Colony and Thresholding

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AUTOMATIC DETECTION OF BRAIN TUMORS USING GENETIC ALGORITHMS WITH MULTIPLE STAGES IN MAGNETIC RESONANCE IMAGES

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Karthik Annam, Sunil Kumar G, Ashok Babu P, Narsaiah Domala

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Abstract:
The field of biomedicine is still working on a solution to the challenge of diagnosing brain tumors, which is now one of the most significant challenges facing the profession. The possibility of an early diagnosis of brain cancer depends on the development of new technologies or instruments. Automated processes can be made possible thanks to the classification of different types of brain tumors by utilizing patented brain images. In addition, the proposed novel approach may be used to differentiate between different types of brain disorders and tumors, such as those that affect the brain. The input image must first undergo pre-processing before the tumor and other brain regions can be separated. Following this step, the images are separated into their respective colors and levels, and then the Gray Level Co-Occurrence and SURF extraction methods are used to determine which aspects of the photographs contain the most significant information. Through the use of genetic optimization, the recovered features are reduced in size. The cut-down features are utilized in conjunction with an advanced learning approach for the purposes of training and evaluating the tumor categorization. Alongside the conventional approach, the accuracy, inaccuracy, sensitivity, and specificity of the methodology under consideration are all assessed. The approach offers an accuracy rate greater than 90%, with an error rate of less than 2% for every kind of cancer. Last but not least, the specificity and sen-

way from the bottom of the brain down to the middle of the lower back. The spinal cord is the pathway via which messages go to and from the brain and the rest of the body. There are between 50 and 100 billion neurons in the brain, which is a very significant number of cells. The functions of the brain's individual cells may be broken down into categories. It is highly difficult to identify a brain tumor in its early stage since the brain is covered by the skull. Additionally, brain tumors do not display distinct clinical signs, making it even more difficult to diagnose. In most cases, the diagnosis of brain tumors is based on the presence of three symptoms [1]. Because of an increase in cranial pressure, the first symptom is a headache, along with vomiting and altered states of consciousness [2–4]. The second symptom is that the affected individual may experience changes in personality or emotions. This is caused by disorder in the brain. The final sign to look out for is irritability, which can also manifest as absences, weariness, or convulsions. However, brain tumors are not the only possible cause of these symptoms. Therefore, imaging techniques are the primary method utilized in the diagnosis of brain tumors. The features of the tumor, as well as its origin, location, and size, are taken into consideration when classifying brain tumors. The identification of brain cancer in its earlier stages is one of the most important issues in the field. According to the World Health Organization (WHO), there are 120 different forms of brain tumors. In addition, the WHO has rated the tumors from grade I to grade IV [5]. The doctor is able to pro-

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Article

Enhanced Photocatalytic Activity of the Cu_2SnS_3 + GO Composite for the Degradation of Navy Blue ME2RL Industrial Dye

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Abstract: In the present work, the photocatalytic activity of pristine Cu_2SnS_3 (CTS) and a composite with graphene oxide (GO), i.e., CTS + GO, prepared by the precipitation technique, and its utilization as a catalyst for the degradation of Navy Blue (NB) ME2RL reactive azo dye were studied. The structural, morphological, and optical properties of the synthesized composite were evaluated. The degradation of azo dyes was used to evaluate the photocatalytic activity of the CTS + GO composite under visible light irradiation. When compared to pure CTS, the CTS + GO nanocomposite demonstrated increased photocatalytic activity. The improved photocatalysis is due to reduced recombination of generated charge carriers, better visible light absorption, and modified dye absorption via GO amalgamation in CTS. The simple and well-organized chemical bath method for catalyst preparation will be more suited to industrial production.

Keywords: Cu_2SnS_3; GO; nanocomposite; NB ME2RL; photocatalyst

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1. Introduction

Water pollution has become a very serious ecological problem worldwide. Water pollution is mainly caused by various contaminants, such as heavy metals, natural organic materials, and microorganisms, etc. [1]. These pollutants originate from the textile, agriculture, and pharmaceutical industries. Industrial waste is fraught with several harmful pollutants for human health and the environment [2]. Therefore, it is necessary to remove hazardous pollutants before they are discharged into fresh water. For the treatment of wastewater, a variety of traditional techniques including physical, chemical, and biological methods have been applied. Cheaper and less time-consuming processes are the major tools

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Simulation of p-CdTe and n-TiO_2 Heterojunction Solar Cell Efficiency

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ABSTRACT

The present study presents a numerical analysis of p-type CdTe and n-type TiO_2 heterojunction solar cells. The simulations were conducted using SCAPS-1D software to investigate the effects of varying the thickness of the p-type CdTe layer, the temperature, and the band gap on the efficiency of the solar cell. The results show that the efficiency of the solar cell increases from 16.81 to 18.28 % as the thickness of the p-type CdTe layer is varied from 1.0 to 5.0 µm and decreases from 17.95 to 11.67% as the temperature is varied from 300 to 400 K. The efficiency also increases from 15.29 to 19.26 % as the band gap is varied from 1.40 to 1.55 eV. For the p-CdTe/n-TiO_2 heterojunction solar cell, the optimized absorber layer thickness is 3 µm, and the optimized temperature and band gap are 300 K and 1.5 eV, respectively. At these optimized parameters, the highest efficiency (η) % achieved was 17.95 %, with a Voc of 0.766 V, Jsc of 27.75 mA/cm^2, and FF of 84.39 %. These results provide theoretical guidelines for fabricating efficient p-CdTe/n-TiO_2 heterojunction solar cells.

1. Introduction

Energy and the environment are two critical and interrelated topics, and using non-renewable energy sources such as oil, coal, and gas contributes to environmental degradation [1]. The need for sustainable energy has led to the development of various experimental procedures for synthesizing and depositing metal oxides to improve solar cell efficiency [2]. However, numerical simulation provides a cost-effective approach to improving solar cell efficiency without requiring extensive lab work and expenses [3]. Metal oxides have unique mechanical and electrical properties, making them easy to synthesize and design, and they are eco-friendly and have a wide band gap [4]. In this study, we investigate the effect of varying the thickness of p-type CdTe, temperature, and band gap on the efficiency of n-type TiO_2 and p-CdTe heterojunction solar cells using Solar Cells Capacitance Simulator software. The thickness of the absorber layer is a crucial factor in solar cells as it directly affects cell performance [5].

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RESEARCH ARTICLE

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Efficient Electrochemical Water Splitting Through Self-Supported Copper Selenide Nanosheets on Cu Foil: Effect of Immersion Time

*Dhanaji B. Malavekar, Shital B. Kale, Harshad D. Shelke, Habib M. Pathan, and Chandrakant D. Lokhande**

Transition metal selenides have been attracting enormous attention for electrocatalytic water oxidation. Herein, a self-supported Cu_3Se_2@Cu electrocatalyst is prepared using the simple self-growth method at different immersion times. The immersion time is critical in the conversion of $Cu(OH)_2$ to Cu_3Se_2 as well as the modification of surface morphology. The growth of thin films is analyzed using a field emission scanning electron microscope and X-ray photoelectron spectroscopy techniques. The electrochemical analysis shows that 230 and 351 mV of overpotential are required to reach a current density of 10 and 100 mA cm^{-2}, respectively, for the oxygen evolution reaction (OER). The chronopotentiometry measurement over 50 h at a current density of 100 mA cm^{-2} shows excellent stability of the self-grown electrocatalyst. This work may provide an effective and controlled strategy to convert Cu substrate to Cu_3Se_2 for efficient OER catalysts with the self-growth method.

1. Introduction

The adverse effects of global warming, mainly associated with the energy usage of human habitats, have accelerated the adoption of alternative green energy resources. These sources mainly include wind turbines, geothermal, solar photovoltaic, and green hydrogen.[1,2] Green hydrogen is one of the promising fuels due to the reduction in CO_2 emissions and possible stabilization of energy supply in the form of heat and electricity. The massive availability of water on earth provides the immense potential for water splitting that will fulfill the needs of this and the next centuries. Therefore, this will provide cheaper green fuel and make energy importing countries energy efficient, which will lead to sustainable development. For this purpose, photocatalytic, photoelectrocatalytic, and electrocatalytic mechanisms have been used. These methods act as a conversion tool to other renewables which can generate energy from water. The designing and preparation of new catalytic materials to achieve certain physicochemical as well as electrochemical properties are of the primary tasks.[3] This will help to determine the applicability of such materials for water electrocatalysis. So far, electrochemical water splitting on an industrial scale for green hydrogen production has been restricted for several reasons. Some of the reasons for that are a requirement of higher potential (>1.5 V) and the lack of a stable electrocatalyst. This suggests the need to develop economic and stable electrocatalysts for water splitting. To date, various transition metal selenides have been prepared and evaluated for oxygen evolution reactions (OER). However, corrosion and poor chemical stability at higher current densities result in sluggish performance throughout the OER. Hence, chemical stability becomes a prime requirement of the electrocatalytic material.[4,5]

Ru/Ir-based materials are state-of-the-art electrocatalysts that require lower overpotential to drive water splitting.[6] The lack of an enormous supply and the higher cost of these metals limit their industrial or commercial-level application. Recently, numerous transition metal compounds have been developed for this purpose. In the last decade, transition metal selenides have been applied for OER applications. Zhang et al.[7] prepared nickel–cobalt selenide nanoarrays for water splitting and reported 270 mV overpotential to reach a current of 100 mA cm^{-2}. Wan et al.[8] prepared nickel selenide via the hydrothermal method and substituted selenium sites with sulfur and reported

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Chemical synthesis of manganese ferrite thin films for energy storage application

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ABSTRACT

For the first time, simple chemical bath deposition method was used for the deposition of manganese ferrite ($MnFe_2O_4$) thin films on stainless steel substrate. The X-ray diffraction study showed cubic spinel crystal structure of $MnFe_2O_4$. The surface morphological, structural and elemental studies were carried out using Fourier transform infrared spectroscopy, scanning electron microscopy, Brunauer–Emmett–Teller and energy dispersive X-ray analysis techniques. Scanning electron microscopic study revealed morphology with randomly distributed cubic nanostructured particles. The films exhibited specific surface area of 55.03 $m^2 g^{-1}$ with an average pore size of 1.22 nm. The structural and elemental studies confirmed the formation of $MnFe_2O_4$. The electrochemical properties of $MnFe_2O_4$ films in 1 M KOH electrolyte displayed maximum specific capacitance (C_s) of 687.94 F g^{-1} at a scan rate of 5 mV s^{-1} and exhibited long cyclic stability of 83.2% after 3000 cycles indicating $MnFe_2O_4$ as a storage electrode. Thus the nanocrystalline particles of cubic spinel ferrite not only increase the number of active sites available for the diffusion of OH^- ions but also decrease the distance that The nanocrystalline particles of cubic spinel ferrite not only increase the number of active sites available for the diffusion of OH^- ions but also decrease the distance that OH^- ions need to travel. These findings demonstrate the potential of the $MnFe_2O_4$ nanoparticles synthesized in this study as favorable options for pseudocapacitors and other electrochemical applications ions need to travel. These findings demonstrate the potential of the $MnFe_2O_4$ nanoparticles synthesized in this study as favorable options for pseudocapacitors and other electrochemical applications.

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Capacitive extensometry for the estimation of meaningful stretch dependent dielectric strength of dielectric elastomer

Ajeet Kumar, Anup Sankar Sadangi, Karali Patra, Anup Teejo Mathew, Dilshad Ahmad, and Abhishek Saini

***Abstract*— The electromechanical performance of a dielectric elastomer (DE) is greatly influenced by the dielectric strength of the elastomeric materials. The dielectric strength of an elastomer profoundly depends on the state of mechanical stretch. In this work, the stretch-dependent dielectric strength for DE is measured for all possible modes of stretches using compliant electrodes. Dielectric breakdown measurement using compliant electrodes considers voltage-induced deformation, which reflects the actual working condition energy transduction. Hence, the measured strength is for a meaningful value of a working DE. Capacitive extensometry and optical method are the two leading methods for the same. We compare the extensometry and optical methods in estimating the true value of dielectric breakdown strength of DEs at high pre-stretches. Furthermore, we propose a modified thickness stretch-based power law for the dielectric breakdown strength. Using the capacitive extensometry method, we verify the model on comprehensive experimental data on three types of elastomers, i.e., acrylic, silicone, and natural rubber. This work proposes a general framework for estimating the meaningful stretch-dependent dielectric strength of DEs.**

***Index Terms*— Dielectric elastomer, breakdown strength, electromechanical instability, capacitive extensometry.**

I. INTRODUCTION

Dielectric elastomers (DEs) consist of a thin membrane of polymer, sandwiched by compliant electrodes. They are often used for electromechanical transduction because of the large electrically-induced deformation, fast response, low cost, light weight, high energy density, noise-free operation, resistance to corrosion, good impedance matching to many energy sources and the ability to tailor properties and/or shapes depending upon applications [1]. Its performance is scaled with the square of the electric field applied [2]–[4]. Hence, the electromechanical performance metric of a DE is predominantly determined by its dielectric strength. For example, energy conversion capability of a DE is improved up to four times when its dielectric strength is doubled [5]. It is noted that three times increase in dielectric strength enable the maximum electrical actuation strain to increase from 200% to 1000% [6]. Also, recent studies showed that DEs have large deformation capability and therefore very large stretching takes place before its failure in all modes like equal biaxial, uniaxial, and unequal-biaxial.

Generally, dielectric strength of an elastomer is affected by several factors such as, thickness of the elastomer film [7]–[9], mechanical stretch state [10], stiffness of the elastomer [11], surrounding media [12], type of electrodes, electrode area and voltage ramp rate [13]. In the current study, we focus only on the stretch-dependent dielectric strength. Thickness is the parameter which affects the dielectric breakdown strength significantly. Electromechanical breakdown i.e. dielectric breakdown strength is due to the onset of electromechanical instability whereby a positive feedback between a thinning dielectric and an increasing field takes place. This will result in a rapid thinning of the dielectricmembrane without increasing the applied voltage. Such a rapid thinning leads dielectric breakdown[7], [8]. In the earlier works, DE membranes are pre-stretched and secured by rigid frames to avert electromechanical instabilities leading to premature failure [11]. Large voltage–induced actuation has been demonstrated on a pre-stretched DE membrane [14]. The stretch states of DEs are continuously changed during its operation as actuators and energy harvesters [15], [16]. Hence, stretch dependency of DEs is a crucial field to study in detail.

Many research groups measured dielectric strength by using solid electrodes which constrain the thinning of membrane due to voltage induced deformation [9], [17]–[20]. For example, Plante et al. [20] used compliant electrodes as well as solid electrodes. They observed that optical method underestimated the out of plane deformation at high actuation stretches. Hence, they used solid electrodes which constrain the voltage induced

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RESEARCH ARTICLE

Polymer COMPOSITES WILEY

Energy harvesting by piezoelectric polyvinylidene fluoride/zinc oxide/carbon nanotubes composite under cyclic uniaxial tensile deformation

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Abstract
In this study, polyvinylidene fluoride (PVDF)/zinc oxide (ZnO)/carbon nanotubes (CNT) nano-reinforced composites were fabricated by solution casting method. Addition of ZnO and CNTs nanoparticles enhances the electroactive polar β-phase of PVDF nanocomposites. Formation of β-phase in the composites were examined by Fourier transform infrared spectroscopy and X-ray diffraction analysis. Piezoelectric properties were investigated by applying uniaxial cyclic tensile deformation with the help of mechanical tensile tester device. The maximum generated voltage peak of 1.32 V was observed in the case of the nano-reinforced composite having 15% ZnO, with maximum current of 0.61 μA and power of 0.66 μW. The fabricated PVDF/ZnO/CNTs nano-reinforced composites can be a good candidate for human motion-based energy harvesting applications during walking, running and so forth in which uniaxial deformation occurs.

KEYWORDS
energy harvesting, nanocomposites, piezoelectric, uniaxial deformations, β-Phase

1 | INTRODUCTION

Energy is the most essential requirement for life and for all the processes that occur around us. Fossil fuels that is, coal, petroleum and natural gas are the main sources of energy for human civilization for a long

renewable energy resources, that is, greener energy, is trending.

Solar energy, tidal energy, wind energy, geothermal energy are some of the renewable energy sources which are being used for past few years at large scale.[4–7] Some of the other small scale energy harvesting systems, such

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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Numerical Analysis of Vertical Axis Wind Turbine with Different Profiles

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Abstract

Wind energy is considered to be the cleanest fuel. India is rich in natural resources; we have learned to harness them for our benefit and advancement. As a gauge of fuel demand, India's fuel consumption increased 6.5% year over year in 2023 to around 18.57 million tons, according to figures from the Petroleum Planning and Analysis Cell (PPAC). Even though it applies to all resources, we are currently focusing on harnessing wind energy. Wind turbines have been improved and researched to increase their efficiency since their inception. However, little progress was ever made on extracting wind energy lost at low wind speeds as they could not power a large commercial turbine. Vertical Axis Wind Turbines (VAWT), which typically perform better at low wind speeds. To address this issue and to increase the turbine's efficiency, we applied natural shapes and curves to the turbine design. We investigated its effects using numerical analysis, discovering that the method offers certain advantages in terms of fluid flow over the turbine body, such as having better flow over the body, a low number of vortex formations, and reduced drag effects while returning the blade to its original position.

Keywords: *Computational fluid Dynamics (CFD), Fuel, Low Wind Velocity Terrains, Vertical Axis Wind turbine, Turbine Design*

1.0 Introduction

Due to the rising cost of these fuels on the global market, using traditional fossil fuels is expensive. The cost of producing electricity from traditional power plants is rising due to the spiraling increase in fuel prices. The production being the most prevalent. The key benefits of VAWTs are their omni-direction, the ability to directly rotate a fixed load, and their low cost. Additionally, they are scalable, have minimal manufacture, installation, and maintenance costs, and produce little noise. However, due to their more complicated unsteady aerodynamics

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Greywater Treatment By Using Coconut Shell

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ABSTRACT

This project proposes a sustainable greywater filtration system for residential-scale water reuse. Recycled greywater can be used in toilet water, outdoor irrigation, car washing, and clothes washing, reducing the demand for potable water. Although pilot-scale systems have been demonstrated for greywater recycling, residential-scale applications remain unexplored, as treatment options on a residential scale are limited. Water being one of the largest resources for the everyday lifestyle, still currently the whole country is facing the scarcity of water. Though it is available in plenty butstill it is very less to use and take in application and practicality. To fulfill the major and minor and every requirements of the society there is a great need of saving the water and also the main thing to do is making the water to apply in the everyday lifestyle. The amount of waste water in the country is very large. So not much but at least treating the waste water can greatly help in helping with the current situation. Wastewater is any water that has been contaminated by human use and activities. Wastewater is used water from any combination of domestic, industrial, commercial or agricultural activities and any sewer inflow or sewer infiltration. Therefore, wastewater is a after product of domestic, industrial, commercial or agricultural activities and use. Also there is scarcity of water situation going on since ages in the entire country. Therefore there is a need to make into use the waste water by treating it by such means that another system should not get disturb and also those means should be affordable and easy to apply in practical work. The issue of greywater management – which is defined as all sources of domestic wastewater excluding toilet wastewater – is gaining more and more importance, especially in developing countries where improper wastewater management is one of most important causes for environmental pollution and fatal diseases. In recent years not only the threats of improper greywater management have been recognised; there is an increasing international recognition that greywater reuse, if properly done, has a great potential as alternative water source for purposes such as irrigation, toilet flushing and others. The present study research the recent developments in grey water treatment using coconut shell.

KEYWORDS- Greywater, Coconut Shell, Wastewater, BOD, COD, TSS, Infiltration, Domestic

and Mn found in grey water lies in the range of 0.2 to 5 mg/L (Inspection Report of STPs in Agra, 2015; The Environment (Protection) Rules, 1986).

Table 3.1: Percent Reduction in Physicochemical Parameters of Grey Water

Physicochemical Parameters	Grey Water Before Treatment	Grey Water After Treatment	Percent Reduction
BOD (mg/L)	148	36.5	75.3
COD (mg/L)	380	160.6	57.7
Ph	7.45	7.2	3.4
Turbidity (NTU)	190	67.10	64.68
Chloride Content (mg/L)	1200	537.4	55.2
Total Hardness (mg/L)	120	115	4.2
Total Solids (mg/L)	780	490	37.2

Uses and benefits of treated grey water:

- The treated water can be used for flushing purpose.
- Irrigation process can be done without any disturbance to the other bodies.
- To every other place wherever there is use of nonpotable uses.
- It reduces the freshwater extraction from the water sources.
- Less environment impact from septic tanks.
- Reduced chemical pollution from water treatment.
- Ground water recharge and reclamation of nutrients.

4. CONCLUSION

After the whole process i.e. after collecting the treated water from the grey water filter and testing its results from the various test taken it is concluded that the results taken before filtering and after filtering has differences and actually have more approximate value for the potable water. The water collected can be used further for many outdoor purposes and also can be very much beneficial to the other surrounding and the environment.

the facilities such as the geotechnical laboratory and advanced geotechnical laboratory to accomplish this study. The author also wishes to acknowledge cooperation given by laboratory technician from Faculty of Civil Engineering Swaminarayan Siddhanta Institute Of Technology, Nagpur, Maharashtra, to complete this study.

Conflict of interest statement

Authors declare that they do not have any conflict of interest.

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"CYBER-PHYSICAL SYSTEMS FOR RESILIENT SUPPLY CHAIN MANAGEMENT IN THE FACE OF DISRUPTIONS"

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Abstract

This research investigates the role of Cyber-Physical Systems (CPS) in enhancing supply chain resilience, particularly in the face of disruptions and uncertainties. The study presents a comprehensive examination of CPS adoption within supply chains, emphasizing its multifaceted contributions to resilience, efficiency, and adaptability. Key findings underscore the benefits of real-time data monitoring, predictive maintenance, and digital twins in optimizing supply chain operations. Furthermore, the research highlights the significance of CPS in promoting visibility, transparency, and customer-centric approaches. It discusses the economic advantages, rapid response capabilities, early disruption detection mechanisms, and sustainability implications associated with CPS integration. As dynamic capabilities that empower supply chains to absorb, adapt, and recover, CPS technologies are pivotal in navigating disruptions and aligning with evolving customer expectations. However, the study acknowledges challenges such as data security, scalability, and the importance of cross-functional collaboration. In conclusion, this research advocates for the holistic adoption of CPS technologies and emphasizes the need for ongoing exploration to ensure supply chain resilience and competitiveness in an ever-evolving global landscape.

Key Words: Cyber-Physical Systems (CPS), Supply Chain Resilience, Disruption Management, Industry 4.0, Digital Twins, Risk Management, Supply Chain Optimization, Predictive Maintenance, Real-time Data Monitoring

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MODERN SUPPLY CHAIN MANAGEMENT AND ITS ADVANTAGES FOR EFFICIENT WORKING IN INDUSTRIES

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Abstract:
In today's dynamic and fiercely competitive business environment, the role of technology in modern Supply Chain Management (SCM) has become increasingly indispensable. This paper delves into the transformative impact of cutting-edge technologies such as Artificial Intelligence (AI), Machine Learning (ML), Internet of Things (IoT), blockchain, and automation on SCM practices. Through a comprehensive analysis of academic literature and real-world case studies, we explore how these technologies have revolutionized traditional supply chain processes, empowering organizations to achieve heightened levels of efficiency, transparency, and responsiveness. We thoroughly examine key areas of technology-driven SCM, including demand forecasting, inventory optimization, real-time tracking, and collaboration among supply chain partners. Furthermore, this paper underscores the significance of technology adoption in SCM, emphasizing the strategic advantage it confers in adapting to market changes, mitigating risks, and enhancing customer experiences. We also discuss the future prospects of technology-driven SCM, presenting exciting possibilities for end-to-end supply chain visibility, predictive analytics, and sustainable practices. Overall, this paper underscores the critical role of technology in shaping the future of Supply Chain Management and its pivotal importance for organizations striving for excellence in today's rapidly evolving business landscape.

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"DESIGN AND TESTING OF LIGHTWEIGHT SANDWICH T-JOINT OF COMPOSITE MATERIAL USING FEA AND EXPERIMENTAL TECHNIQUE"

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Abstract

Presently a large amount of research is going on with the objective to strengthen the technological basis for the large scale application of fiber reinforced composite materials for naval vessels and structures. Fiber reinforced composites are widely used in naval ships and aerospace, ground transport, civil infrastructure because of their high strength and stiffness, low mass, excellent durability and ability to be formed into complex shape. Naval superstructure need to be designed with confidence on the basis of modelling and failure prediction. A typical T-joint used in naval ships. It consists of a horizontal base panel, a vertical leg panel and fillet and over laminates. The aim of this work is to investigate the behaviour of composite T-joints used in marine applications due to variation of different parameters.

Keywords: Composite material, Design, FEA, Testing of T-joint.

1. Introduction

Composite materials are used widely in many applications. They are made of two or more homogeneous materials to achieve better properties than the constituent materials. One of the most common advanced composite materials is Fibre Reinforced Plastics (FRP). In marine applications, FRP has been used to build many types of ships, including pleasure craft, ferries and naval mine-hunters or Mine-Counter-Measure-Vessels. The use of composite materials for military applications is desirable, especially because of some of the material characteristics which are absent in metal-hulled ships, such as lighter weight, corrosion resistance and design flexibility due to its anisotropic nature. Moreover, the non metal-hulled ships, such as composite materials have the capability to be a radar proof, which means that it allows the ships to go through the enemy zone undetected. It makes the composite materials even more attractive for military applications. One task is developing improved joint for naval ship super structure can be manufactured from fibre composite. One type of joint in such a super structure is a T-joint between sandwich panel. In the first phase of the project an existing design called base design T-joint has been tested and characterised. The base design T-joint consists of a PVC foam sandwich panels joined by filler forming a smooth transition from the T-panel to base panel, and over laminates with laminates of the fibre glass. This design aiming at T-joint, which is a lighter than the base design but having the same or higher strength.

1.1 Sandwich Panel:

Sandwich panels are a remarkable product because they can act as strong as a solid material, but weigh significantly less. The trend for "stronger-lighter" is becoming increasingly important in the transportation and

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Adsorption Study of Carbon Monoxide on Modified Metal and Non-metallic Surface Using Density Functional Theory: A Short Review Towards Functional Materials

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Abstract. Carbon Monoxide is an established pollutant with high indexed hazard potential for human being and environment and its omnipresence in indoor and outdoor air, has garnered specific research interest for real time detection of the same at trace level of existence. Extensive spectrum of research for development of Carbon Monoxide sensors are therefore being carried out and pursuit for efficient and smart materials constitute the core of such research efforts. The most common technique of sensing these gas molecules is to detect them with various adsorption materials, such as metal, semi-conductor metal oxides like MnO_2, MoS_2, and carbon-based materials, among others. Doping transition metal atoms in adsorbent materials has also been shown to be beneficial in the gas adsorption process. In order to have a predictive command over development of smart functional materials for detection of Carbon Monoxide, the Density Function Theory calculation is still a time-tested tool for analyzing the adsorption properties of pollutant molecules on various materials at the microscale levels to comprehend adsorptive reactions, adsorbents reactivity, and structure activity relationships, that can provide theoretical guidance for scientific experiments. This review presents the adsorption models and surface properties of CO gas molecules on metal and nonmetallic surfaces by Density Function Theory calculations in recent years. This review opens up the theoretical background for DFT based molecular adsorption studies and some of the recent reports of research pertinence.

Keywords: DFT · Carbon Monoxide · Functional Materials

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Full Length Article

Proposal of a generic constitutive model for deformation-dependent dielectric constant of dielectric elastomers

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ABSTRACT

Dielectric elastomers (DEs) are electroactive polymers that could be used as soft actuators, stretchable generators and sensors. Their performance is dependent on both their mechanical and dielectric properties. Particularly, the dielectric constant has been shown to be dependent on the state of mechanical stretch, which has to be comprehensively characterized across different modes of deformation and different classes of DEs. We conduct experiments to characterize the stretch-dependence of dielectric constant for three classes of elastomers: acrylic (VHB), silicone and natural rubber. In our characterization, we selected three distinct modes of mechanical deformation: equal-biaxial, unequal-biaxial and uniaxial. We reviewed the five most common stretch-dependent dielectric constant models and evaluated their fit with our experimental data which were based upon stretch-dependent dielectric constant of elastomers. Comparing all the model fittings, we find that, although the polarization-based lumped parameter model presents the best fit, both localized dipole relaxation and long chain polymer polarization were absent in the model. In view of the statistical long-chain dynamics in elastomers, we therefore propose a generic, semi-empirical inverse power-law relationship to generalize and standardize the characterization of stretch-dependence of dielectric constant along with log–log curve fitting. We hope to establish a consistent and general framework for dielectric characterization of dielectric elastomers.
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1. Introduction

Dielectric elastomers (DE) are the smart materials that are elastic and electro-active in nature. When a dielectric elastomer film is sandwiched between compliant electrodes and a voltage is applied, it is squeezed in the thickness direction due to electrostatic pressure, giving an electrically-induced areal expansion. Its compliant nature facilitates fast and large electric-field-induced actuation [1–3]. As such, it is synonymously termed "artificial muscles" and is commonly used to create soft robotic components [4,5]. The electrostatic pressure or Maxwell pressure is given by $\sigma = \varepsilon_0 \varepsilon \mathbf{E}^2$, where ε_0 is vacuum permittivity, ε is the relative permittivity or the dielectric constant of the material and E is the electric field applied across the thickness direction. Hence, the proper char-

limit) or when the degree of cross-linking of the long polymer chains is sparse, polymer chains could polarize easily under an electric field – the elastomer behaves like a polymer melt [6]. On the other hand, if the degree of crosslinking is significant and/or the deformation is large, then the dielectric constant becomes dependent upon the state of deformation [7–11]. According to Li et al. [10] a single molecular chain between two bonds consists of a backbone dipole moment and a side chain dipole moment; the overall dipole moment is hence a vector sum of the two. They observed that the dipoles of dielectric elastomers align due to the application of both the electric field and significant mechanical stress. They hence derived a model on the conditional polarization of elastomer due to stretching. In a stress-free condition, the dipole is free to align under an electric field and saturation occurs when

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Analysis of Stretch-Dependent Capacitance and Its Effects on Energy Conversion of a Donut-Shaped Dielectric Elastomer Generator

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***Abstract*— Dielectric elastomer generator (DEG) comprises of soft and stretchable capacitive transducer. The DEG experiences a change in capacitance and provides a voltage gain (G) with an applied mechanical excitation. This article interprets DEG as a machine that involves a cyclic change of finite-state transducer capacitances to transmit or modify energy. In this study, a relative analysis of capacitances associated with the DEG transducer is introduced and analyzed to improve the DEG performance. This article focuses on defining a relationship between the material stretch (λ) and finite-state capacitances associated with the DEG transducer. The estimation of stretch-imposed DEG capacitance under mechanical excitation is well investigated. Eventually, the analysis is experimentally validated with the developed mechanical prototype. For distinct transducer deformation, the associated capacitances are estimated with the capacitive extensometer method and the stretch (λ) is calculated. Moreover, for effective energy conversion, the finite state capacitance variation is maintained large enough to provide a relatively high voltage gain. Experimental results show that for 70% increase in capacitance difference at the DEG makes the specific energy increase from 3.5 to 11.5 μJ/g. This study could lead the DEG as an alternative power source for low-power electronic gadgets.**

***Index Terms*— Capacitance ratio, dielectric elastomer generator (DEG), energy conversion, finite state capacitances, specific energy, stretch.**

I. Introduction

PROVIDING complement to an auxiliary source is the major objective of an energy harvesting system. In this aspect, the understanding of the properties of energy harvesting materials and their transduction mechanisms is important to realize any energy harvesting system [1]. The energy conversion mechanisms such as inductive, capacitive, and piezoelectric are material dependent, i.e., the energy conversion efficiency depends on the properties of the corresponding material [1]–[3], [14], [29]. Among different potential materials, dielectric elastomer (DE) has become an emerging material for scavenging energy from ambient motion [1], [3]–[5], [30]. DE which belongs to the electroactive polymer group is relatively soft and highly stretchable. The DE membrane sandwiched with compliant electrodes acts as a DE generator (DEG) [6], [7], [11], [13]. Under the electrostatic energy conversion principle, DEG converts mechanical motion into electricity [7], [9]–[12]. Under the operational perspective analysis of the DEG, the capacitances associated with its transducer play a major role. Certainly, the stretch (λ) provides a remarkable impact on the capacitance of the DE materials [20], [21]. Therefore, for efficient energy conversion, an adaptable relation is desirable between stretch and the principle of transduction.

The DEG follows the principle of capacitive energy conversion where precharged DE membrane provides a capacitance difference due to the change in deformation state. To maintain the charge constant there is a voltage gain at the electrical terminals of the DEG transducer as the capacitance of the DE membrane decreases due to the release of mechanical excitation [4], [7], [11], [12]. The entire conversion operates in a cyclic process, i.e., the transducer operates on two cyclic states. With the applied mechanical excitation, the capacitive transducer associated with DEG moves between a higher capacitance state (C_H) and the lower capacitance state (C_L). Moreover, the physics related to DEG energy conversion depends on the implementation of either state of transducer capacitance. However, the DE membrane can be interpreted as a variable capacitor with a compliant electrode coating on either side of the DE-film.

The operation of DE as a generator is a reverse cyclic process as that of a DE actuator [6]–[9], [13]. Irrespective of generator and actuator, to ensure remarkable electromechanical stability; prestretching of a virgin DE sample is desirable [3]–[6], [18]. Suo [3] has extensively provided the fundamental of DEG and its related characterization. The focus is on material characterization, prestretching, and correspond-

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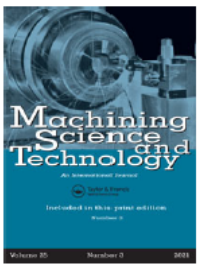

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Investigation on performance characteristics of micro-EDM dressing for the fabrication of micro-rod(s) on Ti-6Al-7Nb biomedical material

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Assessment of vibration-assisted micro-EDM dressing process-stability by monitoring and analyzing debris evacuation during Ti-6Al-7Nb machining

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ABSTRACT

Despite several benefits, the micro-EDM dressing has not achieved widespread acceptance in the micro-fabrication industries due to its low process-stability, which resulted in low material removal rate (*MRR*), surface finish, and dimensional accuracy. The vibration of the tool-plate showed significant improvements in this regard. Additionally, understanding the process-stability of micro-EDM dressing under vibration in terms of debris evacuation in real-time will surely help to utilize the process better, which lacks recognition to date. In this regard, the present work used a high-speed camera and image processing technique to monitor and analyze the debris evacuation while machining an emerging Ti-6Al-7Nb biomedical material. The process-stability was assessed by the percentage of normal and arcing pulses, and the average workpiece retraction height was monitored in real-time. Furthermore, the stability results were used to explain its performance measures, mainly *MRR*, area surface roughness (S_a) and dimensional accuracy. The experimental results showed an increased debris number (~ 3–38 times) and average velocity (~ 1.3–2.2 times) in the focused window under the tool-plate vibration compared to no vibration. The results also showed an increased percentage of normal pulses (~ 1.1 times) and a decreased average workpiece retraction height (~ 1.5 times) with an increased vibration amplitude from 0.65 (a_1) to 4.41 μm (a_5), which were also as per the debris evacuation results. However, despite having a higher average debris velocity, the higher vibration frequency didn't offer a superior inter-electrode gap condition, as verified through the stability results. The process's performance results under different vibration frequencies were also found as per the stability results.

1. Introduction

According to **Banu et al.** [1], niobium-based titanium alloy (Ti-6Al-7Nb) has gained enormous attention in the recent past for its application in the biomedical fields. **Fofonoff et al.** [2] revealed the requirement of smoothed high aspect-ratio arrayed circular metallic micro-rod(s) in biomedical applications such as brain-machine and neural interface, retina, and cochlear implants. According to **Lippmann J M** [3], circular-shaped micro-rod(s) causes minimum insertion pain and less tissue damage to the patient, unlike other shapes. In this regard, micro-EDM dressing has already shown immense potential to make arrayed micro-rods of any form irrespective of the metallic workpieces' hardness. There are also available a few processes such as LIGA, WEDM, Wire-EDG, block-EDG, and chemical etching, which can make such holes of the desired shape and size as the tool (cathode). A bulk workpiece (anode) is mounted on the spindle and fed to the tool at a controlled feed rate and gets eroded because of the generation of discrete sparks. The erosion thus results in arrayed protruded rods on the workpiece. Fig. 1 illustrates the working principle of micro-EDM dressing schematically.

Despite several advantages, micro-EDM dressing has not achieved widespread acceptance in micro-fabrication industries because of its low process-stability, which leads to low material removal rate (*MRR*), surface finish, and dimensional accuracy. This arises due to the narrow discharge gap (~3–5 μm) present in the process, which hinders debris' evacuation seriously. This situation becomes, even more, worsen in the absence of spindle rotation since imparting rotation to the spindle is not feasible when fabricating an arrayed micro-rods using this process. The

discharges which can be confirmed in the observations made in section 4.4.

Further, Fig. 25**(b)** depicts that the percentage deviation in diameter decreases with the increased vibration amplitude, irrespective of the % length of the micro-rod. As low as a deviation in diameter was found -1% at the tip and 30 % at the root at the highest vibration amplitude under consideration. The pulsating dielectric flow improved the evacuation efficiency which quickly flushes the accumulated debris present in the IEG along the length of the fabricated micro-rod, thus avoids secondary discharges that led to better dimensional accuracy.

Fig. 25**(c)** depicts that the percentage deviation in diameter increases with the increased vibration frequency, irrespective of the % length of the micro-rod. As low as a deviation in diameter was found -1% at the tip and 35 % at the root for the lowest vibration frequency under consideration. Since the piercing of more bubbles adheres large debris over their surfaces at higher vibration frequency, resulting in narrower IEG (refer to Figs. 5 and 17) which causes more gap contamination [20]. This again causes secondary discharges in the form of arc (refer to Fig. 18 **(b)**), which led to a higher dimensional inaccuracy in the fabricated micro-rods.

5. Conclusions

The present work attempted to assess the stability of the micro-EDM dressing process under different vibrations and no vibration by analyzing debris evacuation in real-time with the help of a high-speed camera and image processing technique while machining Ti-6Al-7Nb, an emerging biomedical material. The following conclusions can be inferred from the experimental results.

(1) This work shows that the evacuated debris' number and velocity under different vibrations and no vibration of the tool-plate could be successfully estimated in real-time using a high-speed camera and image processing technique. The results show that the pulsating dielectric flow due to the tool plate's vibration caused a maximum increase of debris number by ~ 38 times and its average velocity by ~ 2.2 times compared to no vibration of the tool-plate.

(2) The variation of the debris' number and velocity with respect to the vibration amplitude within the range under consideration showed a good agreement with the micro-EDM dressing process's stability and performance measures. However, the debris count and its velocity beyond 200 Hz of vibration frequency contradicted the same.

(3) With the increase in vibration amplitude from a_1 (0.65 μm) to a_5 (4.41 μm), due to the rise in $+\Delta P$ and the resulting plasma force, the process-stability parameters, namely % of normal pulse, increased up to ~7.16 %, and the average workpiece retraction height reduced by ~ 33 %. Due to this, its performance measures such as *MRR* increased by ~225 %, area surface roughness (S_a) reduced by ~3.2 % and the deviation in diameter improved by ~9% at the tip and ~5% at the root. This also led to an increase in the micro-rod length by ~ 159 % at the end of 2.5 h of machining.

(4) Despite an increased debris evacuation velocity, vibration frequency above 200 Hz didn't improve the process's stability and Due to this, the *MRR* decreased by ~ 48 %, area surface roughness (S_a) increased by ~1.3 % and the deviation in diameter deteriorated by ~8.5 % at the tip and ~3.5 % at the root. This also led to a decrease in the micro-rod length by ~ 50 % at the end of 2.5 h of machining.

Declaration of Competing Interest

The authors report no declarations of interest.

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Thermoelastic bending analysis of laminated plates subjected to linear and nonlinear thermal loads

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Abstract. The paper presents the analytical solutions for thick orthotropic laminated plates using trignometric shear deformation theory. The effects transverse shear and transverse normal strains are included with linear and nonlinear thermal loads. The displacement field of the theory includes the trigonometric functions in thickness coordinate of plate to account for these effects. The displacement field enforces to give the realistic variation of shear stresses across the thickness of plate and thus obviates the need of shear correction factor. The main novelty of the present study is the inclusion of thickness stretching effect in the theory. Another novelty is the application of nonlinear thermal profile consistent with the displacement field of the theory. The principle of virtual work is used to obtain the governing equations and boundary conditions. Simply supported laminated square plates are considered for numerical study to evaluate thermoelastic response. The results obtained by present theory with thickness stretching effect are compared with other refined theories disregarding this effect. It is observed that the results of present theory deviate significantly from the results of other higher order shear deformation theories for antisymmetric crossply laminated plates. The results of symmetric cross-ply laminated plates subjected to linear sinusoidal thermal load are in close agreement with those of exact theory, which validates the accuracy of present shear and normal deformation theory.

Keywords: orthotropic plates; principle of virtual work; shear correction factor; thermoelastic analysis

1. Introduction

Laminated composites with unidirectional fibers are widely used in aerospace, naval, automobile, sport, and civil engineering and electronics packaging industries due to their high

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Handling Federated Privacy preserving Crowdsourcing platform on blockchain

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ABSTRACT

With the rising unemployment and scarcity of jobs, crowdsourcing has emerged as one of the most innovative and helpful uses in recent years. The crowdsourcing technique leverages the power of collaboration to complete difficult and huge projects by breaking them down into simpler tasks. A huge number of workers can successfully perform the minor jobs. However, there is an ongoing issue that has arisen as a result of the installation of these services on the internet architecture. There is a lack of confidence and dependability transmitted by both the task publisher and the employees, resulting in a decline in the number of users on this new platform. There have also been a few techniques intended to reduce this impact, but none of them have been fully successful in reaching better efficiency. As a result, this research proposes an effective strategy for the objective of a trust-free crowdsourcing methodology. The AES encryption system and smart contract technology are combined with Pearson Correlation and Decision Tree on a distributed blockchain architecture in the described solution. According to the experimental results, the proposed approach successfully delivers the intended objective by effective and accurate deployment of AES and the Smart Contract methodologies.

Keyword: - *Advanced Encryption Standard, Blockchain Framework, Smart Contracts, Pearson Correlation and, Decision Tree.*

1. INTRODUCTION

Due to its tremendous efficiency crowdsourcing has progressively become an essential approach to manage complicated issues and finish huge projects by combining crowd power and machine learning. Large-scale translation, information collection, and even more advanced computer systems, such as picture annotation, are only a few examples. The crowdsourcing method is highly useful for finishing a tough work by enlisting the help of a large number of people to do little portions of the task at a time. As a result, the highly difficult work is broken down into a series of smaller activities that can be readily done by an average person. As a result, when crowdsourcing techniques were first presented, they acquired a lot of attention.

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EEG based emotion detection using fourth order spectral moment and deep learning

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Abstract

This paper proposes emotion detection using Electroencephalography (EEG) signal based on Linear Formulation of Differential Entropy (LF-D_fE) feature extractor and BiLSTM network classifier. LF-D_fE effectively detects nonlinearity and non-Gaussianity of the EEG signal. BiLSTM network captures long term dependency of the EEG signal and learns spatial information from different brain regions. Proposed model is used to discriminate positive, negative, and neutral emotions on SEED database, valence and arousal on DEAP database. To assess the proposed model subject contingent, noncontingent and inter-dependent (cross-session) experiments are performed on the SEED database. The average accuracy of emotion detection on SEED database for subject contingent approach is improved by 4.12 %, for noncontingent approach by 4.5 % and for inter-dependent approach it is improved by 1.3 %. To reconfirm the above findings, one more experiment is conducted for subject noncontingent approach on DEAP database. On DEAP database for subject noncontingent experiment average accuracy is improved by 7.04 %. Experimental results of the proposed feature extractor LF-D_fE with the BiLSTM network found to be improved over existing methods.

Wavelet based machine learning models for classification of human emotions using EEG signal

2022, Measurement: Sensors

Citation Excerpt :

...When triple emotional states are utilized to categorize, the precision outcome was 54%, and when two emotional states were being used to categorize, the correctness result was 74%. Vaishali M Joshi et al., [13] the Linear Formulation of Differential Entropy (LF-DfE) feature extractor and Bilinear Long Short-Term Memory (BiLSTM) network decoder were used to create a regime for recognizing emotions through Electroencephalogram signals. The suggested technique employed SEED database for distinguishing emotions into positive emotions, neutral emotions or negative emotions, using Database for emotion analysis using physiological signals (DEAP) to categories emotions using the valence and arousal scheme....

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Multi-modal emotion recognition using EEG and speech signals

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...The standard ELM model is shown in Fig. 6. MLP is a widely used artificial neural network and commonly applied in classification task [53,54]. We used MLP as a deep learning method to compare with ELM for EEG-based AER....

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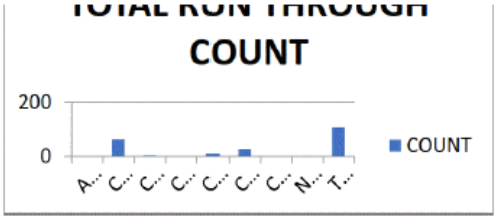

Graph: total run count with zero revenue.

CONCLUSION

The purpose of our investigation was to see if the GPS traffic data set obtained through the Map My Run web service is sufficient for inferring temporal usage patterns of street segments in relation to traffic flow.

Our findings demonstrate that such an analysis is doable, but only within certain parameters.

When compared to the GPS data set's permanent traffic counting stations, our findings provide a good ground truth for the proposed research.

We were able to stress a temporal analysis that allowed us to examine the internal city traffic and the incidence of congestion in detail.

We found clusters with distinct consumption trends over time. The visual examination of these clusters revealed that shopping and recreational activities, in particular, have a distinct temporal utilization pattern.

Demonstrated that temporal patterns cannot effectively discriminate between consecutive activities the use of access roads, for example, is intimately linked to the use of residential neighborhoods, where individual movements often begin and conclude.

Third, the clustering revealed that the weekend is the most distinctive time period for distinguishing usage patterns.

By tweaking our clustering process, we were able to identify groups with comparable temporal traffic distributions, and we interpreted the results using temporal and spatial background knowledge.

As a result, we were able to produce a unique and extensive analysis for the which we were able to clearly identify traffic patterns associated to specific road segments flow

We were able to connect and receive data from a major traffic route service and a digital map supplier

Article Details

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Study Project on Transforming Highways into Renewable Resources Case Study on Mumbai-Pune Expressway (20Km Talegaon to Kamshet)

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Abstract **:** The major goal of this study is to make use of naturally accessible resources such as wind, sunlight, and rainwater on highways and roads. These resources meet all of humanity's basic needs in a more efficient manner. Electricity can be generated by utilizing wind energy in an efficient manner to produce the maximum amount of electricity. In this approach, we can take advantage of moving automobiles on the highway. The vertical axis wind turbine will generate power by turning the wind velocity produced by the vehicle. Solar panels, which can be installed over wind turbines, play an important role in generating electricity. Road Rainwater harvesting is a relatively recent concept that allows people to use rainwater for various purposes rather than letting it to run off.

Keywords—(natural resources, Vertical Axis Wind Turbine VAWT, Solar Panels, Road Rain Water Harvesting)

I - INTRODUCTION

Energy has long been acknowledged as a critical factor in economic progress. The primary force in the cosmos is energy. Energy defines the biomes of the Earth and keeps life alive. All living things, from single-celled microbes to blue whales, are constantly consuming, using, and storing energy. As a result, renewable energy is required to meet the modern energy consumption demand. As a result, extracting energy from non-conventional sources, such as wind energy from vertical axis wind turbines (VAWT), solar energy from solar panels, and road rain water collection, is an essential part of energy production all over

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"Optimization and Characterization of Ni-B Coating of Using RSM Method"

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Abstract: *It is unique properties, the electroless method is used as an effective and important technique to create uniform coatings. Among the coatings that can be made by electroless process is Ni-B coating due to its excellent properties such as good corrosion resistance, high wear resistance, high hardness, favorable oxidation resistance. In this article, after introducing nickel-boron electroless coatings and examining the microstructure and wear rate, recent developments in strategies to improvement in corrosion resistance, tribological properties, and the use of nickel-boron electroless coatings as electrocatalysts. In this study operating parameters are optimized by using RSM method. operating parameters considered for the Reinforcement, temperature and frequency. This paper summarized, the parametric influence of Reinforcement, temperature and frequency on wear rate of Ni-B with ZrSi coating. Response surface methodology (RSM) is used for modelling and optimization. ANOVA has been carried out to identify importance of the operating parameters on the performance characteristics considered. Further the verification experiment has been carried out to confirm the performance of optimum parameters. The results from this study will be useful for selecting appropriate set of process parameters to Ni-B coating has been selected. The analysis of variance (ANOVA) has been used to determine effect of each parameter on wear rate so Finally, the confirmation test has been carried out to compare the predicted value of wear rate with the experimental value.*

Keywords: *Tribometer, RSM Method, Optimization, Wear rate*

I. INTRODUCTION

In any engineering part, first the surfaces are subjected to the frictional, thermal, mechanical, chemical as well as electrochemical interaction which results in damage to the components in the industry. This damage cannot be recovered if the tribological and corrosion phenomenon is not controlled properly. By the application of appropriate surface technology the damage can be prevented or at least delayed. So, surface coating technology is most efficiently used to increase hardness, wear resistance, corrosion resistance and resistance at high temperature without altering the properties of substrate. Modern researchers have adopted a new form of coating which is called composite coating. Normally the composite material includes different types based on matrix materials such as metal matrix composites, ceramic matrix composites, polymer matrix composites and carbon matrix composites. Among them metal matrix composite coating is popularly used in the industry for its versatileness

Coatings produced by chemical reduction method are increasingly used in technical applications. A great advantage of the coatings obtained with this method is the possibility to deposit them on elements with complicated shapes and made from various materials. Among the coatings obtained with the chemical reduction methods, the most common are nickel coatings, owing to their advantageous properties, like high hardness and resistance to friction-induced wear, as well as a resistance to corrosion. The properties of nickel coatings produced by chemical reduction method can be modified by adding during the plating process various chemical compounds as reducing agents. The reducing agent's type determines the chemical composition of the coating. An electroless nickel plating process in a bath containing sodium hypophosphite as reducing agent will produce a Ni-P alloy coating. The use of boranes will produce Ni-B alloy coatings

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International Journal of Mechanical Engineering

ENHANCEMENT OF SPEECH SIGNAL BY USING VARIABLE STEP SIZE NORMALIZED DIFFERENTIAL LMS (VSSNDLMS) ALGORITHM

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Abstract - Different adaptive filters, such as LMS and Normalized LMS are used to minimize the speech signal noise, in order to achieve steadiness. To increase the SNR of the method output through a faster convergence time, filter weights are varied according to the unique behavior. This research shows a new strategy based on the variable step size LMS (VSSLMS) to decrease the noise in distorted voice by utilizing LMS algorithm, which is the fundamental adaptive algorithm even though it has the major drawback of larger mean square error which enhances linearly along with required signal power. The Variable Step Size Normalized Differential LMS algorithm (VSSNDLMS) was implemented in the present paper to wipe out the noise in the speech. The outcomes reveal the existing VSSNDLMS algorithm which has reduced steady-state excess mean square error (MSE). It is also constantly progressing SNR over an extensive variety of SNR-inputs. In addition to this range, the projected technique provides additional stable presentation and improves convergence speed which can reduce steady state error. It also provides extremely minor error values between the weights of the filter and target channel.

Keywords — *LMS, Normalized Differential LMS, SNR improvement, Variable Step Size LMS, MSE, Adaptive Filter*

I. INTRODUCTION

Speech is usually noise-influenced. Acoustic noise elimination is the most significant cleaning applications for noise speakers with adaptive filters. In 1975, Widrow was regarded as the first to present the concept of adaptive filters [1]. The aim was to remove the filtered input noise from the loud, damaged voice. This approach controls the subtraction processes, without any previous knowledge of noise signals, by preventing the processes of noise amplification or voice attenuations.

In noise cancellation operation the major problems concerns with different signal works i.e., voice recognition, speakers' verification and speech recognition etc. due to background noise and other different noises. The various methods implemented to nullify noise produced by speech signal i.e., linear and non-linear filtering, adaptive cancellation of noise for variations. Speech enhancement assists to enhance the quality of voice signal by decreasing background noise. Intelligibility, clarity and happy plays a vital factor in the quality of speech [5-7]. Mainly speech consists of recognition, interpretation, coding and synthesis improves the basic method in the field of speech processing. Speaking signals are mutilate with short duration's noises i.e., an impulsive noise in the communications systems [8].

The above-mentioned interferences are exclusively disagreeable to listeners which should be wiped out speech signals which are intelligible. The maximum number of algorithms used for processing voice signals which are in integrated in their design which follow Gaussian distribution. Though the non-Gaussian probability is distinctive for noises viz. impulsive noise. The impulsive

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A NOVEL NOISE REDUCTION FRAMEWORK FOR SPEECH SIGNALS IN ADAPTIVE CHANNELS USING VARIABLE STEP SIZE NORMALIZED DIFFERENTIAL LMS (VSSNDLMS) ALGORITHM

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Abstract – Human communication is mostly based on speech. This technology is used in variety of ways, including human-machine communication, technical equipment, and even virtual support or search engines. This kind of communication is often carried out using a device that is sensitive to background noise. Voice or audio signals may be negatively affected by noise that is accidentally inserted into the communication route or medium. The quality of the voice signal may be drastically diminished as it travels from transmission to reception undergoes signal conversations at both ends. The Variable Step Size Normalized Differential Least Mean Square (VSSNDLMS) Algorithm is used in this study to present a novel framework for noise reduction in adaptive channels. The value of alpha parameter is changed to reduce background noise in speech communications.

Keywords—Adaptive channels, noise reduction, LMS, Variable Step Size LMS, Variable Step Size Normalized Differential LMS, SNR, MSE.

I. INTRODUCTION

Noise and distortion in hearing aids and other audio devices degrade speech quality. Speech based systems such as speech recognition, speaker identification and pathological voice analysis may suffer performance degradation during operation due to acoustic incompatibilities between training and operational situations. In speech-based systems, nonlinear distortion and background noise are the most common types of degradation. For a deteriorated speech signal, the following terms may be used to characterise additive noise reverberation and nonlinear distortion.

$$y_n(t) = S_n(k) + r(t) \quad (1)$$

$$y_r(t) = S_n(k) * h(t) \quad (2)$$

$$y_o(t) = \Psi(S_n(k)) \quad (3)$$

where t represents the indicator index (t) , the microphone's output signal $S_n(k)$ is used to make clear voice recordings, while the other sounds in the signal chain include an extra sound r(t),Ψ illustrates an additional function (nonlinear), the room's impulse response h(t), and the signal processing operation y.

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ANC BASED ON VARIABLE STEP SIZE NORMALIZED DIFFERENTIAL LMS ALGORITHM

G. Kumar, Dr. S. M. Ramesh • Published 2021 • Engineering, Computer Science

TLDR The results show that the proposed VSSNDLMS algorithm is superior, with much lower steadystate excess mean square error than the current LMS algorithm, in filtering speech sounds in the adaptive noise cancellation (ANC) problem. Expand

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Design of Advance Constructed Wetland to Purify Domestic Wastewater by Using Activated Carbon

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ABSTRACT

Constructed wetlands (CWs) are affordable and reliable green technologies for the treatment of various types of wastewater. Compared to conventional treatment systems, CWs offer an environmentally friendly approach, are low cost, have fewer operational and maintenance requirements, and have a high potential for being applied in developing countries, particularly in small rural communities. However, the sustainable management and successful application of these systems remain a challenge. Therefore, after briefly providing basic information on wetlands and summarizing the classification and use of current CWs, this study aims to provide and inspire sustainable solutions for the performance and application of CWs by giving a comprehensive review of CWs' application and the recent development of their sustainable design, operation, and optimization for wastewater treatment.Activated carbon has been there with us for centuries. It has wide applications in various industries e.g. in the water-treatment, dye, sugar refining, among others. Constructed wetlands for wastewater treatment have substantially developed in the last decades. As an eco-friendly treatment process, constructed wetlands may enable the effective, economical, and ecological treatment of agricultural, industrial, and municipal wastewater. The present study the recent developments in wetland technology for wastewater treatment from articles published from 2012 to 2022. The papers were searched from Web of Science using the key words constructed wetland and wastewater treatment. Up to 10 articles were selected and a table describes the recent enhancements in wetland treatment technology. Some articles presented notable results, with higher pollutant removal rates or related to some important factors in removal processes. The major enhancement methods for nitrogen, BOD, and COD reduction are hybrid water flow wetland designs and the combination of porous substrates with conventional gravel. Organic

Conflict of interest statement

Authors declare that they do not have any conflict of interest.

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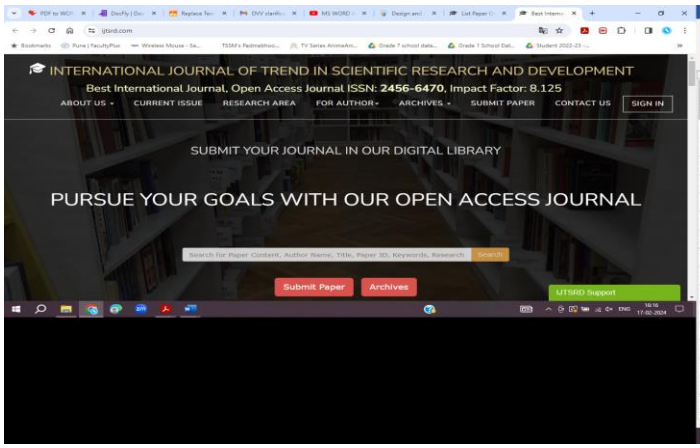
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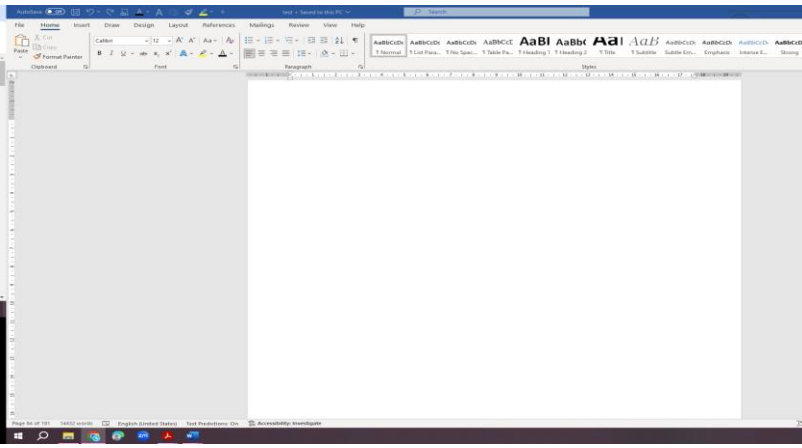

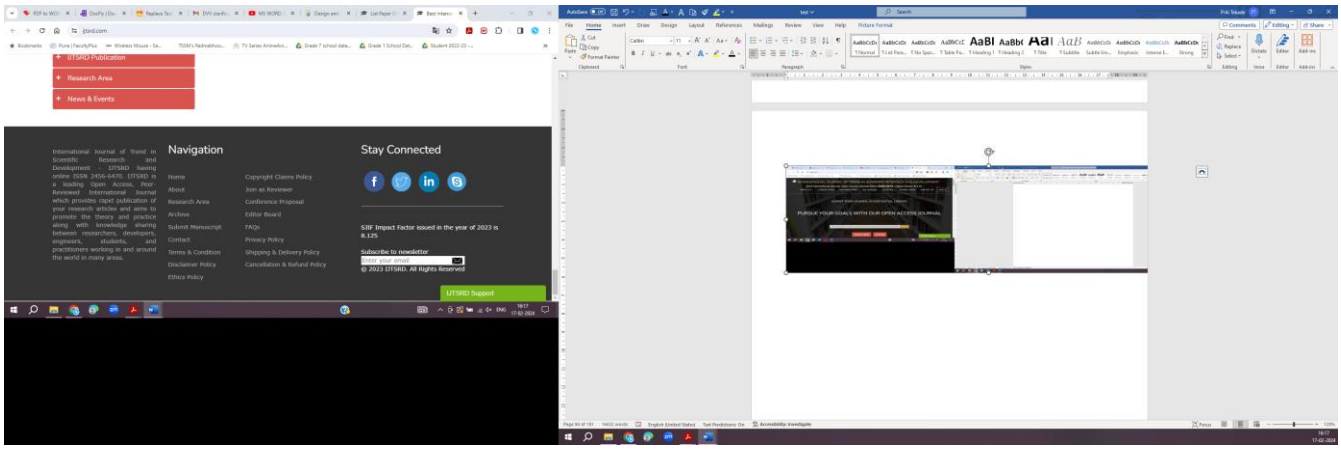
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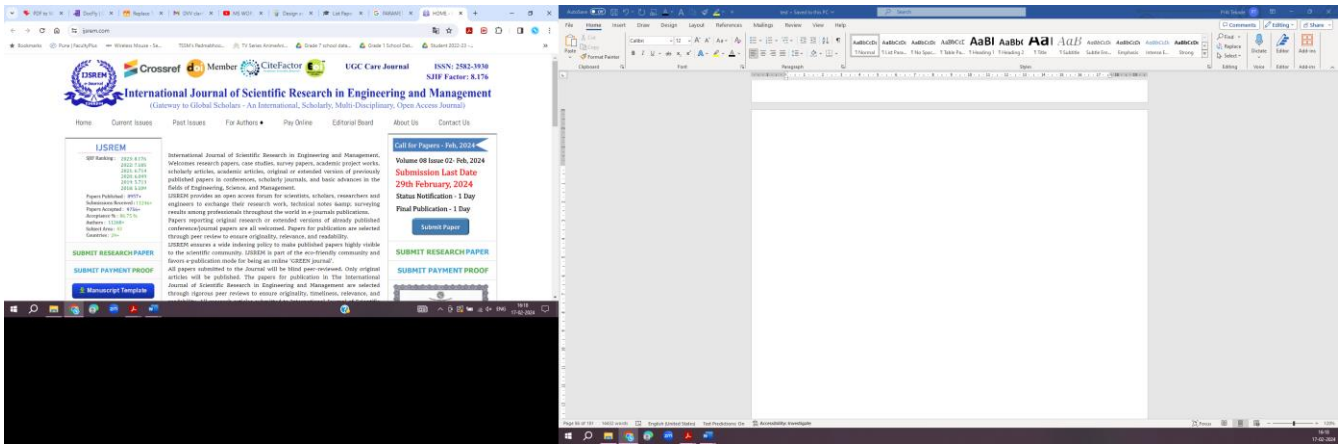
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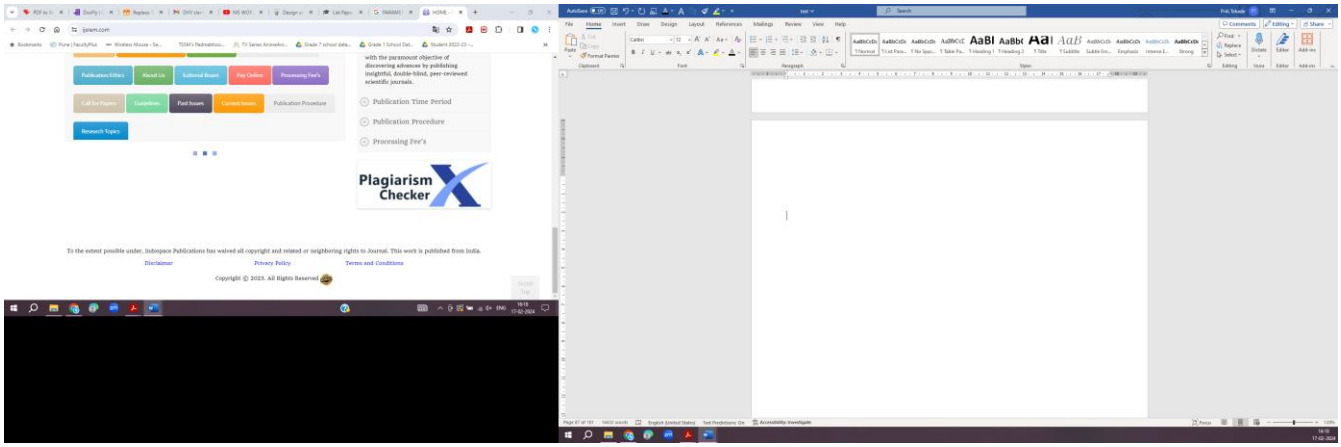
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IDEA: Intellect database for emotion analysis using EEG signal

Vaishali M. Joshi , Rajesh B. Ghongade

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Abstract

Emotion recognition using Electroencephalography (EEG) is a convenient and reliable technique. EEG based emotion detection study can find its application in various fields such as defense, aerospace, medical, and many more. This analysis helps to understand the emotional state of mind. There are two approaches to study EEG analysis known as subject dependent and independent. In this paper, Modified Differential Entropy (MD-DE) feature extractor is proposed to detect nonlinearity and non-Gaussianity of the EEG signal. The paper adopts both approaches by conducting an EEG analysis on own generated database named as 'IDEA- Intellect Database for Emotion Analysis' on 14 subjects. In this work, bidirectional long short-term memory (BiLSTM) network and multilayer perceptron (MLP) network is used to classify emotional state of mind of the subjects. On the 'IDEA' database, subject dependent average accuracy achieved is in the order of 98.5% and for subject independent, 88.57%. To reaffirm the improvement in accuracy level, a new approach of Modified Differential Entropy and BiLSTM network is applied on the openly available SEED and DEAP database as well. This experiment established that the average accuracy of emotion detection using MD-DE and BiLSTM network is better than the established methods.

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...Given that the complexity of bioelectrical signals, the noise interference caused by the under-optimization of acquisition equipment in the process of signal acquisition, the difference between subjects caused by the unreasonable setting of acquisition scenes cannot be minimized, and the bottleneck in the research of single-mode electrophysiological signals, this study summarizes the research status on different acquisition equipment (excluding noise interference) and acquisition scene settings of bioelectrical signals (excluding the influence of subjects themselves), as well as the multimodal fusion of medical signals, and discusses the multimodal bioelectrical signal fusion methods, fusion forms, fusion rules, fusion assessment and challenges and new directions in multi-modal fusion issues. Multi-modal biological signals, composed of multiple complex physiological changes, different psychological states, and behavioral characteristics, have become a pivotal reference in the research fields of mental illness [18–21], identity authentication [22–24], cognitive behavior [25,26] and other fields. In a narrow sense, the research of multi-modal bioelectrical signals involves the construction of acquisition devices, or the use of multiple single devices to collect signals of different modes, such as the EEG caps are used to collect EEG signals (including EOG) in the cerebral cortex; or a hybrid acquisition interface, such as a hybrid brain-computer interface, can be used to achieve information fusion and logic sharing....

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PrimePatNet87: Prime pattern and tunable q-factor wavelet transform techniques for automated accurate EEG emotion recognition

2021, Computers in Biology and Medicine

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Optimal Number of Electrode Selection for EEG Based Emotion Recognition using Linear Formulation of Differential Entropy

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Anxiety, nervousness and stress are daily challenges for mankind. These challenges are very severe specifically for students of the age group between years 14 to 25. Therefore it very important to develop the simplest, low cost, accurate and handy process which will be helpful for the society to gauge the anxiety levels and take necessary corrective actions to avoid health and psychological issues. It is of extreme importance to have regular checks on change in behavior and to ensure correct emotion analysis and take the corrective action. Article elaborates unique feature extraction method called as "linear formulation of differential entropy". With this method we have significantly reduced number of (Electroencephalography) EEG channels for emotion detection. This work has discovered new approach in neuroscience. It's proved that, single-channel EEG contains sufficient information for emotion recognition. The performance of the newly proposed technique is based on the "Database for Emotion Analysis using Physiological Signals" (DEAP) benchmark database using single channel FP1, prefrontal channel [FP1, AF3, FP2, AF4], and all 32 channel. Bidirectional long short term memory (BiLSTM) is used as classifier. The performance shows that, accuracy achieved using proposed method of single channel (FP1) is almost equivalent to the accuracy of 32 channels.

Keywords: Bidirectional Long Short Term Memory; Electroencephalography; Linear Formulation of Differential Entropy.

Day today challenges, success, failures, personal and professional relationship has huge impact on emotions. Little deviations from routines activities make either positive or negative impact on human mind set. Such deviations lead to generate positive, negative or neutral object for its own behavioural development. Such support is extremely useful to handle pressure due to fears competition and pressure situations. Scientific research work on this subject is helpful for analysing mental health of human.

In this research work portable and

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Deep BiLSTM neural network model for emotion detection using cross-dataset approach

Vaishali M. Joshi [a b], Rajesh B. Ghongade [a], Aditi M. Joshi [c], Rushikesh V. Kulkarni [c]

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Abstract

The purpose of this research is to use a cross-dataset approach to construct an EEG-based emotion recognition system. So far, numerous modeling strategies for emotion recognition have been revealed using the same dataset and subject-dependent and independent criteria. We propose EEG-based cross-dataset emotion classification in this study, where the datasets for training and testing are completely distinct. The research is carried out using two benchmark datasets, DEAP and SEED, as well as our own IDEA dataset. The three datasets differ in a variety of technical factors, including electroencephalography (EEG) devices, stimuli, methodology, subject, country, culture, and so on. Multilayer perceptron (MLP), support vector machine (SVM), k-nearest neighbors (k-NN), and deep RNNs model based on bidirectional long short-term memory (BiLSTM) network were trained in this study using features namely PSD, Hjorth parameters, DE, and LF-DE. When the DEAP dataset is used to train the model and the SEED dataset is used to test it, the recognition accuracy improves by 8.2 %, and when the model is the SEED dataset-trained and the DEAP dataset-tested, the recognition accuracy improves by 1.5 % when compared to the previous result. It has been revealed that LF-DE with BiLSTM outperforms other features and classifiers for the same input data. A deep neural network-BiLSTM gives deep features from the lowest level to the highest level from large datasets. The results of the experiments reveal that the optimization of deep neural network parameters can improve the performance of the emotion recognition system to a positive extent.

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Biomed. Signal Process. Control (2021)

L. Wang *et al.*
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Emotion Detection with Single Channel EEG Signal using Deep Learning Algorithm

Vaishali M. Joshi, Rajesh B.Ghongade

Abstract: Today's young generation is tormented by anxiety and stress. A past study shows that, anxiety and stress negatively impact mental and physical health, which ultimately ends up in loss of confidence, self-esteem, and negative performance. This work set guidelines for a replacement approach in neuroscience that only single-channel EEG data has sufficient information for emotion recognition. In this paper, the performance of system is evaluated using subject independent test on the SEED benchmark database using deep learning algorithm namely a bidirectional long short term memory (BiLSTM) classifier. The performance shows that results of single-channel FP1, the combined band (theta, alpha, beta, and gamma) are similar to 62 channels the best accuracy of the beta band. Result obtained for single channel (FP1) using differential entropy (DE) for all band is 74.91% as that of the highest accuracy of the beta band for 62 channels Yang Li, W. Zheng, 2019 74.85%.

Keywords: Electroencephalography (EEG), Differential Entropy (DE), single channel, BiLSTM

I. INTRODUCTION

Emotion plays a major role within the day to day life. To figure with real potential, positive emotions are a requirement. Positive emotions like happiness, joy, love, pride, pleasure have an on the spot impact on work performance. Negative emotions impact decision-making ability focused approach and health. Negative emotions like fear, anger, terror, sadness, and disgust harm personal health, and cause family and professional challenges [1, 2]. This paper focuses on stress and anxiety detection supported emotion recognition by using single-channel (FP1). While engaged on this, two significant challenges are faced. The primary is to extract features from EEG signals, and also the second is to construct an accurate predictive model for emotion recognition. Generally, EEG features is extracted in time, frequency, and time-frequency domain.

In the past few years, researchers are targeting investigating the precise frequency bands and channels for EEG-based emotion recognition using different features and classification methods. Wei-Long Zheng and Lu [3] described a band searching method to make a decision on a definite band for emotion detection, and their results showed that the gamma band is true for EEG-based emotion detection.

Tengfei Song [4] developed a multi-modal physiological emotion database, which collects four physiological signals, i.e., electroencephalogram, galvanic skin response, respiration, and electrocardiogram. He conducted tests using features viz FFT, PSD, and Hjorth parameters and classifiers viz support vector machine, k-Nearest Neighbor, and attention-long memory. Tengfei Song [5] proposed a multichannel EEG emotion recognition method enthusiastic to a dynamical graph convolutional neural network (DGCNN). Zheng [6] proposed (DBNs) deep belief networks construct EEG-based emotion, recognition models. Ruo-Nan Duan [7] used EEG features, namely differential entropy (DE), Differential asymmetry (DASM), and rational asymmetry (RASM) results were compared with the quality frequency-domain feature. Results prove that DE is more suited to emotion detection. Yang Li [8] introduced R2G-STNN, which consists of temporal and spatial neural network models with regional to global hierarchical feature learning process to imbibe discriminative spatial-temporal EEG features. He adapted BiLSTM network to seek out the spatial features. Hjorth parameters are widely used for the time-frequency analysis of nonstationary signals [9]. Various researchers have proposed many EEG based emotion recognition methods within the past few years. However, major issues like extraction of sturdy features and its classification from the EEG signal always remained a challenge. To pander to this issue, deep learning processes have emerged within the machine learning community, which has created a high impact on signal and processing since 2006. Many deep architecture [10, 11] models are projected, like convolution neural networks and deep belief networks. Deep learning architecture models achieved outstanding

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Green Solid Waste Management | *Original Article*

Uday Kumar Phatak, Er. Omkar Lawate, Er. Sachin Biradar, Er. Sangharakshit Ingle, Er. Namrata Varam, in Journal of Advances in Science and Technology* | *Science & Technology*

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ABSTRACT:

Solid Waste Management refers to the process of minimizing the volume of solid waste generated, recycling unwanted supplies, collecting solid waste, handling hazardous solid waste, and ultimate discarding of solid waste. We intend to evaluate the key MSWM criteria while also give a complete analysis of Waste generation rates, characterization, collection, and treatment options in India in this study. MSWM's current situation in Indian states and major cities is also discussed. The study indicates that in developing countries like India, the installation of decentralised solid waste processing units in metropolitan citiestowns and the development of the formal recycling industrial sector are critical. Whether domestic, industrial, or other wastes are of higher or lower values, they should be regenerated. In this work, we aim to evaluate the primary MSWM criteria, as well as provide a full analysis of MSW creation, characterization, collection, and treatment alternatives in India.

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Design and Development of control strategy for stepper motor head lamp leveling device used in automobile.

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Abstract: Automotive manufacturer always depends on new technologies for vehicular head lamps. The data shows occurrence of road accidents at night is disproportionately high in numbers & severity compared to day time traffic due to lesser visibility and more glare. One of the reasons is improper adjustment and in-correct usage of manual head lamp leveling device for the passing beam and also usage of main beams in un-conditional situation (approaching vehicles, during over taking, in city limit etc) as compared to automatic leveling devices. However, the usage of automatic leveling devices is not possible in mid and small segment vehicles due to technology limitations, higher cost etc. Hence, developed a control strategy for automatic load detection and control of head lamp passing beam for the existing manual headlamp leveling device by replacing stepper motor. Comprehensive experimental investigations have been carried out and validated as per the legal requirements. This study will provide a platform for auto industries / law maker / safety committees to choose a technology which shows better performance and cheaper. With this technology, India further saves the lives from night accidents.

Keywords: *AUTOMOTIVE, ACCIDENTS, HEAD LAMPS, HEADLAMP LEVELING DEVICES, STEPPER MOTOR*

1. INTRODUCTION

Automotive manufacturer always depends on new technologies for vehicular front lighting systems. The data shows occurrence of road accidents at night is disproportionately high in numbers & severity compared to day time traffic due to lesser visibility and more glare[1.2,3,4]. Even though Govt. of India made mandatory for the fitment of certified headlamps, however in India one of the major problem for the accidents during night is glare due to improper adjustment and in-correct usage of manual head lamp leveling device for the passing beam and also usage of main beams in un-conditional situation (approaching vehicles, during over taking, in city limit etc.)[3,4,5]. The Fig. 1 demonstrates the head lamp beam movement due to different loading conditions.

There are two types of head lamp leveling systems viz; manual and automatic head lamp leveling systems[6-12]. The manual headlamp leveling system is controlled by the driver with a switch and having various positions 0-4 or 0-3 range. These leveling systems can take care of loading effect on vehicle where the manual switch is placed near the driver and typical manual switch is as shown in Fig. 2. Manual headlight leveling device provides adjustment of headlight passing beam alignment according to the occupation of the occupants and loads. However, manual switch operation is purely based on driver, sometimes drive may operate or the manual adjustment switch can be manipulated, as necessary, to achieve a desired relationship between headlight alignment and his visibility requirements without understanding the effect on approaching vehicle driver performance[5].

Fig. 18. Percentage of deviation of beam inclination from the initial reference value for the automatic stepper motor headlamp

8. Conclusion

Experiments were conducted for three types of head lamp levelling devices to control the passing beam movement in the vehicle. Which includes; with and without operation of manual head lamp leveling switch and stepper motor with new developed control strategy for automatic levelling devices. Results shows that, the developed control strategy in conjunction with occupant and boot load detecting mechanism and auto stepper motor gives better performance in the order of 63% close to the initial aiming than manual leveling device. This 63% upward movement of passing beam will help for better visibility during night driving and developed control strategy works as an automatic leveling device.

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AUTOMATIC -DRIVING CARS USING AI AND MACHINE LEARNING

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ABSTRACT

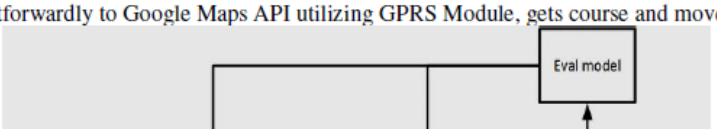
Our Research "Automatic -driving cars using AI and machine Learning" is a advanced period, the vehicles are engaged to be robotized to give human driver loosened up driving. In the field of car different perspectives have been viewed as which makes a vehicle mechanized. Google, the greatest organization has begun dealing with oneself driving vehicles starting around 2022 yet growing new changes to give an unheard of level to the mechanized vehicles. In this paper we have zeroed in on two uses of a mechanized vehicle, one in which two vehicles have same objective and one knows the course, where other don't. The accompanying vehicle will follow the objective (for example Front) vehicle naturally. The other application is computerized driving during the weighty gridlock, thus loosening up driver from ceaselessly pushing brake, gas pedal or grip. The thought depicted in this paper has been taken from the Google vehicle, characterizing the one perspective here viable is making the objective dynamic. This should be possible by a vehicle naturally following the objective of another vehicle. Since taking shrewd choices in the rush hour gridlock is likewise an issue for the mechanized vehicle so this viewpoint has been additionally getting looked at in this paper.

Keywords: Automatic, -Driving, Cars, AI, Machine Learning, Accompanying, Vehicle, Gridlock, Mechanized Vehicle.

1. INTRODUCTION

We have zeroed in on two uses of an Automated Vehicles here and planned a model vehicle for that. The one significant issue is during weighty traffic a driver needs to persistently push brake, gas pedal and hold to gradually move to objective. We have proposed an answer for loosen up the driver in that particular situation by settling on vehicle savvy to the point of going with decisions naturally and move by avoiding vehicles and deterrents around. The subsequent issue is when two vehicles have a similar objective yet one of the drivers doesn't have the foggiest idea about its course.

The driver can cause his vehicle to follow the front vehicle on the off chance that they are known and share their area to arrive at a similar objective. A three-wheeled Mobile Robot is utilized for research is given. The Mobile Robot comprises of various sensors, which assists it with speaking with Google Maps API (Application Program Interface) and causes it to decide impediments to easily follow the course and move. The Mobile Robot associates straightforwardly to Google Maps API utilizing GPRS Module, gets course and moves that way.



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HEADLAMP LEVELING DEVICES AND ITS EFFECT ON NIGHT SAFETY IN INDIA- A SURVEY

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Abstract

The automotive manufacturer always depends on new technologies for vehicular headlamps. The data shows the occurrence of road accidents at night is disproportionately high in numbers & severity compared to day time traffic accidents occurred at straight roads and head-on collisions. The reason may be due to lesser visibility and more glare in the straight driving mode. One of the reasons is the improper adjustment and in-correct usage of manual headlamp leveling device for the passing beam and also usage of main beams in un-conditional situations (approaching vehicles, during overtaking, in city limit, etc) as compared to automatic leveling devices. The survey shows that in India the usage of manual headlamp leveling devices is minimal or not aware of the system. At the same time, the usage of automatic leveling devices is not possible in mid and small segment vehicles due to technology limitations, higher cost, etc. To overcome these problems, the control strategy is developed for automatic load detection and control of the headlamp passing beam for the existing manual headlamp leveling device. Comprehensive experimental investigations have been carried out and validated as per the legal requirements. This study will provide a platform for auto industries/lawmaker/safety committees to choose a technology which shows better performance and cheap. With this technology, India further saves the lives from night accidents.

Keywords: Automotive, accidents, headlamps, headlamp leveling devices.

1. INTRODUCTION

The motor vehicle industry is one of the major pioneer activities for social and economic progress of any country. The automotive manufacturer always depends on new technologies for critical vehicular safety components and one of the important safety components is front lighting systems [1, 2]. In India, a total of 4,64,910 road accidents have been reported by States and Union Territories (UTs) in the calendar year 2017, claiming 1,47,913 lives and causing injuries to 4,70,975 persons [3, 4]. Table 1 shows Road accidents, fatalities and injuries, and Accident severity for the last 10 years.

Table 2 shows the number of accidents by the time interval of the day 2016 and 2017. This would translate, on average, into 1317 accidents and 413 accident deaths taking place on Indian roads every day; or 55 accidents and 17 deaths every hour. The occurrence of road accidents is observed to be higher during the night when visibility is at its lowest compared to the daytime. The two factors which affect visibilities are namely; insufficient illumination and glare caused by the oncoming traffic. Road accident at night is disproportionately high in number and severity, compared to day time driving traffic. It also shows about 40 % accident occurs during the night whereas around 60 % at day time. The statistics show that 40% of all road accidents take place at night when only 15% of the total traffic is plying. This shows the importance of the vehicle lighting system.

Table 1: Road accident statistics

Year	Number of Accidents		Number of Persons		Accident Severity*
	Total	Fatal	Killed	Injured	
2008	4,84,704	1,06,591 (22.0)	119,860	523,193	24.7
2009	4,86,384	1,10,993 (22.8)	125,660	515,458	25.8
2010	4,99,628	1,19,558 (23.9)	134,513	527,512	26.9
2011	4,97,686	1,21,618 (24.4)	1,42,485	5,11,394	28.6
2012	4,90,383	1,23,093 (25.1)	1,38,258	5,09,667	28.2

In Table 6, f = Degree of freedom, S= Sum of squares, V = Values of variance, F = F- Ratio, p (%) = Percentage contribution

This result shows that the rotational speed contributes the most by 99.95% and this is followed by cooling time by 0.0138% and oven temperature 0.00169%. This proves that rotational speed is the most significant parameter contributes to improve tensile strength in the process while cooling time and oven temperature only have very small effects less than 1% towards the tensile strength.

4. CONCLUSION

By using ANOVA and Taguchi methods, we obtained the result of optimum conditions. The influence of all factors has been identified. For improving quality, as per our study rotational speed is found to be the most significant factor which contributes 99.95% followed by cooling time by 0.0138% and oven temperature 0.00169%. The results show that, for LDPE water tank 'TL Blue 2000' the best combination of processing parameters in terms of tensile strength are 20 mm/ min rotational speed, 14 minutes for cooling time and 320°C oven temperature. Study concludes that these key factors are helping engineers in determining optimum process conditions for producing better quality product in rotomolding process parameters.

Conflict of Interest: No conflict of interest.

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Colour Coded Plant Health Monitoring System and Pesticide Spraying Mechanism

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ABSTRACT: **In order to satisfy the food requirements of the growing population and rapid industrialization, modernization of agriculture is inescapable. Automations enable's the conservation of inputs through precision, in metering and ensuring better distribution and reducing quantity needed for better response and this helps in prevention of losses and wastage of inputs applied to it. New automations or mechanism are built every day in order to develop a new era of modernization, keeping in mind we are developing automatic fertilizer sprayer machine which will reduce the manpower and production through higher productivity.Sprayer machines, In our country farming is completed in a traditional way. Due to the weight of sprayer farmers are suffering from several problems like back pain fatigue problems. So, to beat this problem we introduced this machine which can be beneficial for spraying pesticides within the farm over the saplings. This project helps farmers in delivering the correct amount of pesticides fluid over each sapling or crops. The sprayer is placed on the chassis and as per requirement it'll spray pesticides.**

Keywords: **Automation, Correct amount, Pesticides, Robot, Sprayer machines.**

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INTRODUCTION

India is agricultural nation and whose monetary balance is primarily based on farming. Development in farming will increase economic level of United States of America. In India farmers ought to face masses of problem due to ineffective time-consuming farming techniques, loss of labours which in the end will increase the price of farming. This mission is ready to plant seeds and maintains proper distance between seeds, spacing among two rows and planting seeds at right depth of soil with suitable soil compaction. As type of seeds changes shape and length additionally adjustments which calls for changing certain parameters like distance among two rows and seeds as well as intensity of the seed plantation? The principle intention is to supply fee effective device in order to reduce fee in addition to time of plantation and enhances ordinary productivity. Conventional way of farming based totally on consideration of seed to seed distance stage of seed plantation which is fairly useless, time consuming and besides of this it's require masses of efforts Farmers are going through one extra serious problem because of one of a kind dangerous pests and bugs. Farmers use conventional way of pesticide spraying by using carrying the heavy pump on them again during the sector which requires masses of efforts and time. Researchers have provided a higher velocity of operation and appropriate Seed Sowing potential for new advanced

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INVESTIGATION OF DYNAMIC CHARACTERISTICS OF 2-WHEELER SUSPENSION USING PNEUMATIC EXCITATION

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Abstract*— *A system of mechanical linkages, springs, damper that is used to connect the wheels to the chassis is known as suspension system. It has usually done two works- controlling the vehicle's handling and braking for safety and keeping the passengers comfortable from bumps, vibrations. There are many types of shock absorbers available in market /industry different kinds of techniques are there to reduce shocking effect on running vehicles and to make a ride comfortable. In present research design and development of test set-up of shock- absorber with optimized design of spring is to be performed. Design of three different spring of dimension and experimental setup in is designed in CATIA software. To obtain optimized design of spring with damper in ANSYS software to calculate elastic force and elongation in ANSYS. Modal analysis of experimental setup with optimized spring with damper to determine natural frequency and mode shape using ANSYS software. Experimental testing of setup by FFT technique and acceleration value using impact hammer test and pneumatic excitation.

Keyword – Spring damper experimental setup, FFT

I. INTRODUCTION

A Mechanical framework made by numerous parts which are having movement and vibration. Here and there movements and vibrations can be valuable however inordinate vibration makes distress individuals, damage to machines and structures and wear of machine parts, for example, course and apparatuses. The drivers of vehicles during are presented to vehicle. As a significant gadget utilized in suspension frameworks of current vehicles, the shock absorber is mounted between auto scaffold and casing for damping the vibration brought about by lopsided street to direct incautious load. In this manner, the damping execution of the shock absorber is of significance to running perfection, working unfaltering quality and through limit of vehicles. With requesting necessities for security and solace of driving vehicle, examine on the shock absorber have increased increasingly more consideration, including its high recurrence execution, tests for damping trademark, temperature control, commotion issue, and so forth.

Shoukun Wang et al. [1] In this paper it presents the pressurized water driven shaking table has been produced for damping trademark probes shock absorbers. The damping qualities and relating probes the twofold cylinder water driven shock absorber are investigated right off the bat, and its damping power model is likewise constructed. An open-closed loop ILC strategy is proposed to beat the asymmetry, vulnerability and nonlinearity of the water powered control framework. At that point framework rule and real parts of the shaking table are depicted, and the model of pressure driven actuator, formed of servo valve controlled deviated chamber with damping load, is investigated. Created by such electro-pressure driven control innovation, this using pressurized water driven shaking table has been applied to the damping trademark examination of a sequential of shock absorbers in a vehicle get together plant of Beijing, and has accomplished perfect execution, with 50 kN greatest load power, 0.1 m

Tabular Data		
	Mode	Frequency [Hz]
1	1.	17.852
2	2.	20.64
3	3.	35.615
4	4.	48.852
5	5.	53.714
6	6.	70.515

Table. Comparison of spring with damper setup FEA and FFT results

MODE SHAPE	FEA	EXPERIMENTAL
1	17.85	19.53
2	20.64	19.53
3	35.61	39.06
4	48.85	58.59
5	53.71	78.12

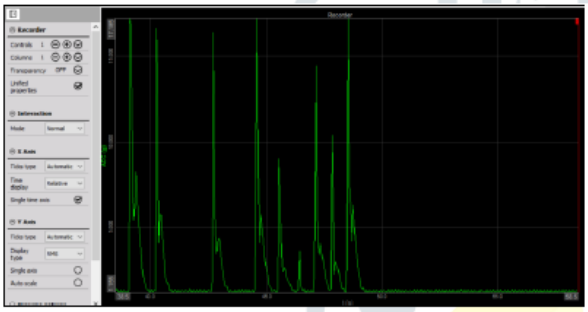

Fig. FFT plot of acceleration of excitation of pneumatic exciter of spring with damper

Maximum acceleration is observed around 17.14 m/s^2

CONCLUSION

- In present research spring with damper characteristics of different dimension of spring are selected along with design of experimental setup to measure acceleration and frequency.
- Spring with optimized dimension is selected after FEA analysis for manufacturing and experimental testing it with damper for FFT test.
- Initially in FEA analysis spring stiffness values are

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Effect of lead angle on push force of snap joint using nonlinear analysis and 3D printing

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Abstract- ***Snap-fit joints are one of the cheapest and fastest connectors available. However, due to geometrical complexity of the joints and the limitations of injection molding, they are used almost exclusively in large-scale manufactured products. Additive manufacturing offers the possibility to create end-user products in small and medium numbers with almost unlimited design complexity In present study the existing snap joint is considered to study the effect of lead angle of snap joint with 13, 15 and 17 degree angle and determine the optimized model for existing design using ANSYS software. Optimized model is manufactured using 3 D printing technique and tested using UTM. Many snap-fits are used in conjunction with sealing elements that produce a constant force that remains in effect after snap fit assembly is completed. The effect of sealing element preload magnitude and stiffness is to be studied using a test station, force deflection measurements, are to be calculated. The analysis and testing results comparison will be carried out and then the suitable future scope will be suggested.***

Keywords—FEA, Snap fit angle, UTM

I. INTRODUCTION

Snap fit is formfitting joint which permits great design flexibility. Snap fit is used to fix two parts together in a certain position. Virtually all consumers and industrial products, utilizing plastic molded components, have multiple components attached together with some form of snap fits. This utilization of snap fit joints for plastic molded component provides an easy and cost-effective method to attach multiple component assemblies. During assembly, the parts are elastically deformed. Joints may be non-detachable or detachable, depending on design. A typical snap fit joint assembly consists of a cantilever beam with an overhang at the

typical cantilever snap which gives an overview of mating parts.

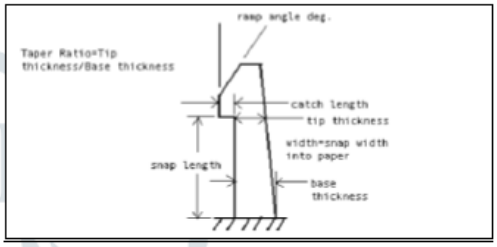

Fig. 1 Typical Cantilever Snap

A Snap-fit (Integral Attachment Feature) is an assembly method used to attach flexible parts, usually plastic, to form the final product by pushing the parts' interlocking components together. There are a number of variations in snap fits, including cantilever, torsional and annular. Snap fits are an alternative to assembly using nails or screws, and have the advantages of speed and no loose parts. Snap fit connectors can be found in everyday products such as battery compartment lids, Snap fasteners and Pens. Snap-together connectors have been used for thousands of years. The first ones were metal. Some of the oldest snap-fits found are snap fasteners, or buttons, shown on the Chinese Terracotta Army featuring soldiers from the late Warring States Period. Metal snap fasteners, spring clips, and other snap-type connectors are still in broad use today. With the development of new flexible yet springy materials, such as molded plastic, and new manufacturing processes, many new variations in these types of connectors have been invented, and are commonly called snap-fits. They can be found in on our phones, laptops, keys, and other household devices. Engineers have studied and developed these snap-fits, creating formulae concerning the

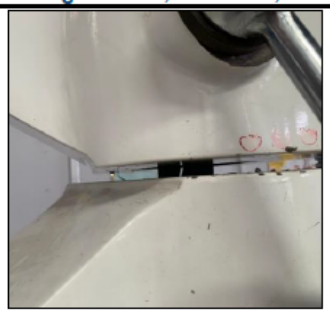

Fig. Experimental testing

CONCLUSION

- In present research snap fit with different angles namely 13, 15 and 17 degree are studied to obtain optimized design snap fit for application purpose.
- It is observed from FEA analysis that increase in snap angle leads to decrease in reaction force to join both snap fits to each other.
- Manufacturing of 17 degree is considered as optimized model and 3 D printing material namely ABS is selected and printed using 3D printing machine.
- In experimental testing similar displacement is applied as per FEA result and is observed that force require to snap fits to contact each other are similar to FEA results.

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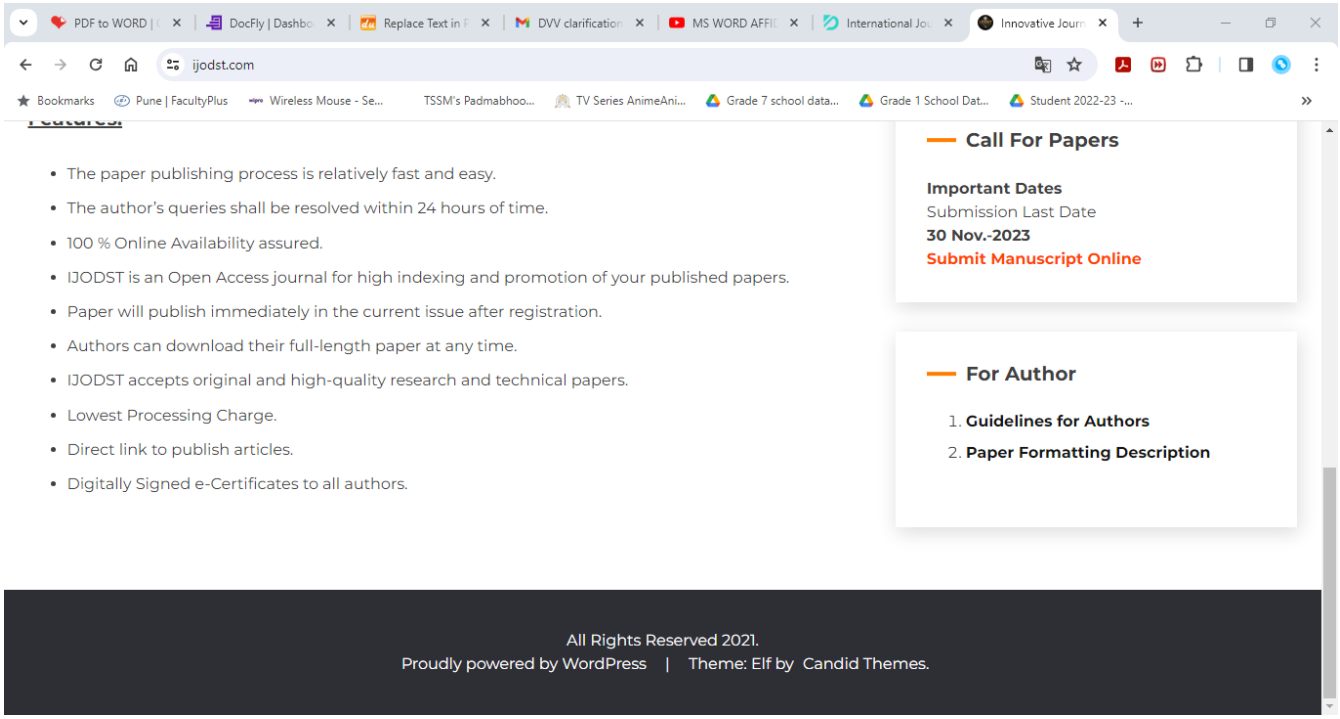
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Analysis of tortional stiffness of an automobile drive shaft by composite material with FEA

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Abstract: **The main aim of this work is to accomplish FEM analysis and to optimize the design with composite materials of drive shaft. Steel shaft is common component used in all kinds of power transmission system. Steel shaft are used due to higher durability. Substitute's metallic structure with composite can help in achieving higher stiffness and light weight components. For that it has been tried to identify suitable composite material which may the alternates in place of steel material. This form basis of replacement of steel shaft with carbon epoxy reinforced steel shaft. Steel shaft with reinforced epoxy was manufactured by taking the dimension of steel shaft as for the material and then reinforcement is done over it. The FEM analysis have been done on above material to get the material as an alternate in place of conventional steel shaft material and result are discussed.**

Index Terms: Drive Shaft, Carbon Fiber, CATIA, FEA, Torsion Test.

I. INTRODUCTION

Carbon fibers fibers about 5–10 micro meters in diameter and composed mostly of carbon atoms. Carbon fibers have several benefits including high stiffness, high tensile strength, low weight, high chemical resistance, high temperature tolerance and low thermal expansion. These properties have made carbon fiber very popular in aerospace, civil engineering, military, and motorsports, along with other competition sports. However, carbon fibers are more expensive when compared with similar fibers, such as glass fibers or plastic fibers. To produce a carbon fiber, the carbon atoms are bonded together in crystals that are more or less aligned parallel to the long axis of the fiber as the crystal alignment gives the fiber high strength-to-volume ratio. Several thousand carbon fibers are bundled together to form a tow, which may be used by itself or woven into a fabric.Carbon fibers are mainly combined with other materials to form a composite. When impregnated with a plastic resin and baked it forms carbon-fiber-reinforced polymer which has a very high strength-to-weight ratio, and is extremely rigid although somewhat brittle. Carbon fibers are also composited with other materials, such as graphite, to form reinforced carbon-carbon composites, which have a very high heat tolerance.

Carbon fiber is most commonly used to reinforce composite materials, particularly the class of materials known as carbon fiber or graphite reinforced polymers. Non-polymer materials can also be used as the matrix for carbon fibers. Due to the formation of metal carbides and corrosion considerations, carbon has seen limited success in metal matrix composite applications. Reinforced carbon-carbon (RCC) consists of carbon fiber-reinforced graphite, and is used structurally in high-temperature applications. The fiber also finds use in filtration of high-temperature gases, as an electrode with high surface area and impeccable corrosion resistance, and as an anti-static component. Molding a thin layer of carbon fibers significantly improves fire resistance of polymers or thermo set composites because a dense, compact layer of carbon fibers efficiently reflects heat. The increasing use of carbon fiber composites is displacing aluminum from aerospace applications in favor of other metals because of galvanic corrosion issues.

Carbon fiber reinforced polymer, carbon fiber reinforced plastic, or carbon fiber reinforced thermoplastic, is an extremely strong and light fiber-reinforced plastic which contains carbon fibers. Carbon fiber reinforcement can be expensive to produce but are commonly used wherever high strength-to-weight ratio and stiffness are required, such as aerospace, superstructure of ships, automotive, civil engineering, sports equipment, and an increasing number of consumer and technical applications. The binding polymer is often a thermo set resin such as epoxy, but other thermo set, such as polyester, vinyl ester, or nylon, are sometimes used. The composite material may contain Kevlar, Twaron, ultra-high-molecular-weight polyethylene aluminum,

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Fig.11Carbon Fiber Shaft after test

RESULTS & CONCLUSION

SR.NO.	CHARACTERISTICS	STEEL SHAFT	CARBON FIBRE
1.	Total Deformation (mm)	14.41	12.73
2.	Equivalent stress (MPa)	692.32	1455.1

From the testing results, we get the torque values. The torque required for steel shaft is 3.99Nm and that for the Epoxy Carbon Fiber shaft is 13.06Nm. So, the torque required for carbon fiber shaft is more. So, the Strength of the carbon fiber shaft is more than that of the steel shaft.
As the shaft breaks at same location in Testing & in Analysis also the results validate.

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Hybrid based cluster head selection for maximizing network lifetime and energy efficiency in WSN

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ABSTRACT

A wireless sensor network (WSN) includes more low-cost and less-power sensor nodes. All the sensor nodes are positioned in a particular area and form a wireless network by way of self-organizing. They has the ability to work normally at any of the special or wicked environ that people cannot close. However, the data transmission among nodes in an effective way is almost not possible due to various complex factors. Clustering is a renowned technique to make the transmission of data more effective. The clustering model divides the sensor nodes into various clusters. Every cluster in network has unique cluster head node, which send the information to other sensor nodes in cluster. In such circumstances, it is the key role of any clustering algorithm to choose the optimal cluster head under various constraints like less energy consumption, delay and so on. This paper develops a new cluster head selection model to maximize the lifetime of network as well as energy efficiency. Further, this paper proposes a new Fitness based Glowworm swarm with Fruitfly Algorithm (FGF), which is the hybridization of Glowworm Swarm Optimization (GSO) and Fruitfly Optimization algorithm (FFOA) to choose the best CH in WSN. The performance of developed FGF is compared to other existing methods like Particle swarm Optimization (PSO), Genetic Algorithm (GA), Artificial Bee Colony (ABC), GSO, Ant Lion Optimization (ALO) and Cuckoo Search (CS), Group Search Ant Lion with Levy Flight (GAL-LF), Fruitfly Optimization algorithm (FFOA) and grasshopper Optimization algorithm (GOA) in terms of alive node analysis, energy analysis and cost function and the betterments of proposed work is also proven.
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1. Introduction

In today's world, the WSN has appeared as one of the hopeful modalities. WSN examines the environment, by detecting the alterations occurred in monitoring areas. Some of the alternations caused are vibration, sound, pressure, humidity, intensity, temperature, and motion. The applications of WSN are broadly utilized in various monitoring systems in fields like military solicitations, habitat monitoring system (Madhuri et al., 2013), bio-medical application (Giorgio et al., 2016; Guadagni et al., 2000; Fiorentini et al., 2015), health monitoring system (Mambrini et al., 2008; Müller and Guadagni 2008), smart home monitoring system and inventory management system (Sherifi and Baholli, 2015).

Clustering (Zhu and Ma 2018; Baradaran and Navi 2017; Ge et al., 2018; Parvin et al., 2015) is the approach, which separates the geographical area into small sectors, It helps sensor nodes to distribute workload among all the server nodes evenly and one of the nodes be assigned as the head of the cluster, which named as 'Cluster Head' (CH). The selection of CH is a major role for better information transmission. In practical, CH reformed while distinct iterations to give the best performance. The distinctive cluster includes a CH with more cluster members. The responsibility of the CH is that it should coordinate all the nodes present in the clus-

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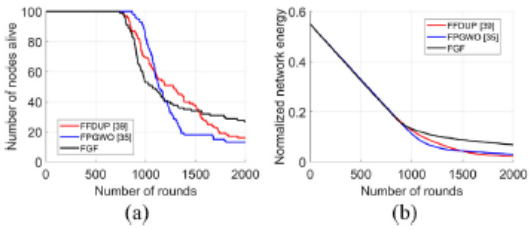

Fig. 11. Performance analysis (a) Number of nodes alive (b) Normalized network energy.

the proposed method stays with high energy almost for all the variations. Particularly, at 2000th round, the proposed model at $N(t) = 5$ has attained high energy. Similarly, the analysis of alive node counts is given in Fig. 8 (b). The graph shows that the proposed method attains more alive nodes at all variations. This continuous even at the last round (2000), where the proposed FGF gives more than 20 alive nodes at 2000th round.

6.6.5. Distance evaluation of CH

The CH distribution among sensor nodes is illustrated in Fig. 10. The CH distribution varies with the difference in a number of rounds and difference in algorithms.

6.6.6. Comparative analysis over (Murugan and Sarkar 2018) and (Shankar and Jaisankar, 2016)

After comparing the performance of the proposed model over existing models in Sections 6.5 and 6.6 most recent models like (Murugan and Sarkar 2018) and (Shankar and Jaisankar, 2016), the number of alive nodes, and normalized network energy is shown in Fig. 11. The nodes alive concerning the number of rounds is illustrated in Fig. 9 (a). The proposed FGF method shows more number of alive nodes in round 2000 when compared to that of existing FFDUP and FPGWO technique. Moreover, Fig. 9 (b) shows the normalized network energy of proposed and existing techniques. The proposed FGF method shows better life time when compared to that of FFDUP and FPGWO technique.

7. Conclusion

To acquire maximum network lifetime, minimum energy consumption, delay and so on, this paper has introduced a new CH selection approach. Furthermore, this paper has proposed a new FGF algorithm for selecting the optimal cluster head in WSN. The performance of proposed FGF was compared to other conventional methods such as GA, PSO, ABC, GSO, ALO and CS, GAL-LF, FFOA and GOA with respect to alive node analysis, energy analysis and cost function. The results have proven that the developed approach with respect to a number of alive nodes shows 90.08%, 63.37%, 58.64%, 68.02%, 90.84% and 72.67% better from GOA, FFOA, GAL-

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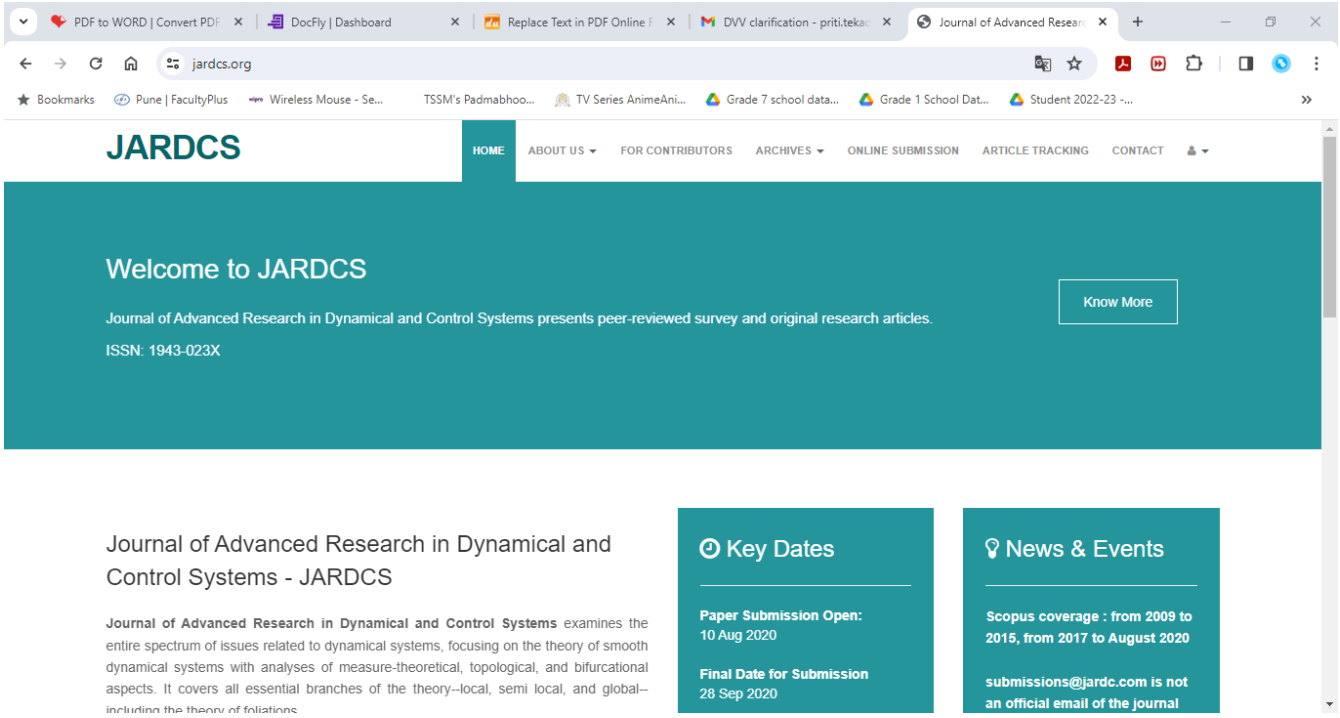
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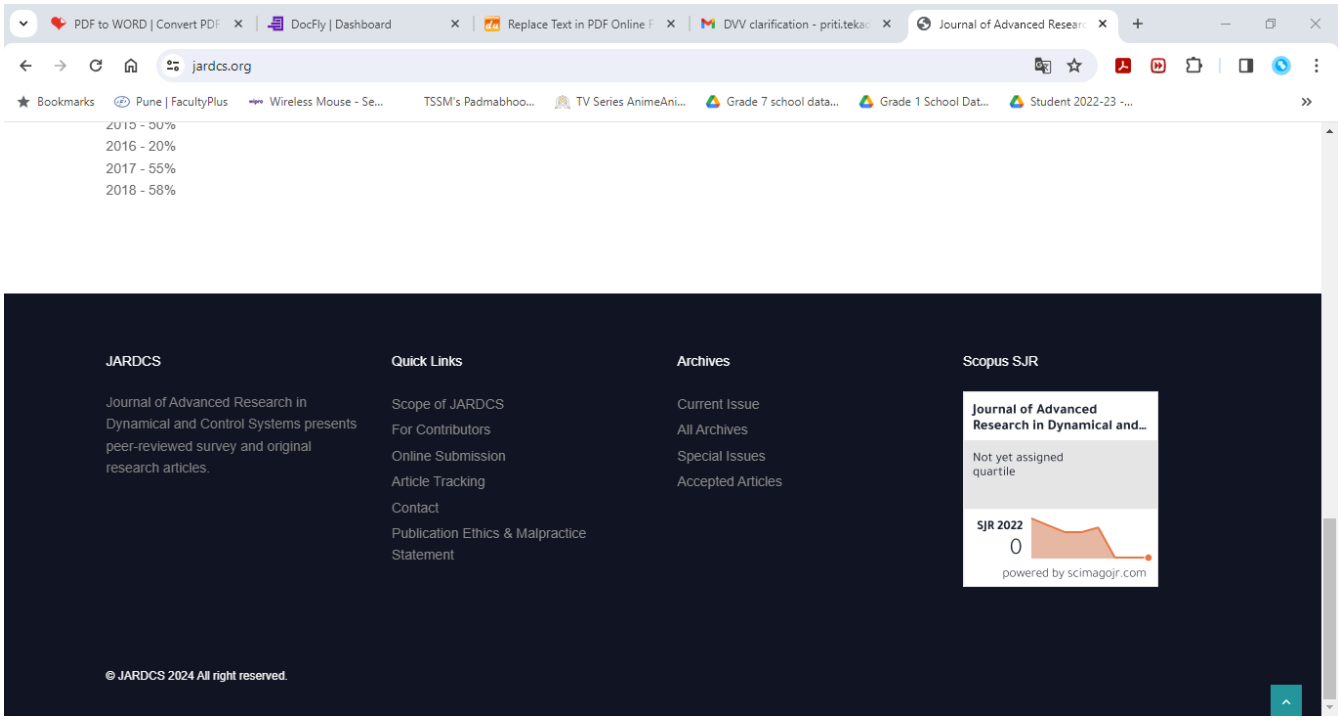
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Video stabilization is the method of removing unwanted movement from a video stream. In this paper, we have proposed three algorithms for stabilization of jittery videos. 1.Video stabilization based on LI norm 2.Video stabilization based on s-R-t transform 3.Video stabilization based on LI&L2 norm The first algorithm is based on L1 norm. L-I norm is related with Least Absolute Deviation (LAD). It is minimising sum of absolute difference between consecutive video frames. In the second Algorithm, hybrid technique which is the combination of RANSAC (Random Sample consensus Algorithm) and s-R-t (scale-rotation-translation) transform is proposed to stabilize jittery videos. RANSAC algorithm is used to find effective inlier correspondences and afterward it derives the affine transformation to map the inliers in consecutive video frames. This transformation is capable to improve the image plane. This transform makes smoothening of video frames and also removes jitter in video. To obtain the optimal camera path composed of distinct constant, linear and parabolic segments, we have minimised the first, second, and third derivatives of the resulting camera path. The third algorithm based on LI-L2-norm. L2 optimization achieves the best estimation in least square sense. In order to keep the boundary information of original videos as much as possible optimal smooth camera path should be close to the original path. λ is a weight to adjust the smoothness of path. It can be treated as a factor which controls the degree of stabilization. Comparing the stabilized and shaky video it is confirmed that the processed videos highly satisfy the human perception. Results indicate a remarkable elimination of high jitter from shaky videos.

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A Review: New Histogram for Bilateral Filtering and Nearest Neighbor Searching

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Assistant Professor, E&TC, SKN COE, Pune, India[2]

Abstract: Noise not only degrades quality of image but also results in loss of important information in images. There are different types of noise are available such as Gaussian, impulse, mixed noise etc. Filtering plays vital role in image processing and computer vision to remove noise. In this work, we have reviewed and analyzed different nearest neighbor field (NNF) methods using bilateral filtering to preserve edges. Computing NNF is nothing but, for each patch in one image, find out the most similar patch in other image. Bilateral filtering overcomes limitation of using box spatial filter kernel by using locality sensitive histogram (LSH). The computational complexity of bilateral filter is linear in number of pixels. Also new bilateral weighted histogram (BWH) is proposed for edge preserving patch-match. In this paper, we have studied and reviewed different patch-matching methods.

Keywords: locality sensitive histogram, bilateral weighted histogram, bilateral filter, nearest neighbor field.

I. INTRODUCTION

Bilateral filter is non-linear, noise reducing filter used for gray and color images. It is used in various applications such as stereo matching, image denoising, tone mapping, contrast management, 3D fairing [8]. Bilateral filter is technique to smooth images while preserving edges. Different techniques have been proposed to improve efficiency and accuracy of bilateral filters. The histogram-based bilateral filtering methods [10] make use of box spatial filter kernel which has finite impulse response and it causes ambiguities around edges in image. In this, bilateral filter is derived from locality sensitive histogram (LSH) which computes histogram at each pixel location and floating point value is added to the corresponding bins. Gaussian filter takes into account only spatial information and bilateral filter not only consider spatial distance but also the intensity value of image in order to preserve edges. It depends on two parameters: spatial parameter and rangeparameter, to measure radiometric distances between center pixel and its neighbors.The computational complexity of bilateral filter is not dependent of kernel size. Bilateral filtering can be improved to get linear time joint bilateral filtering and Further bilateral weighted histogram (BWH) is developed from LSH, which require both spatial and color information to reconstruct original image while maintaining the efficiency of LSH. The implementation of BWH is simple and can be done by applying recursive approximation of range kernel. Like patch-match method [7], it is very effective for nearest neighbor searching. Patch-based methods have certain limitations since they are unable to preserve boundaries of reconstructed image well. BWH overcomes the limitation as the introduced range kernel provides a geodesic based similarity to recover structure of image in proper way. It is used in various applications such as image reconstruction, optical flow, example based colorization. This method has less reconstruction errors and about 2 to 3 times faster than original patch-match maintaining similar accuracy. The proposed method achieves better performance than the original PatchMatch algorithm in terms of speed, accuracy and visual quality.

II.LITERATURE SURVEY

A. Large displacement optical flow from nearest

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E. Coherency sensitive hashing

Simon Korman and ShaiAvidan [6], proposed Coherency Sensitive Hashing (CSH) technique to find matching patches between two images. Traditional patch-match method is based on assumption that images are coherent. That is, if we find pair of similar patches, then their neighbors are likely to be similar. But it is slow and less accurate. The reconstruction errors of CSH are lower than patch-match method. Incoherency term is used to measure reconstruction errors by calculating the number of neighboring patches in one image that are mapped to neighboring patches in other image. The proposed CSH is mainly divided into two stages: Indexing stage and Search stage. In indexing stage, new set of functions is determined, which make use of Walsh-Hadamard kernels. At search stage, set of candidate nearest patches is generated and find out most similar patch. In this method, error-to-time trade off of CSH is compared with patch-match and it is found that CSH is faster, avoid many artifacts along edges, more accurate, especially in textured regions.

F. Bilateral filtering for gray and color images

C, Tomasi and R. Manduchi [], proposed bilateral filtering that smooths images while preserving edges, by means of nonlinear combination of nearby image values. The idea behind bilateral filtering is to do in range of image what traditional filters do in its domain.Two pixels can be closeto one another, that is, occupy nearby spatial location, or they can be similarto one another, that is, have nearby values, possibly in a perceptually meaningful fashion. Closeness refers to vicinity in the domain, similarity to vicinity in the range. Traditional filtering is domain filtering, and enforces closeness by weighing pixel values with coefficients that fall off with distance. Similarly, range filtering is defined, which averages image values with weights that decay with dissimilarity. Range filters are nonlinear because their weights depend on image intensity or color. The combination of range and domain filtering is known as bilateral filtering given as:

$$h(x) = k^{-1}(x)\iint_{-\infty}^{\infty} f(\xi)c(\xi, x)s(f(\xi), f(x))d\xi$$

with the normalization

$$k(x) = \iint_{-\infty}^{\infty} c(\xi, x)s(f(\xi), f(x))d\xi$$

It replaces the pixel value at x with an average of similar with their advantages and limitations.The proposed bilateral filtering algorithm overcomes the box spatial kernel restrictionof existing histogram-based methods, makes use of an exponential kernel, and the new BWH leads to an accurate and efficient way for image matching.

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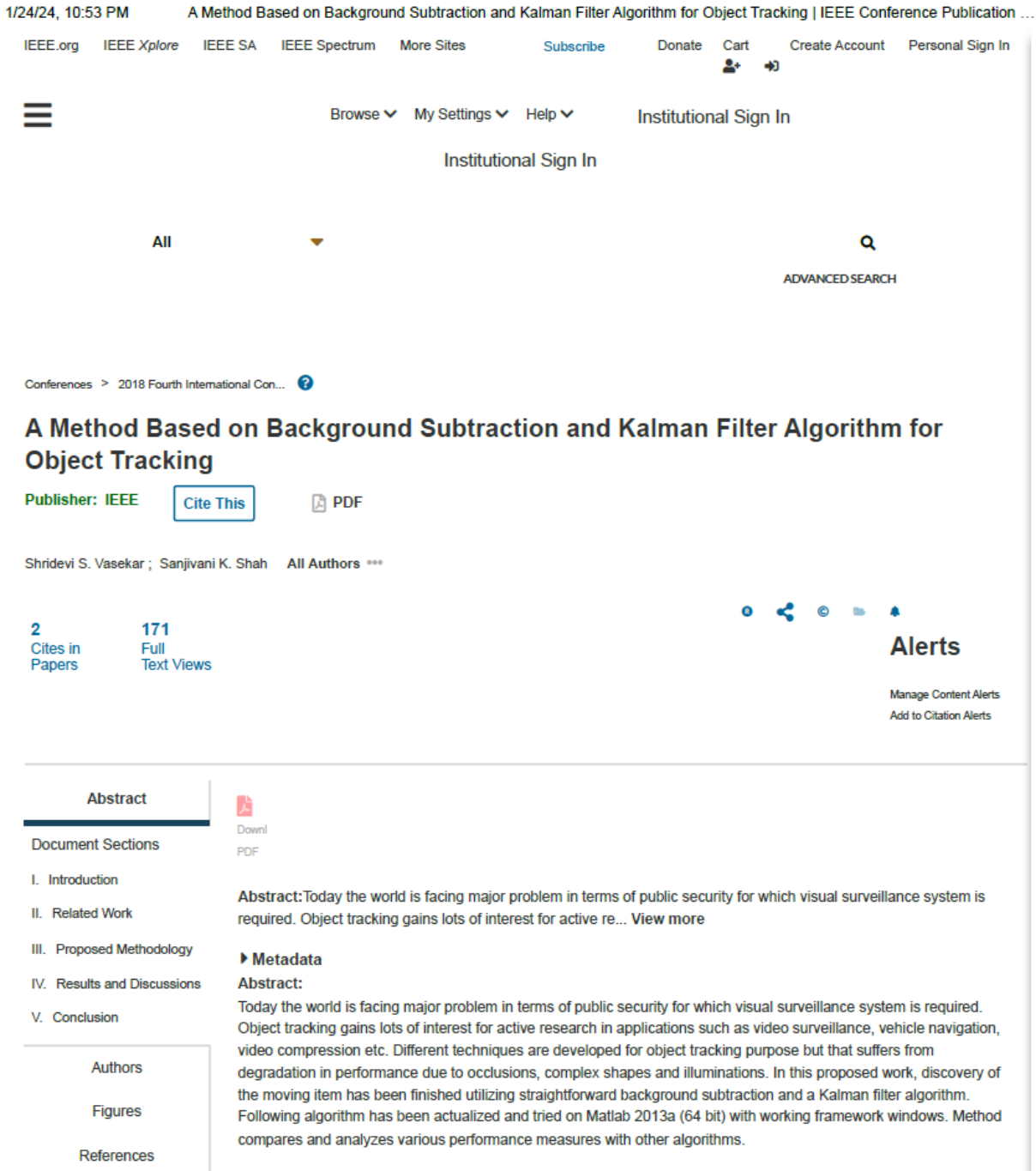

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Abstract:
Today the world is facing major problem in terms of public security for which visual surveillance system is required. Object tracking gains lots of interest for active research in applications such as video surveillance, vehicle navigation, video compression etc. Different techniques are developed for object tracking purpose but that suffers from degradation in performance due to occlusions, complex shapes and illuminations. In this proposed work, discovery of the moving item has been finished utilizing straightforward background subtraction and a Kalman filter algorithm. Following algorithm has been actualized and tried on Matlab 2013a (64 bit) with working framework windows. Method compares and analyzes various performance measures with other algorithms.

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Thermal Performance of Wickless Heat Pipe Flat Plate Solar Collector with Nanofluid

K. B. Waghulde, R. N. Todkar, N. A. Bandal, H. Ranpise

Abstract

Water heating by solar energy is the most important solar energy utilization because of technological feasibility and economic attraction compared with other kind's energy utilization. The system can supply hot water at 50°C to 80°C which can be used for both domestic and industrial purposes. Nanofluids are the important fluids containing a very small amount of Nano particles that are uniformly suspended in fluids. Nanofluids having high thermal conductivity as compared to other conventional fluids. In this paper we have putted the thermal performance of two different wickless heat pipe solar collectors were investigated by using pure water, CuO-BN/water nanofluid for different coolant mass flow rates and tilt angles. The first collector uses only pure water, the second one utilizes CuO and BN nanoparticles with water as a base fluid. Experiments were carried out for the two different collectors under the same experimental conditions. The wickless heat pipe flat plate solar collector containing nanofluid showed better performance. The optimum performance for both the collector was obtained at 31.5° tilt angle.

Keywords: *Flat plate solar collector, heat pipe, heat transfer, nanofluid*

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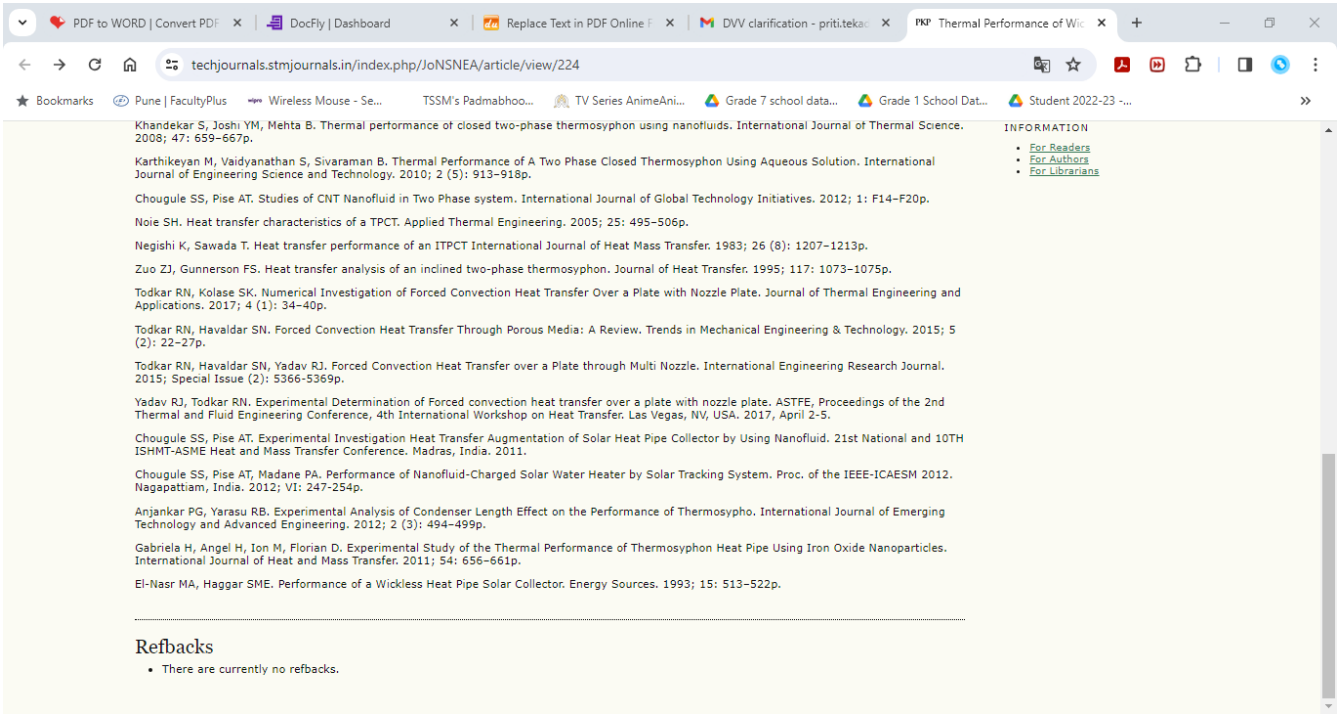

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Development of nickel bi-porous wicks for miniature loop heat pipe applications

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Abstract

Purpose Miniature loop heat pipes (MLHPs) are highly efficient passive heat transfer devices, which have considerable advantages over conventional heat pipes. Currently, miniature LHPs with ammonia and water as working fluids have been developed and utilized in electronics cooling within temperature range of 50°C-70°C at any orientation in 1-g conditions. Design/methodology/approach The authors studied the standard procedure for the development of bi-porous nickel wicks and their characterization. Three different shaped nickel powders were studied, and best fitting nickel powder for electronics cooling application was reported. The manufacturing of bi-porous wick structures was analyzed with parameters such as porosity, permeability, capillary pressure and effective thermal conductivity for efficient performance of MLHP. Findings The study investigated the sintering process for number of samples to identify effective sample for the particular application. It is found that carbonyl nickel powder (type 287) with particle size of 2.6-3.3 µm gives promising results. Permeability and porosity were found to be highest in this case. Originality/value It is found that carbonyl nickel powder type with particle size gives promising results. Permeability and porosity was found to be highest in this case.

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Experimental determination of forced convection heat transfer over a plate with nozzle plate

Rupesh Yadav [a], Sandeep Kore [b], Parimal Bhambare [c], Dhanpal Kamble [b], R.N. Todkar [d]

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Abstract

The intent of this paper is to study the heat transfer characteristics by convection mode of heat transfer over flat plate placed under multi-nozzle plate jets. Experimental investigations are carried out for heat transfer performance and pressure penalty from nozzle array impingement on the target wall at various Reynolds numbers. The investigations based on Reynolds numbers varied from 22,000 to 28,000. The Reynolds number is based on average nozzle diameters to cover the incompressible flow regimes. Three different nozzle plate configurations are used with closely spaced holes of varying diameters. The nozzles are chamfered in order to minimize pressure loss through the jet plate. The heat input supplied to flat plate using uniform heat flux condition boundary condition. A target wall giving the enhancement of heat transfer with the nozzle plate-1 and 2 is in the average range of 10–20%.

Introduction

Electronic components cooling is the topic of interest for many researchers in recent years, present electronic components such as microprocessor, electronics chips – ram, mother board of CPU, gets overheated due to increased capacity, smaller size and less time for heat dissipation. In single phase heat transfer multiple jet impingements cooling is considered as one of the effective method of cooling. Lately, micro multi-nozzle is used in evaporative cooling of different electronic devices to enhance forced convection heat transfer. Many researchers investigated the effect of impinging jets velocity and flow structure over a flat plate to understand the flow physics. The analysis includes experimental and theoretical studies. The jet impingement techniques with water and air as working medium is very useful for many applications in single phase heat transfer. The applications are paper and films drying, tempering of glass and metal during heat treatment process, gas turbine internal blade cooling and heat dissipation of electronic components. In number of industrial applications, such as heat dissipation in electronics components and turbine blade/vane surfaces where internal cooling passage is observed, the jet outflow is often bounded between the target plate and an opposing surface. In these applications several jets are used to cool the surface. Several reports such as Lai et al. [1], Schroeder et al. [2], Victor et al. [3], Lee [4], Salah [5], Goldstein [6] and Murthy [7] has focused on the heat transfer and fluid flow in free impinging jets, primarily in the turbulent regime. In micro- electronics cooling, air velocities are often limited by acoustic concerns. Hence, impinging jet heat transfer in the turbulent regime may be impractical. From both a fundamental and practical perspective it is important to study both the laminar and turbulent regimes. The confined jet impingement gives a practical approach to different microelectronics cooling problem due to the concentration of intense cooling over small areas. In previous reports deals with study of various parameters, Lee et al. [4] and Murthy [7] studied effect of diameter of nozzle/jet. They concluded that variation of jet diameter within ±10% has no detrimental effects on the area averaged Nusselt numbers for the flat target plate and the sidewalls. On the other hand, increasing jet diameters shows the higher heat transfer capabilities for the impingement plate as in Chougule and Anwarullah et al. [8], [9]. They studied effect of distance between test plate and nozzle/jet and stated that temperature gradient is higher

UGC CARE LIST JOURNALS

Sl.No.	Title	Publisher	ISSN	E-ISSN	Subject
1	Art Libraries Journal	Cambridge University Press	0307-4722	2059-7525	Library and Information
2	Brahmavidya: The Adyar Library Bulletin	The Adyar library and Research Centre	0972-2106	NA	Library and Information Science
3	Catholic Library World	Catholic Library Association	0008-820X	NA	Library and Information
4	Citaliste: the Scientific Journal on Theory and Practice of Librarianship	The City Library of Panevo and Faculty of Philosophy of the University of Novi Sad	2217-5563	NA	Library and Information Science
5	College Libraries	West Bengal College Librarians Association	0972-1975	NA	Library and Information Science
6	Georgia Library Quarterly	Georgia Library Association	2157-0396	NA	Library and Information
7	IASLIC Bulletin	Indian Association of Special Libraries and Information Centres	0018-8441	NA	Library and Information Science
8	International Journal of Information Retrieval Research	IGI Global	2155-6377	2155-6385	Library and Information Science
9	Journal of Indian Library Association	Indian Library Association	2277-5145	2456-513X	Library and Information Science
10	Journal of Library and Information Studies	Department of Library and Information Science, National Taiwan University	1606-7509	NA	Library and Information Science
11	Journal of the Canadian Health Libraries	Canadian Health Libraries Association	1708-6892	NA	Library and Information

	Association				Science
12	Journal of University Librarians Association of Sri Lanka	University Librarians Association of Sri Lanka	NA	2579-2253	Library and Information Science
13	Knowledge Quest	American Library Association	1094-9046	NA	Library and Information
14	Library Herald	Delhi Library Association	0024-2292	0976-2469	Library and Information
15	New Review of Children's Literature and Librarianship	Taylor and Francis	1361-4541	1740-7885	Library and Information Science
16	RBU Journal of Library and Information Science	Department of Library and Information Science, Rabindra Bharati University	0972-2750	NA	Library and Information Science

17	South African Journal of Libraries and Information Science	Library and Information Association of South Africa	0256-8861	2304-8263	Library and Information Science
18	SRELS Journal of Information Management	Informatics Publishing Limited and Sarada Ranganathan Endowment for Library Science	0972-2467	0976-2477	Library and Information Science
19	Virginia Libraries	Virginia Libraries Association	NA	2331-3331	Library and Information
20	World Digital Libraries: An International Journal	Energy and Resources Institute	0974-567X	0975-7597	Library and Information Science
21	Aarthika Charche- FPI Journal of Economics and Governance	Fiscal Policy Institute, Government of Karnataka	2455-6483	NA	Economics
22	Acta Universitatis Sapientiae, Economics and Business	Sapientia Hungarian University of Transylvania	2343-8894	2360-0047	Economics
23	African Journal of Business and Economic Research	Adonis and Abbey Publishers	1750-4554	1750-4562	Economics
24	American Review of Political Economy	University of Washington	1551-1383	NA	Economics
25	Annals of Financial Economics	World Scientific Publishing	2010-4952	2010-4960	Economics
26	Annals of the University of Petrosani-Economics	University of Petrosani	1582-5949	2247-8620	Economics
27	Anvesak	Sardar Patel Institute of Economic and Social Research	0378-4568	NA	Economics
28	Applied Economics Quarterly	Duncker and Humblot GmbH	1611-6607	1865-5122	Economics
29	Applied Finance Letters	Auckland University of Technology	2253-5799	2253-5802	Economics

30	Arab Economic and Business Journal	Elsevier	2214-4625	NA	Economics
31	Artha Vijnana	Gokhale Institute of Politics and Economics	0971-586X	NA	Economics
32	Arthaniti	Department of Economics, University of Calcutta	0976-7479	2517-2654	Economics
33	Economia	Brookings Inst Press	1529-7470	1533-6239	Economics
34	Economic Issues	Nottingham Trent University	1363-7029	2514-5479	Economics
35	Estudios Economicos	Centro de Estudios Economicos, El Colegio de Mexico	0188-6916	0186-7202	Economics

36	Hyperion International Journal of Econophysics and New Economy	Hyperian University and Hyperion Research and Development Institute	NA	2069-3508	Economics
37	IASSI Quarterly	Indian Association of Social Science Institutions	0970-9061	0974-018X	Economics
38	Indian Economic Review	Department of Economics, Delhi School of Economics	0019-4670	2520-1778	Economics
39	Indian Journal of Economics	Department of Economics, University of Allahabad	0019-5170	NA	Economics
40	International Journal of Applied Behavioral Economics	IGI Global	2160-9802	2160-9810	Economics
41	International Journal of Bonds and Currency Derivatives	Inderscience Publishers	2050-2281	2050-229X	Economics
42	International Journal of Financial Engineering	World Scientific Publishing	2424-7863	2424-7944	Economics
43	International Journal of Financial Engineering and Risk Management	Inderscience Publishers	2049-0909	2049-0917	Economics
44	International Journal of Financial Markets and Derivatives	Inderscience Publishers	1756-7149	1756-7130	Economics
45	International Journal of Financial Services Management	Inderscience Publishers	1741-8062	1460-6712	Economics
46	International Journal of Happiness and Development	Inderscience Publishers	2049-2790	2049-2804	Economics
47	International Journal of Management and Network Economics	Inderscience Publishers	1754-2324	1754-2316	Economics
48	International Journal of Political Economy	Taylor and Francis	0891-1916	1558-0970	Economics

49	Journal of Asian Economic Integration	ASEAN- India Centre at RIS and ASEAN Studies Center, Chulalongkorn University	2631-6846	2631-6854	Economics
50	Journal of Economic Research	Hanyang University Seoul	1226-4261	2713-6418	Economics
51	Journal of Entrepreneurship and Innovation in Emerging Economies	International Entrepreneurship Forum	2393-9575	2394-9945	Economics

52	Journal of Indian School of Political Economy	Indian School of Political Economy	0971-0396	NA	Economics
53	Journal of Quantitative Economics	The Indian Econometric Society	0971-1554	2364-1045	Economics
54	Journal of Social and Economic Development	Institute for Social and Economic Change	0972-5792	2199-6873	Economics
55	Orissa Economic Journal	Orissa Economics Association	0976-5409	NA	Economics
56	Pakistan Economic and Social Review	Department of Economics, University of the Punjab	1011-002X	2224-4174	Economics
57	Prajnan: Journal of Management and Social Sciences	National Institute of Bank Management	0970-8448	NA	Economics
58	Review of Economic Analysis	Rimini Centre for Economic Analysis	NA	1973-3909	Economics
59	Small Enterprises Development, Management	Sage Publications	0970-8464	2456-1223	Economics

	and Extension Journal				
60	South African Journal of Information Management	AOSIS Publishing	2078-1865	1560-683X	Economics
61	The American Economist	Sage Publications	0569-4345	2328-1235	Economics
62	The Chartered Accountant	Institute of Chartered Accountants of India	NA	0009-188X	Economics
63	The Indian Economic Journal	Indian Economic Association	0019-4662	2631-617X	Economics
64	The Orissa Journal of Commerce	Orissa Commerce Association	0974-8482	NA	Economics
65	The Review of Finance and Banking	Bucharest University of Economic Studies	2067-2713	2067-3825	Economics
66	Theoretical and Applied Economics	General Association of the Economists in Romania	1841-8678	1844-0029	Economics
67	Transnational Corporations Review	Taylor and Francis	1918-6444	1925-2099	Economics
68	Vidyasagar University Journal of Economics	Vidyasagar University	0975-8003	NA	Economics
69	Vilakshan- XIMB Journal of Management	Xavier Institute of Management	0973-1954	NA	Economics
70	World Economics Journal	Economic and Financial Publishing Ltd.	1468-1838	NA	Economics
71	Aitihya- The Heritage	Aitihya Samstha	2229-5399	NA	History
72	Amphora	Society for Classical Studies, New York University	1542-2364	1542-2380	History

73	Apeiron- A Journal for Ancient Philosophy and Science	Walter de Gruyter	0003-6390	NA	History
74	Bengal, Past and Present (print only)	Calcutta Historical Society	0005-8807	NA	History
75	Bharatiy Itihas ani Sanskruti (print only)	Itihas Shanshodan Mandal	2250-1185	NA	History
76	CLIO- An Annual Interdisciplinary Journal of History (print only)	Corpus Research Institute	0976-075X	NA	History
77	Harvard Journal of Asiatic Studies	Harvard- Yenching Institute	0073-0548	1944-6454	History
78	History Compass	John Wiley and Sons, Inc.	NA	1478-0542	History
79	History Research Journal	Dr. Omshiva Ligade	0976-5425	NA	History
80	History Today	Indian History and Culture Society	2249-748X	NA	History
81	Indian Journal of History of Science	Indian National Science Academy	0019-5235	2454-9991	History
82	Itihas (Shodh-Patrika) (print only)	Indian Council of Historical Research	2319-8818	NA	History
83	Itihas Darpan (print only)	Akhil Bharatiya Itihas Sankalan Yojana	0974-3065	NA	History
84	Itihas Drishti (print only)	Saiyad Najamul Raja Rijavi	0976-349X	NA	History
85	Itihasa Darpana	Itihasa Darpana Prakashana	2321-3590	NA	History
86	Itihasa- The Indian Historical Review (print only)	Indian Council of Historical Research	NA	NA	History
87	Itikotha (print only)	Bangiya Itihas Samiti Kolkata	2320-3447	NA	History
88	Jijnasa (print only)	Department of History and Indian Culture, University of Rajasthan	0337-743X	NA	History
89	Journal of Ancient History and Archaeology	Institutul de Arheologie si Istoria Artei, Cluj-Napoca	NA	2360-266X	History
90	Journal of Early Modern Studies	Firenze University Press	NA	2279-7149	History
91	Journal of Indian History and Culture	C. P. Ramaswami Aiyar Institute of Indological Research	0975-7805	NA	History
92	Kakatiya Journal of Historical Studies (print only)	Department of History Tourism Management, Kakatiya University	0976-2345	NA	History

93	Kala: The Journal of Indian Art History Congress (print only)	Indian Art History Congress	0975-7945	NA	History
94	Kalyan Bharati (print only)	Kalyan Kumar Dasgupta Memorial Committee	0976-0822	NA	History

95	Kanpur Philosophers (print only)	New Archaeological and Genological Society	2348-8301	NA	History
96	Mithila-Bharati (print only)	Maithili Sahitya Sansthan	2349-834X	NA	History
97	Modern Historical Studies (print only)	Department of History, Rabindra Bharati University	0972-6756	NA	History
98	Museum History Journal	Taylor and Francis	1936-9816	1936-9824	History
99	Our Heritage	Department of Postgraduate Training And Research, Sanskrit College	0474-9030	NA	History
100	Proceeding of Andhra Pradesh History Congress (print only)	Andhra Pradesh History Congress	2320-057X	NA	History
101	Proceedings of the Indian History Congress (print only)	Indian History Congress	2249-1937	NA	History
102	Proceedings of the South Indian History Congress	General Secretary South Indian History Congress	2229-3671	NA	History
103	Purapravah	The Indian Archaeological Society	2454-8014	NA	History
104	Rajasthan History Congress	Rajasthan History Congress	2321-1288	NA	History
105	Sanshodhak (print only)	Itihasacharya V. K. Rajwade Sanshodhan Mandal	2394-5990	NA	History

106	Shodhak: A Journal of Historical Research	National Organisation of Historians and Social Scientists	0302-9832	NA	History
107	South Asia Chronicle	Humboldt- Universitat Zu Berlin	NA	NA	History
108	Studies in People's History	Sage Publications	2348-4489	2349-7718	History
109	The Journal of Oriental Research Madras (print only)	The Kuppuswami Sastri Research Institute	0022-3301	NA	History
110	The Quarterly journal of The Mythic Society	The Quarterly Journal of The Mythic Society	0047-0555	NA	History
111	Utkal Historical Research Journal (print only)	Department of History, Utkal University	0976-2132	NA	History
112	Varalaaru	Journal of Dr.M.Rajamanikkanar Centre for Historical Research	NA	NA	History
113	Vidyasagar University Journal of History	Vidyasagar University	2321-0834	NA	History

114	Vishveshvaranand Indological Journal (print only)	Vishveshvaranand Vishwa Bandhu Institute of Sanskrit and Indological Studies, Panjab University	0507-1410	NA	History
115	Dibrugarh University Journal of English Studies	Department of English, Dibrugarh University	0975-5659	2581-7833	English
116	Journal of the Department of English	Vidyasagar University	0973-3671	NA	English
117	Atishay Kalit (print only)	Atishay Kalit	2277-419X	NA	Hindi
118	Bhasha	Central Hindi Directorate	NA	0523-1418	Hindi
119	Hindi Anusheelan (print only)	Bhartiya Hindi Parishad	2249-930X	NA	Hindi

120	Parishodh	Hindi-Department, Panjab University	2347-6648	NA	Hindi
121	Sahridaya	Nav Unnayan	2230-8997	NA	Hindi
122	Sammelan Patrika (print only)	Hindi Sahitya Sammelan	2278-1773	NA	Hindi
123	Sangrathan	Hindi Vidyapeeth	2278-6880	NA	Hindi
124	Shodh Sarovar Pathrika	Akhil Bharatheeya Hindi Academy	2456-625X	NA	Hindi
125	Vishwa Hindi Patrika	Vishwa Hindi Sachivalaya	1694-2477	NA	Hindi
126	Aadhunik Sahitya (print only)	Vishwa Hindi Sahitya Parishad	2277-7083	NA	Linguistics
127	Adab-O-Saqafat	Maulana Azad National Urdu University	2455-0248	NA	Linguistics
128	Aitihya- The Heritage	Aitihya Samstha	2229-5399	NA	Linguistics
129	Al- Jeel Al- Jadeed	Al- Jeel Al- Jadeed	2581-3455	NA	Linguistics
130	Aligarh Journal of Linguistics	Department of Linguistics, Aligarh Muslim University	2249-1511	NA	Linguistics
131	Annals of the Bhandarkar Oriental Research Institute (print only)	Bhandarkar Oriental Research Institute	0378-1143	NA	Linguistics
132	Antarmukh (print only)	Antarmukh	2249-3751	NA	Linguistics
133	Anusandhanvallari (print only)	Shri Pattabhirama Shastri Veda Mimamsa Anusandhan Kendra	2229-3388	NA	Linguistics
134	Anvesan (print only)	Department of Assamese, Gauhati University	2250-2475	NA	Linguistics
135	Bahuri Nahi Awana (print only)	Anang Prakashan	2320-7604	NA	Linguistics

136	Banaas Jan	Notnul Publisher	2231-6558	NA	Linguistics
137	Bhasha	Central Hindi Directorate	NA	0523-1418	Linguistics

138	Bhasha ani Jeevan (print only)	Marathi Abhyas Parishad	2231-4059	NA	Linguistics
139	Bhavaveena	Bhavaveena	2456-4702	NA	Linguistics
140	Biolinguistics	Department of English Studies, University of Cyprus	NA	1450-3417	Linguistics
141	Cognitextes	Association Francaise de Linguistique Cognitive	NA	1958-5322	Linguistics
142	Dastak (print only)	Department of Urdu, Faculty of Arts, Banaras Hindu University	NA	NA	Linguistics
143	Dibrugarh University Journal of English Studies	Department of English, Dibrugarh University	0975-5659	2581-7833	Linguistics
144	Discours	Universite de Paris- Sorbonne	NA	1963-1723	Linguistics
145	FORTELL: Journal of Teaching English Language and Literature	TESOL International Association and International association of Teachers of English as Foreign Language	2229-6557	2394-9244	Linguistics
146	Forum- International Journal of Interpretation and Translation	John Benjamins Publishing Company	1598-7647	2451-909X	Linguistics
147	Himalayan Linguistics	Southern Illinois University Edwardsville	NA	1544-7502	Linguistics
148	Hindi Anusheelan (print only)	Bhartiya Hindi Parishad	2249-930X	NA	Linguistics
149	Indian Linguistics (print only)	Linguistic Society of India	0378-	NA	Linguistics

			0759		
150	Informationen Deutsch als Fremdsprache	Walter de Gruyter	0724-9616	2511-0853	Linguistics
151	International Journal of Dravidian Linguistics	Naduvattom Gopalakrishnan	0378-2484	NA	Linguistics
152	International Journal of Tamil Language and Literary Studies	Maheshwari Publishers	NA	2581-7140	Linguistics
153	International Research Journal of Tamil	IOR Press	NA	2582-1113	Linguistics
154	Jadavpur Journal of Languages and Linguistics	School of Languages and Linguistics, Jadavpur University	2581-494X	NA	Linguistics
155	Jayanti	Central Sanskrit University	2248-9495	NA	Linguistics
156	Journal of English Language Teaching	The Society for the Promotion of Education in India	0973-5208	NA	Linguistics
157	Journal of Language and Discrimination	Equinox Publishing Ltd.	2397-2637	2397-2645	Linguistics

158	Journal of Language and Linguistic Studies	Department of English Language and Literature, Selcuk University	NA	1305-578X	Linguistics
159	Journal of South Asian Linguistics	CSLI Publications	1947-8240	1947-8232	Linguistics
160	Journal of the Ganganatha Jha Campus (print only)	Central Sanskrit University, Ganganath Jha Campus	0377-0575	NA	Linguistics
161	Journal of the Indian Academy of Arabic	Department of Arabic, Aligarh Muslim University	2250-0413	NA	Linguistics
162	Journal of Veda Samskrita Academy	Veda Samskrita Academy	2250-1711	NA	Linguistics
163	Kiranavali	Sanskrit Research Foundation	0975-4067	NA	Linguistics
164	Language Arts Journal of Michigan	Michigan Council of Teachers of English	1044-6702	2168-149X	Linguistics
165	Language at Internet	Digital Peer Publishing NRW	NA	1860-2029	Linguistics
166	Linguistic Landscape	John Benjamins Publishing Company	2214-9953	2214-9961	Linguistics
167	Littcrit	University of Kerala	0970-8049	NA	Linguistics
168	Majalla-tul-Hind	Maulana Azad ideal Educational Trust	2321-7928	NA	Linguistics
169	Malayala Pachcha	Post Graduate Department of Malayalam, KKTM Government College	2454-292X	NA	Linguistics
170	Malayalam Research Journal	Benjamin Bailey Foundation	0974-1984	NA	Linguistics

171	Mizo Studies	Department of Mizo, Mizoram University	2319-6041	NA	Linguistics
172	Musi (print only)	Musi	2457-0796	NA	Linguistics
173	New Centuryin Ungal Noolagam	New Century Readers Sangam	2394-7535	NA	Linguistics
174	Nibandhamaala (print only)	Central Sanskrit University	2277-2359	NA	Linguistics
175	Parkh	Department of Punjabi, Panjab University	2320-9690	NA	Linguistics
176	Peyal- An Internationally Refereed Journal of Tamil Studies	Peyal Publications	2394-0948	NA	Linguistics
177	Pracya	Manohari Devi Kanoi Girls' College	2278-4004	NA	Linguistics
178	Rock Pebbles	Udayanath Majhi	0975-0509	NA	Linguistics

179	Russian Philology (print only)	The English and Foreign Languages University	2231-1564	NA	Linguistics
180	Sabaq- e- Urdu (print only)	Mohd Saleem	2321-1601	NA	Linguistics
181	Sahityasetu	Sahityasetu	2249-2372	NA	Linguistics
182	Sambodhi: Indological Research Journal of L. D. I. I. (print only)	Lalbhai Dalpatbhai Institute of Indology	2249-6661	NA	Linguistics
183	Samdarshi	Punjabi Academy	2581-3986	NA	Linguistics
184	Sampreshan (print only)	Sampreshan	2347-2979	NA	Linguistics
185	Sanskrit Vimarsah	Central Sanskrit University	0975-1769	NA	Linguistics

186	Sanvad	Post Graduation Department of Punjabi Studies, Khalsa College	2395-1273	NA	Linguistics
187	Semantics and Pragmatics	Linguistic Society of America	1937-8912	NA	Linguistics
188	Shama-e-Hayat (print only)	Zakir Husain Delhi College	2396-1230	NA	Linguistics
189	Shanlax International Journal of Tamil Research	Shanlax International Journals	2454-3993	2582-2810	Linguistics
190	Shodh Pragya	Uttarakhand Sanskrit University	2347-9892	NA	Linguistics
191	Surabharati	Department of Sanskrit, Gauhati University	0976-4488	NA	Linguistics
192	Synergies Inde	Groupe d'Etudes et de Recherches pour le Francais Langue Internationale	1951-6436	2260-8060	Linguistics
193	Tareekh e Adab e Urdu	Md. Yahya	2582-1229	2582-9157	Linguistics
194	Thaqafat-ul-hind	Indian Council for Cultural Relations	0970-3713	NA	Linguistics
195	The Journal of Oriental Research Madras (print only)	The Kuppuswami Sastri Research Institute	0022-3301	NA	Linguistics
196	Tifan (print only)	Tifan	2231-573X	NA	Linguistics
197	Translation and Translanguaging in Multilingual Contexts	John Benjamins Publishing Company	2352-1805	2352-1813	Linguistics
198	Translation Today	National Transmission Mission	0972-8740	0972-8090	Linguistics
199	Urdu Studies	Department of Urdu, Jai Prakash University	NA	NA	Linguistics

200	Ushati (print only)	Central Sanskrit University, Ganganath Jha Campus	2277-680X	NA	Linguistics
201	Vagvai Brahma	Central Sanskrit University	2457-0729	NA	Linguistics
202	Vijnanakairali	Kerala Language Institute	NA	NA	Linguistics
203	Vishwa Hindi Patrika	Vishwa Hindi Sachivalaya	1694-2477	NA	Linguistics
204	Word Structure	Edinburgh University Press	1750-1245	1755-2036	Linguistics
205	Working Papers on Linguistics and Literature	Department of linguistics, Bharathiyar University	2349-8420	NA	Linguistics
206	Zielsprache Deutsch	Stauffenburg Verlag	0341-5864	NA	Linguistics
207	Apeiron- A Journal for Ancient Philosophy and Science	Walter de Gruyter	0003-6390	NA	Philosophy
208	Between the Species	California Polytechnic State University	NA	1945-8487	Philosophy
209	Comparative Philosophy	Center for Comparative Philosophy, San Jose State University	NA	2151-6014	Philosophy
210	Darsaniki (print only)	Department of Philosophy, Mahatma Gandhi Kashi Vidyapith	2230-7435	NA	Philosophy
211	Darshnik Traimasik	Akhil Bhartiya Darshan Parishad	0974-8849	NA	Philosophy
212	Environmental Philosophy	Philosophy Documentation Center	1718-0198	2153-8905	Philosophy
213	Gandhi Marg	Gandhi Peace Foundation	0016-4437	NA	Philosophy
214	IAFOR Journal of Ethics, Religion and Philosophy	International Academic Forum	NA	2187-0624	Philosophy

215	Indian Philosophical Quarterly (print only)	Department of Philosophy, Savitribai Phule Pune University	0376-415X	NA	Philosophy
216	International Critical Thought	Taylor and Francis	2159-8282	2159-8312	Philosophy
217	International Journal of Yoga- Philosophy, Psychology and Parapsychology	Swami Vivekananda Yoga Anusandhana Samsthana University	2347-5633	2348-5108	Philosophy

218	Journal for Peace and Justice Studies	Center for Peace and Justice Education	1093-6831	2153-9839	Philosophy
219	Journal of East- West Thought	International Association for East-West Studies	2161-7236	2168-2259	Philosophy
220	Journal of Foundational Research	Department of Philosophy, University of Rajasthan	2395-5635	NA	Philosophy
221	Journal of Scottish Philosophy	Edinburgh University Press	1479-6651	1755-2001	Philosophy
222	Journal of the All Orissa Philosophy Association	All Orissa Philosophy Association	2395-2784	NA	Philosophy
223	Journal of World Philosophies	Indiana University Press	NA	2474-1795	Philosophy
224	Kanpur Philosophers (print only)	New Archaeological and Genological Society	2348-8301	NA	Philosophy
225	Mind	Oxford University Press	1460-2113	0026-4423	Philosophy
226	Paramarsa (Hindi) (print only)	Department of Philosophy, Savitribai Phule Pune University	2320-4443	NA	Philosophy
227	Paramarsa (Marathi) (print only)	Department of Philosophy, Savitribai Phule Pune University	2320-4478	NA	Philosophy

228	Phenomenology and Mind	Firenze University Press	2280-7853	2239-4028	Philosophy
229	Philosophical Papers: Journal of the Department of Philosophy	Department of Philosophy, University of North Bengal	0976-4496	NA	Philosophy
230	Philosophical Traditions of the World (print only)	Department of Philosophy, University of Mumbai	2581-9577	NA	Philosophy
231	Philosophy and the Life-World	Department of Philosophy, Vidyasagar University	0975-8461	NA	Philosophy
232	Rabindra Bharati Journal of Philosophy (print only)	Rabindra Bharati University	0973-0087	NA	Philosophy
233	Ravenshaw Journal of Philosophy (print only)	Department of Philosophy, Ravenshaw University	2395-3209	NA	Philosophy
234	Tattva: Journal of Philosophy	CHRIST Deemed to be University	0975-332X	NA	Philosophy

235	The Theosophist	Theosophical Publishing House	0972-1851	NA	Philosophy
236	Unmilan (print only)	Darshan Pratishthan	0974-0053	NA	Philosophy
237	Vicharshalaka (print only)	Vicharshalaka	2229-7901	NA	Philosophy
238	Ajasra	Akhila Bharatiya Sanskrit Parishad	2278-3741	NA	Sanskrit
239	Amnayiki (print only)	Faculty of Sanskrit Vidya Dharma Vigyan, Banaras Hindu University	2277-4270	NA	Sanskrit
240	Hari Prabha	Haryana Sanskrit Akademi	2278-0416	NA	Sanskrit
241	Khagolah	Central Sanskrit University	2546-3420	NA	Sanskrit
242	Kiranavali	Sanskrit Research Foundation	0975-4067	NA	Sanskrit
243	Natyam (print only)	Natya Parisad, Department of Sanskrit, Doctor Harisingh Gour University	2229-5550	NA	Sanskrit
244	Sanskritvidya (print only)	Faculty of Sanskrit vidya dharma Vijnan	0975-8348	NA	Sanskrit
245	Shodh Pragya	Uttarakhand Sanskrit University	2347-9892	NA	Sanskrit
246	Shodha Samiksha	Ratha Seva Pratishthanam	2249-5045	NA	Sanskrit
247	Shrivaishnavi	Central Sanskrit University	7552-2779	NA	Sanskrit
248	Musi (print only)	Musi	2457-0796	NA	Telugu
249	Hamari Awaaz (print only)	Department of Urdu, Chaudhary Charan Singh University	2394-7381	NA	Urdu
250	Monthly Baraheen (print only)	Shah Waliullah Institute	2395-	NA	Urdu

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251	Saghar e Adab	Kahkashan Yasmin	2582-3612	NA	Urdu
252	Shama-e-Hayat (print only)	Zakir Husain Delhi College	2396-1230	NA	Urdu
253	Shashmahi Ghalibnama (print only)	Ghalib Institute	2582-5658	NA	Urdu
254	Urdu Studies	Department of Urdu, Jai Prakash University	NA	NA	Urdu
255	Asia Pacific Journal of Public Administration	The University of Hong Kong	2327-6665	2327-6673	Political Science
256	Bhartiya Rajniti Vigyaan Shodh Patrika (print only)	Indian Political Science Association	2229-452X	NA	Political Science
257	Derrida Today	Edinburgh University Press	1754-8500	1754-8519	Political Science
258	European Journal of International Security	Cambridge University Press	2057-5637	2057-5645	Political Science

259	European Security	Taylor and Francis	0966-2839	1746-1545	Political Science
260	Explorations: E- Journal of Indian Sociological Society	Indian Sociological Society	NA	2581-5741	Political Science
261	Foreign Trade Review	Indian Institute of Foreign Trade	0015-7325	0971-7625	Political Science
262	Gandhi Marg	Gandhi Peace Foundation	0016-4437	NA	Political Science
263	Glocalism: Journal of Culture, Politics and Innovation	Globus et Locus	NA	2283-7949	Political Science
264	Indian Journal of Asian Affairs	Indian Journal of Asian Affairs	0970-	NA	Political

			6402		Science
265	Indian Journal of Politics and International Relations	School of International Relations and Politics, Mahatma Gandhi University	0973-5011	NA	Political Science
266	Indian Studies Review	Centre for Study of Politics and Governance	NA	2582-7154	Political Science
267	Indo- Pacific Journal of Phenomenology	Taylor and Francis	2079-7222	1445-7377	Political Science
268	International Journal of Human Rights and Constitutional Studies	Inderscience Publishers	2050-103X	2050-1048	Political Science
269	International Journal of Political Economy	Taylor and Francis	0891-1916	1558-0970	Political Science
270	International Journal of Transparency and Accountability in Governance	National Law University	2395-4337	NA	Political Science
271	International Journal on World Peace	World Peace Academy	0742-3640	NA	Political Science
272	International Studies	Jawaharlal Nehru University	0020-8817	0973-0702	Political Science
273	Jadavpur Journal of International Relations	Jadavpur University	0973-5984	2349-0047	Political Science
274	Journal of Asian Security and International Affairs	Sage Publications	2347-7970	2349-0039	Political Science
275	Journal of Indian School of Political Economy	Indian School of Political Economy	0971-0396	NA	Political Science
276	Journal of Polity and Society	Department of Political Science, University of Kerala	0976-0210	NA	Political Science
277	Journal of Social Work Education, Research and Action	National Association of Social Workers	2394-4102	NA	Political Science

278	Man and Development	Centre for Research in Rural and Industrial Development	0258-0438	NA	Political Science

279	Man and Society: A Journal of North-East Studies	Indian Council of Social Science Research, North Eastern Regional Centre	2229-4058	NA	Political Science
280	New Perspectives on Political Economy	CEVRO Institute	1801-0938	1804-6290	Political Science
281	Peace Research: The Canadian Journal of Peace and Conflict Studies	Menno Simons College	0008-4697	NA	Political Science
282	Politics, Groups, and Identities	Taylor and Francis	2156-5503	2156-5511	Political Science
283	Rajasthan Journal of Sociology	Rajasthan Sociological Association	2249-9334	NA	Political Science
284	Refugee Watch	Mahanirban Calcutta Research Group	2347-405X	NA	Political Science
285	Resilience: International Policies, Practices and Discourses	Taylor and Francis	2169-3293	2169-3307	Political Science
286	Sameeksha Sociology Research Journal (print only)	Thunchath Ezhuthachan Malayalam University	NA	NA	Political Science
287	Social Scientist	Social Scientist Trust	0970-0293	NA	Political Science
288	Society and Culture In South Asia	South Asian University	2393-8617	2394-9872	Political Science
289	The Government- Annual Research Journal of Political Science	Department of Political Science, University of Sindh Jamshoro	2227-7927	NA	Political Science
290	The Indian Journal of Political Science (print only)	Indian Political Science Association	0019-5510	NA	Political Science

291	Theory and Event	Johns Hopkins University Press	2572-6633	1092-311X	Political Science
292	European Journal of Education and Psychology	University of Almeria	1888-8992	1989-2209	Psychology
293	Health Psychology Update	British Psychological Society	0954-2027	2396-8729	Psychology
294	Indian Journal of Clinical Psychology (print only)	Indian Association of Clinical Psychologists	0303-2582	NA	Psychology
295	Indian Journal of Psychology (print only)	Indian Psychological Association	0019-5553	NA	Psychology
296	Indian Journal of Social Psychiatry	Indian Journal of Social Psychiatry	0971-9962	2454-8316	Psychology
297	Industrial Psychiatry Journal	Association of Industrial Psychiatry of India	0972-6748	0976-2795	Psychology
298	International Coaching Psychology Review	British Psychological Society	1750-2764	2396-8753	Psychology

299	International Journal of Behavioral Sciences	Baqiyatallah University of Medical Sciences	2322-1194	2423-5784	Psychology
300	International Journal of Educational Psychology	Hipatia Press	2014-3591	NA	Psychology
301	International Journal of School and Educational Psychology	Taylor and Francis	2168-3603	2168-3611	Psychology
302	International Journal of Yoga-Philosophy, Psychology and Parapsychology	Swami Vivekananda Yoga Anusandhana Samsthana University	2347-5633	2348-5108	Psychology
303	Journal of Mental Health and Human Behaviour	Indian Psychiatric Society- North Zone	0971-8990	2543-1897	Psychology
304	Journal of Psychosocial Studies	Policy Press	NA	1478-6737	Psychology

305	Journal of the Society for Psychical Research	Society for Psychical Research	0037-9751	NA	Psychology
306	Psychology of Women Section Review	British Psychological Society	1466-3724	NA	Psychology
307	Psychology, Community and Health	PsychOpen	NA	2182-438X	Psychology
308	Sport and Exercise Psychology Review	British Psychological Society	1745-4980	2396-961X	Psychology
309	The Coaching Psychologist	British Psychological Society	1748-1104	2396-9628	Psychology
310	Yoga- Mimamsa	Kaivalyadhama Ashram	0044-0507	2394-2487	Psychology
311	Administrative Development: A Journal of HIPA, Shimla	Himachal Institute of Public Administration	2319-2976	NA	Public Administration
312	Administrative Theory and Praxis	Taylor and Francis	1084-1806	1949-0461	Public Administration
313	Bihar Journal of Public Administration	Indian Institute of Public Administration	0974-2735	NA	Public Administration
314	Indian Journal of Public Administration	Indian Institute of Public Administration	0019-5561	2457-0222	Public Administration
315	Journal of Services Research	Vedatya Institute	0972-4702	2581-3412	Public Administration
316	Lok Prashasan	Indian Institute of Public Administration	2249-2577	NA	Public Administration
317	The Indian Police Journal	Bureau of Police Research and Development, Ministry of Home Affairs	0537-2429	NA	Public Administration
318	The Journal of Institute of Public Enterprise	Institute of Public Enterprise	0971-1864	NA	Public Administration

319	Explorations: E- Journal of Indian Sociological Society	Indian Sociological Society	NA	2581-5741	Sociology
320	Gandhi Marg	Gandhi Peace Foundation	0016-4437	NA	Sociology
321	Journal of Social Work Education, Research and Action	National Association of Social Workers	2394-4102	NA	Sociology
322	Man and Society: A Journal of North- East Studies	Indian Council of Social Science Research, North Eastern Regional Centre	2229-4058	NA	Sociology
323	Rajasthan Journal of Sociology	Rajasthan Sociological Association	2249-9334	NA	Sociology
324	Refugee Watch	Mahanirban Calcutta Research Group	2347-405X	NA	Sociology
325	Sameeksha Sociology Research Journal (print only)	Thunchath Ezhuthachan Malayalam University	NA	NA	Sociology
326	Social Scientist	Social Scientist Trust	0970-0293	NA	Sociology
327	Society and Culture In South Asia	South Asian University	2393-8617	2394-9872	Sociology
328	ADBU Journal of Engineering Technology	Assam Don Bosco University	NA	2348-7305	Engineering
329	Advanced Engineering Forum	Trans Tech Publications Inc.	2234-9898	2234-991X	Engineering
330	Advanced Science Letters	American Scientific Publishers	1936-6612	1936-7317	Engineering
331	Annals of Faculty Engineering Hunedoara- International Journal of Engineering	Faculty of Engineering Hunedoara, University Politehnica Timisoara	1584-2665	1584-2673	Engineering
332	Bioengineering	MDPI	2306-5354	NA	Engineering

333	Current Biochemical Engineering	Bentham Science Publishers	2212-7119	2212-7127	Engineering
334	Current Opinion in Biomedical Engineering	Elsevier	2468-4511	NA	Engineering
335	High Voltage	Institution of Engineering and Technology	NA	2397-7264	Engineering
336	ICTACT Journal on Image and Video Processing	ICT Academy	0976-9099	0976-9102	Engineering
337	ICTACT Journal on Microelectronics	ICT Academy	2395-1672	2395-1680	Engineering
338	Industrial Engineering Journal	Indian Institution of Industrial Engineering	0970-2555	NA	Engineering

339	International Journal of Advances in Engineering Sciences and Applied Mathematics	Springer	0975-0770	0975-5616	Engineering
340	International Journal of Applied Industrial Engineering	IGI Global	2155-4153	2155-4161	Engineering
341	International Journal of Architecture, Engineering and Construction	International Association for Sustainable Development and Management	1911-110X	1911-1118	Engineering
342	International Journal of Biomedical and Clinical Engineering	IGI Global	2161-1610	2161-1629	Engineering
343	International Journal of Design Engineering	Inderscience Publishers	1751-5882	1751-5874	Engineering
344	International Journal of Energy Optimization and Engineering	IGI Global	2160-9500	2160-9543	Engineering

345	International Journal of Financial Engineering and Risk Management	Inderscience Publishers	2049-0909	2049-0917	Engineering
346	International Journal of Gender, Science and Technology	Department of Computing and Communications, The Open University	NA	2040-0748	Engineering
347	International Journal of Information Technology and Electrical Engineering	International Journal of Information Technology and Electrical Engineering	NA	2306-708X	Engineering
348	International Journal of Masonry Research and Innovation	Inderscience Publishers	2056-9467	2056-9459	Engineering
349	International Journal of Materials, Mechanics and Manufacturing	International Association of Computer Science and Information Technology	1793-8198	NA	Engineering
350	International Journal of Monitoring and Surveillance Technologies Research	IGI Global	2166-7241	2166-725X	Engineering
351	International Journal of Nano Dimension	Islamic Azad University, Tonekabon Branch	2008-8868	2228-5059	Engineering
352	International Journal of Statistics and Reliability Engineering	Indian Association for Reliability and Statistics	2350-0174	2456-2378	Engineering
353	ISET Journal of Earthquake Technology	Indian Society of Earthquake Technology	0972-0405	NA	Engineering
354	Journal of Aerospace Sciences and Technologies	Aeronautical Society of India	0972-950X	NA	Engineering
355	Journal of Construction Management	National Institute of Construction Management and Research	0970-3675	NA	Engineering

356	Journal of Scientific Research	Institute of Science, Banaras Hindu University	0447-9483	NA	Engineering
357	Journal of Scientific Temper	National Institute of Science Communication and Information Resources	2278-2788	2278-2796	Engineering
358	Journal of Sustainable Metallurgy	Springer	2199-3823	2199-3831	Engineering
359	Mechanics of Advanced Materials and Modern Processes	Springer	NA	2198-7874	Engineering
360	Nano Convergence	Springer	NA	2196-5404	Engineering
361	Nanocomposites	Taylor and Francis	2055-0324	2055-0332	Engineering
362	Proceeding in Applied Mathematics and Mechanics	GAMM- Association of Applied Mathematics and Mechanics	NA	1617-7061	Engineering
363	Protection and Control of Modern Power Systems	Springer	2367-2617	2367-0983	Engineering
364	Reliability: Theory and Applications	Gnedenko Forum	NA	1932-2321	Engineering
365	Research Journal of Textile and Apparel	Emerald Publishing Limited	1560-6074	2515-8090	Engineering
366	Rubber Science	Rubber Research Institute of India	2454-4841	2454-485X	Engineering
367	Samriddhi: A Journal of Physical Sciences, Engineering and Technology	Institute of Technology, School of Management Sciences	2229-7111	2454-5767	Engineering
368	The Horological Journal	British Horological Institute	0018-5108	NA	Engineering
369	World Journal of Science, Technology and Sustainable Development	Emerald Publishing Limited	2042-5953	2042-5945	Engineering

370	African Journal of Accounting, Auditing and Finance	Inderscience Publishers	2046-8083	2046-8091	Management
371	AIMS Journal of Management	Association of Indian Management Schools	2395-6852	NA	Management

372	American Journal of Business	Emerald Publishing Limited	1935-5181	1935-519X	Management
373	Asia- Pacific Journal of Risk and Insurance	Walter de Gruyter	NA	2153-3792	Management
374	Asia- Pacific Management Accounting Journal	Asia- Pacific Management Accounting Association	1675-3194	2550-1631	Management
375	Asian Journal of Business Ethics	Springer	2210-6723	2210-6731	Management
376	Atna Journal of Tourism Studies	CHRIST Deemed to be University	0975-3281	NA	Management
377	Bank Quest	Indian Institute of Bankers	0019-4921	NA	Management
378	BimaQuest- The Journal of Insurance, Pension and Management	National Insurance Academy	0974-0791	NA	Management
379	Brazilian Annals of Tourism Studies	Universidade Federal de Juiz de Fora	NA	2238-2925	Management
380	Case Folio The IUP Journal of Management Case Studies	IUP Publications	0972-5350	NA	Management
381	Colombo Business Journal	Faculty of Management and Finance, University of Colombo	2579-2210	1800-363X	Management
382	Decision	Indian Institute of Management Calcutta	0304-0941	2197-1722	Management
383	Eurasian Journal of Business and Economics	Ala- Too International University	1694-5948	1694-5972	Management
384	Focus: Journal of International Business	Journal Press India	2347-4459	2395-258X	Management

385	HSB Research Review	Haryana School of Business, Guru Jambheshwar University of Science and Technology	0976-1179	NA	Management
386	IITM Journal of Business Studies	Institution of Innovation in Technology and Management	2393-9451	2394-5028	Management
387	International Journal of Accounting and Finance	Inderscience Publishers	1752-8224	1752-8232	Management
388	International Journal of Business and Emerging Markets	Inderscience Publishers	1753-6219	1753-6227	Management
389	International Journal of Business Competition and Growth	Inderscience Publishers	2042-3845	2042-3853	Management
390	International Journal of Corporate Governance	Inderscience Publishers	1754-3037	1754-3045	Management

391	International Journal of Economics and Accounting	Inderscience Publishers	2041-868X	2041-8698	Management
392	International Journal of Financial Engineering and Risk Management	Inderscience Publishers	2049-0909	2049-0917	Management
393	International Journal of Hospitality and Event Management	Inderscience Publishers	2050-0483	2050-0491	Management
394	International Journal of Indian Culture and Business Management	Inderscience Publishers	1753-0806	1753-0814	Management
395	International Journal of Leisure and Tourism Marketing	Inderscience Publishers	1757-5567	1757-5575	Management
396	International Journal of Online Marketing	IGI Global	2156-	2156-	Management

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397	International Management Review	American Scholar Press	1551-6849	NA	Management
398	International Research Journal of Business Studies	Universitas Prasetiya Mulya	2089-6271	2338-4565	Management
399	IPE Journal of Management	Institute of Public Enterprise	2249-9040	NA	Management
400	Iranian Journal of Management Studies	College of Farabi, University of Tehran	2008-7055	2345-3745	Management
401	Jharkhand Journal of Development and Management Studies	Xavier Institute of Social Service	0973-8444	NA	Management
402	JIM QUEST: Journal of Management and Technology	Jaipuria Institute of Management	0975-6280	NA	Management
403	Jindal Journal of Business Research	O. P. Jindal Global University	2278-6821	2321-0311	Management
404	Journal of Enterprising Culture	World Scientific Publishing	0218-4958	1793-6330	Management
405	Journal of Entrepreneurship and Innovation in Emerging Economies	International Entrepreneurship Forum	2393-9575	2394-9945	Management
406	Journal of Global Responsibility	Emerald Publishing Limited	2041-2568	2041-2576	Management
407	Journal of Infrastructure Development	India Development Foundation	0974-9306	0975-5969	Management
408	Journal of Innovation and Entrepreneurship	Springer	NA	2192-5372	Management
409	Journal of International Business and Economy	The College of Business, San Francisco State University	1527-8603	NA	Management

410	Journal of Management	Xavier Institute of Management and Entrepreneurship	2229-5348	NA	Management

	and Entrepreneurship				
411	Journal of Small Business and Entrepreneurship	Taylor and Francis	0827-6331	2169-2610	Management
412	Journal of Tourism	Centre for Mountain Tourism and Hospitality Studies	0972-7310	NA	Management
413	Journal of Tourism Hospitality and Culinary Arts	Universiti Teknologi MARA	1985-8914	2590-3837	Management
414	Journal of Tourism Insights	Resort and Commercial Recreation Association	2328-0824	NA	Management
415	Labour and Development	V. V. Giri National Labour Institute	0973-0419	NA	Management
416	Latin American Journal of Tourismology	Federal University of Juiz de Fora	NA	2448-198X	Management
417	Metamorphosis: A Journal of Management Research	Indian Institute of Management	0972-6225	2348-9324	Management
418	NMIMS Management Review	Narsee Monjee Institute of Management Studies	0971-1023	NA	Management
419	Optimization: Journal of Research in Management	Ganeshi Lalji Bajaj Institute of Management and Research	0974-0988	NA	Management
420	PIMT Journal of Research	Punjab Institute of Management and Technology	2278-7925	NA	Management

421	Prajnan: Journal of Management and Social Sciences	National Institute of Bank Management	0970-8448	NA	Management
422	Pravasi Jagat	Kendriya Hindi Sansthan	2581-6985	NA	Management
423	Rajagiri Management Journal	Rajagiri Centre for Business Studies	0972-9968	2633-0091	Management
424	Ramanujan International Journal of Business and Research	Department of Commerce, Ramanujan College, University of Delhi	2455-5959	NA	Management
425	Review of Market Integration	India Development Foundation	0974-9292	0975-4709	Management
426	Review of Professional Management	New Delhi Institute of Management	0972-8686	2455-0647	Management
427	Revista De Turism- Studii Si Cercetari in Turism	Department of Economic Sciences and Public Administration, University of Suceava	NA	1844-2994	Management
428	SEMCOM Management and Technology Review	Sardar Gunj Mercantile English Medium College of Commerce and Management	2321-5968	NA	Management
429	Small Enterprises Development, Management and Extension Journal	Sage Publications	0970-8464	2456-1223	Management

430	South Asian Journal of Management	Association of Management Development Institutions in South Asia	0971-5428	NA	Management
431	Studies in Business and Economics	Lucian Blaga University of Sibiu	NA	2344-5416	Management
432	The Indian Journal of Commerce	All India Commerce Association	0019-512X	2454-6801	Management
433	The IUP Journal of Accounting Research and Audit Practices	IUP Publications	0972-690X	NA	Management
434	The IUP Journal of Marketing Management	IUP Publications	0972-6845	NA	Management
435	The IUP Journal of Organizational Behavior	IUP Publications	0972-687X	NA	Management
436	The Journal of Corporate Accounting and Finance	John Wiley and Sons, Inc.	NA	1097-0053	Management
437	The Journal of Global Entrepreneurship Research	Springer	NA	2251-7316	Management
438	The Journal of Prediction Markets	University of Buckingham Press	1750-676X	NA	Management
439	The Management Accountant	The Institute of Cost Accountants of India	0972-3528	NA	Management

440	The South East Asian Journal of Management	Faculty of Economics and Business, Universitas Indonesia	1978-1989	2355-6641	Management
441	Turizam-International Scientific Journal	Institute of Geography and Tourism, University of Novi Sad	1450-6661	1821-1127	Management
442	Vilakshan- XIMB Journal of Management	Xavier Institute of Management	0973-1954	NA	Management
443	Water Science	National Water Research Center	1110-4929	2357-0008	Management
444	Applied Water Science	Springer	2190-5487	2190-5495	Technology
445	Biotechnology Research and Innovation	Elsevier	2452-0721	NA	Technology
446	JIM QUEST: Journal of Management and Technology	Jaipuria Institute of Management	0975-6280	NA	Technology
447	Journal of Indian Water Works Association (print only)	Indian Water Works Association	0970-275X	NA	Technology
448	Journal of Innovation and Entrepreneurship	Springer	NA	2192-5372	Technology
449	Journal of Microscopy and Ultrastructure	Saudi Society of Microscopes	NA	2213-8803	Technology
450	Journal of Self-Assembly and Molecular	River Publishers	2245-4551	2245-8824	Technology

	Electronics				
451	Journal of Sustainable Water in the Built Environment	American Society of Civil Engineers	NA	2379-6111	Technology
452	Journal of Water and Environmental Nanotechnology	Iran Nanotechnology Initiative Council and Iranian Environmental Mutagen Society	2476-7204	2476-6615	Technology
453	Plant Biotechnology	Institute of Plant Biotechnology, Central University "Marta Abreu"	1609-1841	2074-8647	Technology
454	Water Economics and Policy	World Scientific Publishing	2382-624X	2382-6258	Technology
455	Water History	Springer	1877-7236	1877-7244	Technology
456	Adhigam (print only)	Rajya Shiksha Sansthan	2394-773X	NA	Education
457	Asian Association of Open Universities Journal	Asian Association of Open Universities	1858-3431	2414-6994	Education
458	Asian Journal of Legal Education	The West Bengal National University of Juridical Sciences	2322-0058	2348-2451	Education
459	Australian Journal of Career Development	Sage Publications	1038-4162	2200-6974	Education
460	Bharatiya Shiksha Shodh Patrika (print	Bharatiya Shiksha Shodh Sansthan	0970-7603	NA	Education

	only)				
461	Bhartiya Adhunik Shiksha	National Council of Educational Research and Training	0972-5636	NA	Education
462	Education India: A Quarterly Refereed Journal of Dialogues on Education	Education India	NA	2278-2435	Education
463	EduTech	Pallav Memorial Trust	NA	0975-5004	Education
464	European Journal of Education and Psychology	University of Almeria	1888-8992	1989-2209	Education
465	Gifted Education International	Sage Publications	0261-4294	2047-9077	Education
466	IAFOR Journal of Education	International Academic Forum	NA	2187-0594	Education
467	Indian Educational Review	National Council of Educational Research and Training	0019-4700	0972-561X	Education
468	Indian Journal of Adult Education	Indian Adult Education Association	0019-5006	NA	Education
469	Indian Journal of Educational Technology	Central Institute of Educational Technology	2581-8325	NA	Education
470	Indian Journal of Open Learning	Indira Gandhi National Open University	0971-2690	NA	Education
471	Indian Journal of Teacher Education	National Council for Teacher Education	2349-6355	NA	Education

472	International Coaching Psychology Review	British Psychological Society	1750-2764	2396-8753	Education
473	International Journal of Educational Psychology	Hipatia Press	2014-3591	NA	Education
474	International Journal of Information and Education Technology	International Association of Computer Science and Information Technology	NA	2010-3689	Education
475	International Journal of School and Educational Psychology	Taylor and Francis	2168-3603	2168-3611	Education
476	Journal of Education Culture and Society	Institute of Pedagogy, University of Wrocław	NA	2081-1640	Education

477	Journal of Education for Sustainable Development	Centre for Environment Education	0973-4082	0973-4074	Education
478	Journal of Education: Rabindra Bharati University (print only)	Department of Education, Rabindra Bharati University	0972-7175	NA	Education
479	Journal of Educational Planning and Administration	National University of Educational Planning and Administration	0971-3859	NA	Education
480	Journal of Educational Technology Systems	Sage Publications	0047-2395	1541-3810	Education
481	Journal of Extension Education	Extension Education Society	0971-	2456-	Education

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482	Journal of Indian Education	National Council of Educational Research and Training	0377-0435	0972-5628	Education
483	Journal of International Special Needs Education	Division of International Special Education and Services	2159-4341	2331-4001	Education
484	Management Teaching Review	Sage Publications	2379-2981	2379-2981	Education
485	Prajna	Banaras Hindu University	0554-9884	NA	Education
486	Prathmik Shikshak	National Council of Educational Research and Training	0970-9312	NA	Education
487	Research and Reflections on Education	St. Xavier's College of Education	0974-648X	NA	Education
488	School Science (print only)	National Council of Educational Research and Training	0036-679X	NA	Education
489	Shikshan Soudha (print only)	Vidyanidhi Prakashana	2249-2429	NA	Education
490	Shodha Samiksha	Ratha Seva Pratishthanam	2249-5045	NA	Education
491	Teacher Support	National Council for Teacher Education	0975-4598	NA	Education
492	The Classical Outlook	American Classical League	0009-8361	2573-4369	Education
493	The Coaching Psychologist	British Psychological Society	1748-1104	2396-9628	Education
494	The Online Journal of Distance Education and e-Learning	The Online Journal of Distance Education and e-Learning	NA	2147-6454	Education
495	The Primary Teacher (print only)	National Council of Educational Research and Training	0970-9282	NA	Education
496	The Turkish Online Journal of Educational Technology	Turkish Online Journal of Educational Technology	NA	2146-7242	Education

497	Towards Excellence	UGC- Human Resource Development Centre, Gujarat University	NA	0974-035X	Education
498	Voices of Teachers and Teacher Educators	National Council of Educational Research and Training	2455-1376	NA	Education
499	AIPLA Quarterly Journal	American Intellectual Property Law Association	0883-6078	NA	Law
500	Annual Survey of Indian Law	Indian Law Institute	0570-2666	NA	Law
501	Appeal: Review of Current Law and Law Reform	Appeal Publishing Society	1205-612X	1925-4938	Law
502	Army Institute of Law Journal	Army Institute of Law	0975-8208	NA	Law
503	Asian Journal of Legal Education	The West Bengal National University of Juridical Sciences	2322-0058	2348-2451	Law
504	Australian Intellectual Property Journal	Lawbook Co.	1038-1635	NA	Law
505	Australian Journal of Administrative Law	Lawbook Co.	1320-7105	NA	Law
506	Australian Journal of Labour Law	LexisNexis Butterworths	1030-7222	NA	Law
507	Banaras Law Journal	Law School, Banaras Hindu University	0522-0815	NA	Law
508	Berkeley Journal of International Law	School of Law, University of California	1085-5718	NA	Law
509	Boston College Law Review	School of Law, Boston College	0161-6587	NA	Law
510	Brawijaya Law Journal	Brawijaya University	2356-4512	2503-0841	Law
511	Brooklyn Law Review	Brooklyn Law School	0007-2362	NA	Law
512	California Western International Law Journal	California Western School of Law	0886-3210	NA	Law
513	California Western Law Review	California Western	0008-1639	NA	Law

		School of Law			
514	Canberra Law Review	University of Canberra	1320-6702	1839-2660	Law
515	Cardozo Arts and Entertainment Law Journal	Cardozo School of Law, Yeshiva University	0736-7694	NA	Law
516	City University of New York Law Review	City University of New York School of Law	2572-7788	NA	Law
517	CMR University Journal for Contemporary	CMR University	2582-4805	NA	Law
518	Company Law Journal (print only)	Company Law Journal India Private Limited	0010-4019	NA	Law
519	Comparative Constitutional Law and Administrative Law	National Law University	NA	2347-4351	Law
520	Contemporary Law Review	Maharashtra National Law University	2581-7582	NA	Law
521	CPJ Law Journal	Chanderprabhu Jain College of Higher Studies and School of Law	0976-3562	NA	Law
522	Criminal Law Journal	Lawbook Co.	0314-1160	NA	Law
523	Dehradun Law Review	Law College Dehradun, Uttaranchal University	2231-1157	NA	Law
524	Dr. Ram Manohar Lohiya National Law University Journal	National Law University	0975-9549	NA	Law
525	George Mason Law Review	Antonin Scalia Law School, George Mason University	1088-5625	NA	Law
526	George Washington International Law Review	George Washington University	1534-9977	0748-4305	Law

527	German Law Journal	Cambridge University Press	NA	2071-8322	Law
528	GNLU Journal of Law, Development and Politics	Gujarat National Law University	0975-0193	NA	Law
529	Harvard Human Rights Journal	Harvard Law School, Harvard University	1943-5088	NA	Law
530	Harvard Journal of Law and Technology	Harvard Law School, Harvard University	0897-3393	NA	Law
531	Hasanuddin Law Review	Faculty of Law, Hasanuddin University	2442-9880	2442-9899	Law
532	Idaho Law Review	College of Law, University of Idaho	0019-1205	NA	Law
533	ILI Law Review	Indian Law Institute	NA	0976-1489	Law
534	Indian Journal of Criminology	National Law University	0997-7249	NA	Law
535	Indian Journal of Intellectual Property Law	NALSAR University of Law	0975-492X	2278-862X	Law
536	Indian Journal of International Law	The Indian Society of International Law	0019-5294	2199-7411	Law

537	Indian Journal of Law and Justice	Department of Law, University of North Bengal Darjeeling	0976-3570	NA	Law
538	Indian Journal of Law and Technology	National Law School of India University	0973-0362	NA	Law
539	Intellectual Property Forum	Intellectual Property Society of Australia and New Zealand Inc.	0815-2098	NA	Law
540	Intellectual Property	Carswell	0824-7064	NA	Law

	Journal				
541	International Annals of Criminology	Cambridge University Press	0003-4452	2398-676X	Law
542	International Journal of Legal Studies and Research	School of Technology, Law and Development, West Bengal National University of Juridical Sciences	NA	2278-4764	Law
543	International Journal on Consumer Law and Practice	National Law School of India University	2347-2731	NA	Law
544	Journal of Indian Law Institute	Indian Law Institute	0019-5731	NA	Law
545	Journal of National Human Rights Commission, India (print only)	National Human Rights Commission India	0973-7596	NA	Law
546	Journal of National Law University Delhi	National Law University Delhi	2277-4017	2516-8851	Law
547	Journal on Environmental Law, Policy and Development	Centre for Environmental Law Education, Research and Advocacy	NA	2348-7046	Law
548	Jurisprudence: An International Journal of Legal and Political Thought	Taylor and Francis	2040-3313	2040-3321	Law
549	Kanpur Philosophers (print only)	New Archaeological and Genological Society	2348-8301	NA	Law
550	Legal Information Management	Cambridge University Press	1472-6696	1741-2021	Law
551	Lewis and Clark Law Review	Northwestern School of Law	1557-6582	NA	Law
552	Manav Adhikar: Nai Dishayein (print only)	National Human Rights Commission India	0973-7588	NA	Law

553	NALSAR Student Law Review	Nalsar University of Law	0975-0216	NA	Law
554	National Law School Journal	National Law School of India University	0971-491X	NA	Law
555	NIU International Journal of Human Rights	Noida International University	2394-0298	NA	Law
556	NLS Business Law Review	National law School of india University	2456-1010	NA	Law
557	NLUJ Law Review	National Law University	2326-5320	NA	Law
558	Rostrum's Law Review	Rostrum Legal	NA	2321-3787	Law
559	Shimla Law Review	Himachal Pradesh National Law University	2582-1903	NA	Law
560	Supreme Court Journal (print only)	SCJ Publications	NA	NA	Law
561	Temida	Victimology Society of Serbia	1450-6637	2406-0941	Law
562	The Canadian Bar Review	Canadian Bar Association	0008-3003	NA	Law
563	The Journal of Comparative Law	Wildy, Simmonds and Hill Publishing	1477-0814	NA	Law
564	The Judges' Journal	American Bar Association	0047-2972	NA	Law
565	Uniform Law Review	Oxford University Press	1124-3694	2050-9065	Law
566	Vermont Law Review	Vermont Law School	0145-2908	NA	Law
567	Virginia Journal of International Law	School of Law, University of Virginia	0042-6571	NA	Law
568	Washington and Lee Law Review	Washington and Lee University	0043-0463	NA	Law
569	William and Mary Law Review	William and Mary Law School	0043-5589	2374-8524	Law
570	Wisconsin Journal of Law, Gender and Society	University of Wisconsin Law School	1052-3421	NA	Law
571	Yale Journal of Law and Feminism	Yale Law School	1043-9366	NA	Law

572	Yale Law and Policy Review	Yale Law School	0740-8048	NA	Law
573	Bharatiya Vaigyanik evam Audyogik Anusandhan Patrika	National Institute of Science Communication and Information Resources	0771-7706	0975-2412	Astronomy
574	Bulgarian Journal of Physics	Heron Press Ltd.	1310-0157	1314-2666	Astronomy
575	Gravitational and Space Research	American Society for Gravitational and Space Research	NA	2332-7774	Astronomy
576	Jnanabha	Vijnana Parishad of India	0304-9892	2455-7463	Astronomy
577	Journal of Nonlinear Analysis and Optimization: Theory and Applications	Department of Mathematics, Naresuan University	1906-9685	NA	Astronomy
578	Journal of Physics Communications	Institute of Physics Publishing	NA	2399-6528	Astronomy
579	Journal of Radiation Research and Applied Sciences	Taylor and Francis	NA	1687-8507	Astronomy
580	Journal of Rajasthan Academy of Physical Sciences	Rajasthan Academy of Physical Sciences	0972-6306	NA	Astronomy
581	Journal of Scientific Research	Faculty of Sciences, Rajshahi University	2070-0237	2070-0245	Astronomy
582	Karbala International Journal of Modern Science	University of Karbala	2405-609X	2405-6103	Astronomy
583	Nanosystems: Physics, Chemistry, Mathematics	St. Petersburg National Research University of Information Technologies, Mechanics and Optics	2220-8054	2305-7971	Astronomy
584	Physics Education	Indian Association of Physics Teachers	NA	0970-5953	Astronomy

585	Stochastic Modeling and Applications	MUK Publications and Distributions	0972-3641	NA	Astronomy
586	The Nucleus	Pakistan Institute of Nuclear Science and Technology	0029-5698	2306-6539	Astronomy
587	AIMS Molecular Science	AIMS Press	NA	2372-0301	Bio chemistry
588	Applied Biological Research	Centre for Advancement of Applied Science	0972-0979	0974-4517	Bio chemistry
589	Bharatiya Vaigyanik evam Audyogik Anusandhan Patrika	National Institute of Science Communication and Information Resources	0771-7706	0975-2412	Bio chemistry
590	Biochemistry Insights	Sage Publications	1178-6264	1178-6264	Bio chemistry
591	Biotechnology Research and Innovation	Elsevier	2452-0721	NA	Bio chemistry
592	Defence Life Science Journal	Defence Scientific Information and Documentation Centre	2456-379X	2456-0537	Bio chemistry
593	Entomon	Association for Advancement of Entomology	0377-9335	NA	Bio chemistry

594	Environmental and Experimental Biology	University of Latvia	1691-8088	2255-9582	Bio chemistry
595	Genomics and Computational Biology	Johannes Gutenberg University	NA	2365-7154	Bio chemistry
596	Journal of Applied Biology and Biotechnology	Open Science Publishers	2455-7005	2347-212X	Bio chemistry
597	AIMS Molecular Science	AIMS Press	NA	2372-0301	Chemistry
598	Analytical Chemistry Letters	Taylor and Francis	2229-7928	2230-7532	Chemistry

599	Applied Biological Research	Centre for Advancement of Applied Science	0972-0979	0974-4517	Chemistry
600	Asian Journal of Organic and Medicinal Chemistry	Asian Publication Corporation	NA	2456-8937	Chemistry
601	Bharatiya Vaigyanik evam Audyogik Anusandhan Patrika	National Institute of Science Communication and Information Resources	0771-7706	0975-2412	Chemistry
602	Biochemistry Insights	Sage Publications	1178-6264	1178-6264	Chemistry
603	Biotechnology Research and Innovation	Elsevier	2452-0721	NA	Chemistry
604	Chemistry and Biology Interface	Indian Society of Chemists and Biologists	NA	2249-4820	Chemistry
605	Current Catalysis	Bentham Science Publishers	2211-5447	2211-5455	Chemistry
606	Current Green Chemistry	Bentham Science Publishers	2213-3461	2213-347X	Chemistry
607	Current Microwave Chemistry	Bentham Science Publishers	2213-3356	2213-3364	Chemistry
608	Current Physical Chemistry	Bentham Science Publishers	1877-9468	1877-9476	Chemistry
609	Current Traditional Medicine	Bentham Science Publishers	2215-0838	2215-0846	Chemistry
610	Defence Life Science Journal	Defence Scientific Information and Documentation Centre	2456-379X	2456-0537	Chemistry
611	Entomon	Association for Advancement of Entomology	0377-9335	NA	Chemistry
612	Environmental and Experimental Biology	University of Latvia	1691-8088	2255-9582	Chemistry
613	Genomics and Computational Biology	Johannes Gutenberg University	NA	2365-7154	Chemistry
614	International Journal of Electrochemistry	Hindawi Limited	2090-	2090-	Chemistry

			3529	3537	
615	Iranian Journal of Mathematical Chemistry	University of Kashan	2226-6489	2008-9015	Chemistry
616	Journal of Advanced Scientific Research	Sciensage	NA	0976-9595	Chemistry
617	Journal of Applied Biology and Biotechnology	Open Science Publishers	2455-7005	2347-212X	Chemistry

618	Journal of Applied Geochemistry	Indian Society of Applied Geochemists	0972-1967	NA	Chemistry
619	Journal of Nanostructure in Chemistry	Springer	2008-9244	2193-8865	Chemistry
620	Journal of Proteins and Proteomics	Proteomics Society of India	0975-8151	2524-4663	Chemistry
621	Journal of Scientific Research	Faculty of Sciences, Rajshahi University	2070-0237	2070-0245	Chemistry
622	Journal of Scientific Research	Institute of Science, Banaras Hindu University	0447-9483	NA	Chemistry
623	Journal of Scientific Temper	National Institute of Science Communication and Information Resources	2278-2788	2278-2796	Chemistry
624	Journal of Self- Assembly and Molecular Electronics	River Publishers	2245-4551	2245-8824	Chemistry
625	Journal of Stress Physiology and Biochemistry	Siberian Institute of Plant Physiology and Biochemistry	NA	1997-0838	Chemistry
626	Journal of Taibah University for Science	Elsevier	NA	1658-3655	Chemistry
627	Karbala International Journal of Modern Science	University of Karbala	2405-609X	2405-6103	Chemistry
628	Malaysian Journal of	Institute Kimia Malaysia	NA	2550-	Chemistry

	Chemistry			1658	
629	Nanosystems: Physics, Chemistry, Mathematics	St. Petersburg National Research University of Information Technologies, Mechanics and Optics	2220-8054	2305-7971	Chemistry
630	Plant Biotechnology	Institute of Plant Biotechnology, Central University "Marta Abreu"	1609-1841	2074-8647	Chemistry
631	Research Journal of Agricultural Sciences- An International Journal	Centre for Advanced Research in Agricultural Sciences	0976-1675	2249-4538	Chemistry
632	Romanian Journal of Biophysics	Romanian Society of Pure and Applied Biophysics	1220-515X	1843-424X	Chemistry
633	Stochastic Modeling and Applications	MUK Publications and Distributions	0972-3641	NA	Chemistry
634	The Journal of Cytology and Genetics	Society of Cytologists and Geneticists	0253-7605	NA	Chemistry

635	World Journal of Chemical Education	Science and Education Publishing	2375-1665	2375-1657	Chemistry
636	AIMS Molecular Science	AIMS Press	NA	2372-0301	Genetics
637	Applied Biological Research	Centre for Advancement of Applied Science	0972-0979	0974-4517	Genetics
638	Bharatiya Vaigyanik evam Audyogik Anusandhan Patrika	National Institute of Science Communication and Information Resources	0771-7706	0975-2412	Genetics
639	Biochemistry Insights	Sage Publications	1178-6264	1178-6264	Genetics
640	Biotechnology Research and Innovation	Elsevier	2452-0721	NA	Genetics

641	Defence Life Science Journal	Defence Scientific Information and Documentation Centre	2456-379X	2456-0537	Genetics
642	Entomon	Association for Advancement of Entomology	0377-9335	NA	Genetics
643	Environmental and Experimental Biology	University of Latvia	1691-8088	2255-9582	Genetics
644	Genomics and Computational Biology	Johannes Gutenberg University	NA	2365-7154	Genetics
645	Journal of Applied Biology and Biotechnology	Open Science Publishers	2455-7005	2347-212X	Genetics
646	Journal of Proteins and Proteomics	Proteomics Society of India	0975-8151	2524-4663	Genetics
647	Journal of Scientific Research	Institute of Science, Banaras Hindu University	0447-9483	NA	Genetics
648	Journal of Self- Assembly and Molecular Electronics	River Publishers	2245-4551	2245-8824	Genetics
649	Journal of Stress Physiology and Biochemistry	Siberian Institute of Plant Physiology and Biochemistry	NA	1997-0838	Genetics
650	Plant Biotechnology	Institute of Plant Biotechnology, Central University "Marta Abreu"	1609-1841	2074-8647	Genetics
651	Research Journal of Agricultural Sciences- An International Journal	Centre for Advanced Research in Agricultural Sciences	0976-1675	2249-4538	Genetics
652	Romanian Journal of Biophysics	Romanian Society of Pure and Applied Biophysics	1220-515X	1843-424X	Genetics
653	The Journal of Cytology and Genetics	Society of Cytologists and Geneticists	0253-7605	NA	Genetics

654	Annals of the National Association of Geographers India	National Association of Geographers India	0970-972X	NA	Geography

655	Bhugol Swadesh Charcha (print only)	Bhugol Swadesh Charcha	2581-4788	NA	Geography
656	Journal of Education for Sustainable Development	Centre for Environment Education	0973-4082	0973-4074	Geography
657	Population Geography	Association of Population Geographers of India	0256-5331	NA	Geography
658	Studies in Indian Place Names	The Place Names Society of India	2394-3114	NA	Geography
659	The Deccan Geographer (print only)	The Deccan Geographical Society	0011-7269	NA	Geography
660	The Indian Geographical Journal	The Indian Geographical Society	0019-4824	NA	Geography
661	Uttar Pradesh Geographical Journal	The Brahmavarta Geographical Society of India	0975-4903	NA	Geography
662	International Journal of Economic and Environmental Geology	Society of Economic Geologists and Mineral Technologists, Department of Geology, University of Karachi	NA	2223-957X	Geology
663	International Journal of Geosynthetics and Ground Engineering	Springer	2199-9260	2199-9279	Geology
664	Journal of Geomatics	Indian Society of Geomatics	0976-1330	NA	Geology
665	Journal of Geosciences Research	The Gondwana Geological Society	2455-1953	NA	Geology
666	Journal of Sustainable Mining	Elsevier	2300-3960	NA	Geology
667	Journal of the Geographical Institute "Jovan Cvijic" SASA	Geographical Institute “Jovan Cvijić” SASA	0350-7599	1821-2808	Geology

668	Journal of the Indian Association of Sedimentologists	Indian Association of Sedimentologists	0970-3268	2582-2020	Geology
669	Paleobios	University of California	NA	0031-0298	Geology
670	Purakala (print only)	Rock Art Society of India	0971-2143	NA	Geology
671	The Journal of Indian Geophysical Union	Indian Geophysical Union	0971-9707	0257-7968	Geology

672	Journal of Geophysics (print only)	Association of Exploration Geophysicists	0257-1412	NA	Geophysics
673	Acta Universitatis Apulensis	Department of Mathematics and Informatics, University of Alba Iulia	1582-5329	NA	mathematics
674	Acta Universitatis Matthiae Belii Series Mathematics	Department of Mathematics Faculty of Natural Sciences, Matej Bel University	1338-712X	1338-7111	mathematics
675	Advanced Science Letters	American Scientific Publishers	1936-6612	1936-7317	mathematics
676	Advances and Applications in Mathematical Sciences	Mili Publications	0974-6803	NA	mathematics
677	African Diaspora Journal of Mathematics	Mathematical Research Publisher	1539-854X	NA	mathematics
678	Afrika Statistika	Saint-Louis Senega University	2316-090X	NA	mathematics
679	Albanian Journal of Mathematics	Department of Mathematics and Statistics, Oakland University	1930-1235	NA	mathematics
680	Aligarh Journal of Statistics	Department of Statistics and Operations Research, Aligarh Muslim University	0971-0388	NA	mathematics
681	Annales Mathematiques Blaise Pascal	Mathematical laboratory, Blaise Pascal University of Clermont-Ferrand	1259-1734	2118-7436	mathematics
682	Annals of West University of Timisoara-Mathematics and Computer Science	Sciendo, De Gruyter	NA	1841-3307	mathematics
683	Arab Journal of Mathematical Sciences	Elsevier	1319-5166	NA	mathematics
684	Arabian Journal of Mathematics	Springer	2193-5343	2193-5351	mathematics

685	Bulletin of the Calcutta Mathematical Society (print only)	Calcutta Mathematical Society	0008-0659	NA	mathematics
686	Calcutta Statistical Association Bulletin	Calcutta Statistical Association	0008-0683	2456-6462	mathematics
687	Communications Faculty of Sciences University of Ankara Series A1: Mathematics and Statistics	Faculty of Science, Ankara University	1303-5991	2618-6470	mathematics
688	Complex Analysis and its Synergies	Springer	NA	2197-120X	mathematics
689	Computational Methods for Differential Equations	University of Tabriz	2345-3982	2383-2533	mathematics
690	Concrete Operators	Walter de Gruyter	NA	2299-3282	mathematics

691	Creative Mathematics and Informatics	Depatament of Mathematics and Computer Science, Tehnical University of Cluj- Napoca	1584-286X	1843-441X	mathematics
692	Crux Mathematicorum	Canadian Mathematical Society	1706-8142	1496-4309	mathematics
693	Cubo, A Mathematical Journal	Department of Mathematics and Statistics, University of La Frontera	0716-7776	0719-0646	mathematics
694	Differential Geometry- Dynamical Systems	Balkan Society of Geometers, Geometry Balkan Press	NA	1454-511X	mathematics
695	Discussiones Mathematicae- General Algebra and Applications	Faculty of Mathematics Computer Science and Econometrics, University of Zielona Gora	1509-9415	2084-0373	mathematics
696	Electronic Journal of Mathematical Analysis and Applications	Department of Mathematics and Computer Sciences, Alexandria University	NA	2090-729X	mathematics

697	Fasciculi Mathematici	Poznan University of Technology, Institute of Mathematics	0044-4413	NA	mathematics
698	Fractional Differential Calculus	Element d.o.o.	1847-9677	NA	mathematics
699	Ganita	Bharata Ganita Parishada	0046-5402	NA	mathematics
700	Gulf Journal of Mathematics	Canadian University of Dubai	NA	2309-4966	mathematics
701	Hardy Ramanujan Journal	Hardy- Ramanujan Society	NA	NA	mathematics
702	Indian Journal of Discrete Mathematics	Academy of Discrete Mathematics and Applications	NA	2455-5819	mathematics
703	Information and Inference: A Journal of the IMA	Oxford University Press	2049-8764	2049-8772	mathematics
704	Integers	Colgate University and Charles University	NA	1553-1732	mathematics
705	International Journal of Advances in Engineering Sciences and Applied Mathematics	Springer	0975-0770	0975-5616	mathematics
706	International Journal of Applied Nonlinear Science	Inderscience Publishers	1752-2862	1752-2870	mathematics
707	International Journal of Mathematics and Statistics	Centre for Environment and Socio-Economic Research Publications	0974-7117	0973-8347	mathematics
708	International Journal of Statistics and Reliability Engineering	Indian Association for Reliability and Statistics	2350-0174	2456-2378	mathematics
709	Involve: A Journal of Mathematics	Mathematical Sciences Publishers	1944-4176	1944-4184	mathematics
710	Iranian Journal of Mathematical Chemistry	University of Kashan	2226-6489	2008-9015	mathematics

711	Jnanabha	Vijnana Parishad of India	0304-9892	2455-7463	mathematics
712	Journal of Advanced Mathematical Studies	Fair Partners Society for the Promotion of Science	2065-3506	2065-5851	mathematics
713	Journal of Algebra and Related Topics	Faculty of Mathematical Sciences, University of Guilan	2345-3931	2382-9877	mathematics
714	Journal of Applied Mathematics and Computational Mechanics	Institute of Mathematics, Czestochowa University of Technology	2299-9965	2353-0588	mathematics
715	Journal of Classical Analysis	Element d.o.o.	1848-5979	1848-5987	mathematics
716	Journal of Dynamical Systems and Geometric Theories	Taylor and Francis	1726-037X	2169-0057	mathematics
717	Journal of Fractional Calculus and Applications	Department of Mathematics and Computer Sciences, Alexandria University	2090-584X	2090-5858	mathematics
718	Journal of Hyperstructures	University of Mohaghegh Ardabili	2251-8436	2322-1666	mathematics
719	Journal of Linear and Topological Algebra	Central Tehran Branch, Islamic Azad University	2252-0201	2345-5934	mathematics
720	Journal of Mathematical Computational Science	SCIK Publishing Corporation	1927-5307	NA	mathematics
721	Journal of Mathematical Extension	Islamic Azad University, Shiraz Branch	1735-8299	2476-7719	mathematics
722	Journal of Mathematical Research and Applications	Dalian University of Technology and China Society for Industrial and Applied Mathematics	2095-2651	NA	mathematics
723	Journal of Optimization	Hindawi Limited	2356-752X	0231-4648	mathematics
724	Journal of Partial Differential	Global Science Press	1000-	2079-	mathematics

	Equations		940X	732X	
725	Journal of Scientific Research	Faculty of Sciences, Rajshahi University	2070-0237	2070-0245	mathematics
726	Journal of Scientific Research	Institute of Science, Banaras Hindu University	0447-9483	NA	mathematics

727	Journal of Statistical Distributions and Applications	Springer	NA	2195-5832	mathematics
728	Journal of Statistical Theory and Applications	Atlantis Press	1538-7887	2214-1766	mathematics
729	Journal of Statistics Applications and Probability	Natural Sciences Publishing	2090-8423	2090-8431	mathematics
730	Journal of the Calcutta Mathematical Society (print only)	Calcutta Mathematical Society	2231-5314	NA	mathematics
731	Journal of the Chungcheong Mathematical Society	The Chungcheong Mathematical Society	1226-3524	2383-6245	mathematics
732	Journal of the French Statistical Society	Societe Francaise De Statistique	NA	2102-6238	mathematics
733	Journal of the Indian Society for Probability and Statistics	Indian Society for Probability and Statistics	NA	2364-9569	mathematics
734	Journal of the Indian Statistical Association	Indian Statistical Association	0537-2585	NA	mathematics
735	Journal of the Indonesian Mathematical Society	Indonesian Mathematical Society	2086-8952	2460-0245	mathematics
736	Journal of the Korean Society of Mathematical Education Series B: The Pure and	The Korean Society of Mathematical Education	1226-0657	2287-6081	mathematics

	Applied Mathematics				
737	Khayyam Journal of Mathematics	Tusi Mathematical Research Group and Department of Pure Mathematics, Ferdowsi University of Mashhad	NA	2423-4788	mathematics
738	Kobe Journal of Mathematics	Kobe University	0289-9051	NA	mathematics
739	Korean Journal of Mathematics	Kangwon-Kyungki Mathematical Society	1976-8605	2288-1433	mathematics
740	Malaya Journal of Matematik	University Press	2319-3786	2321-5666	mathematics
741	Mathematical and Computational Applications	MDPI	1300-686X	2297-8747	mathematics
742	Mathematical Forum	The Registrar, Dibrugarh University	0972-9852	NA	mathematics
743	Mathematical Sciences	Springer	2008-1359	2251-7456	mathematics
744	Mathematical Sciences and Applications E- Notes	Mathematical Sciences and Applications E-Notes	NA	2147-6268	mathematics
745	Mathematics in Engineering, Science and Aerospace	Cambridge Scientific Publishers	2041-3165	0204-1316	mathematics
746	Nanosystems: Physics, Chemistry, Mathematics	St. Petersburg National Research University of Information Technologies, Mechanics and Optics	2220-8054	2305-7971	mathematics

747	New Zealand Journal of Mathematics	Department of Mathematics, The University of Auckland	NA	1179-4984	mathematics
748	Proceeding in Applied Mathematics and Mechanics	GAMM- Association of Applied Mathematics and Mechanics	NA	1617-7061	mathematics
749	Punjab University Journal of Mathematics	Department of Mathematics, University of Punjab	1016-2526	NA	mathematics
750	Ratio Mathematica	Academy of Piceno Aprutina Dei Velati	1592-7415	2282-8214	mathematics
751	Review of Science, Mathematics and ICT Education	Department of Educational Science and Early Childhood Education, University of Patras	1791-261X	1792-3999	mathematics
752	Sao Paulo Journal of Mathematical Sciences	Springer	1982-6907	2316-9028	mathematics
753	Sarajevo Journal of Mathematics	Department of Natural Sciences and Mathematics, Academy of Sciences and Arts of Bosnia and Herzegovina	1840-0655	2233-1964	mathematics
754	Scientific Studies and Research, Series Mathematics and Informatics	Vasile Alecsandri University of Bacau	2457-497X	2067-3566	mathematics
755	Sema Journal	Springer	2254-3902	2281-7875	mathematics
756	Serdica Mathematical Journal	Bulgarian Academy of Sciences, Institute of Mathematics and Informatics	1310-6600	NA	mathematics

757	South East Asian Journal of Mathematics and Mathematical Sciences	Ramanujan Society of Mathematics and Mathematical Sciences	0972-7752	NA	mathematics

758	Southeast Asian Bulletin of Mathematics	Department of Mathematics, Yunnan University	0129-2021	0219-175X	mathematics
759	Statistica	Department of Statistical Sciences Paolo Fortunato, University of Bologna	0390-590X	1973-2201	mathematics
760	Statistics and Applications	Society of Statistics, Computer and Applications	NA	2454-7395	mathematics
761	Stochastic Modeling and Applications	MUK Publications and Distributions	0972-3641	NA	mathematics
762	The Electronic International Journal Advanced Modeling and Optimization	Research Institute for Informatics	NA	1841-4311	mathematics
763	The Journal of Analysis	Forum D' Analystes	NA	2367-2501	mathematics
764	The Journal of the Numismatic Society of India (print only)	Numismatic Society of India, Banaras Hindu University	0029-6066	NA	mathematics
765	The Mathematical Gazette	Cambridge University Press	0025-5572	2056-6328	mathematics
766	The Mathematics Educator	Association of Mathematics Educators	0218-9100	NA	mathematics
767	The Mathematics Student	Indian Mathematical Society	0025-5742	NA	mathematics
768	Topological Algebra and its Applications	Walter de Gruyter	NA	2299-3231	mathematics
769	Transactions on Combinatorics	University of Isfahan	2251-8657	2251-8665	mathematics
770	TWMS Journal of Pure and Applied Mathematics	Turkic World Mathematical Society	2076-2585	2219-1259	mathematics
771	Journal of Immunology and Immunopathology	Society for Immunology and Immunopathology	0972-0561	0973-9149	Microbiology
772	Journal of Microscopy and Ultrastructure	Saudi Society of Microscopes	NA	2213-8803	Microbiology

773	Microbiology Insights	Sage Publications	1178-6361	1178-6361	Microbiology
774	Microorganisms	MDPI	NA	2076-2607	Microbiology
775	AIMS Molecular Science	AIMS Press	NA	2372-0301	Molecualr Biology
776	Applied Biological Research	Centre for Advancement of Applied Science	0972-0979	0974-4517	Molecualr Biology

777	Bharatiya Vaigyanik evam Audyogik Anusandhan Patrika	National Institute of Science Communication and Information Resources	0771-7706	0975-2412	Molecualr Biology
778	Biochemistry Insights	Sage Publications	1178-6264	1178-6264	Molecualr Biology
779	Biotechnology Research and Innovation	Elsevier	2452-0721	NA	Molecualr Biology
780	Defence Life Science Journal	Defence Scientific Information and Documentation Centre	2456-379X	2456-0537	Molecualr Biology
781	Entomon	Association for Advancement of Entomology	0377-9335	NA	Molecualr Biology
782	Environmental and Experimental Biology	University of Latvia	1691-8088	2255-9582	Molecualr Biology
783	Genomics and Computational Biology	Johannes Gutenberg University	NA	2365-7154	Molecualr Biology
784	Journal of Applied Biology and Biotechnology	Open Science Publishers	2455-7005	2347-212X	Molecualr Biology
785	Journal of Proteins and Proteomics	Proteomics Society of India	0975-8151	2524-4663	Molecualr Biology
786	Journal of Scientific Research	Institute of Science, Banaras Hindu University	0447-9483	NA	Molecualr Biology
787	Journal of Self- Assembly and Molecular Electronics	River Publishers	2245-4551	2245-8824	Molecualr Biology
788	Journal of Stress Physiology and Biochemistry	Siberian Institute of Plant Physiology and Biochemistry	NA	1997-0838	Molecualr Biology
789	Plant Biotechnology	Institute of Plant Biotechnology, Central University "Marta Abreu"	1609-1841	2074-8647	Molecualr Biology
790	Research Journal of Agricultural Sciences-An International Journal	Centre for Advanced Research in Agricultural Sciences	0976-1675	2249-4538	Molecualr Biology

791	Romanian Journal of Biophysics	Romanian Society of Pure and Applied Biophysics	1220-515X	1843-424X	Molecualr Biology
792	The Journal of Cytology and Genetics	Society of Cytologists and Geneticists	0253-7605	NA	Molecualr Biology
793	Bharatiya Vaigyanik evam Audyogik Anusandhan Patrika	National Institute of Science Communication and Information Resources	0771-7706	0975-2412	Physics
794	Bulgarian Journal of Physics	Heron Press Ltd.	1310-0157	1314-2666	Physics
795	Gravitational and Space Research	American Society for Gravitational and Space Research	NA	2332-7774	Physics

796	Jnanabha	Vijnana Parishad of India	0304-9892	2455-7463	Physics
797	Journal of Geophysics (print only)	Association of Exploration Geophysicists	0257-1412	NA	Physics
798	Journal of Nonlinear Analysis and Optimization: Theory and Applications	Department of Mathematics, Naresuan University	1906-9685	NA	Physics
799	Journal of Physics Communications	Institute of Physics Publishing	NA	2399-6528	Physics
800	Journal of Radiation Research and Applied Sciences	Taylor and Francis	NA	1687-8507	Physics
801	Journal of Rajasthan Academy of Physical Sciences	Rajasthan Academy of Physical Sciences	0972-6306	NA	Physics
802	Journal of Scientific Research	Faculty of Sciences, Rajshahi University	2070-0237	2070-0245	Physics

803	Karbala International Journal of Modern Science	University of Karbala	2405-609X	2405-6103	Physics
804	Nanosystems: Physics, Chemistry, Mathematics	St. Petersburg National Research University of Information Technologies, Mechanics and Optics	2220-8054	2305-7971	Physics
805	Physics Education	Indian Association of Physics Teachers	NA	0970-5953	Physics
806	Romanian Journal of Biophysics	Romanian Society of Pure and Applied Biophysics	1220-515X	1843-424X	Physics
807	Stochastic Modeling and Applications	MUK Publications and Distributions	0972-3641	NA	Physics
808	The Nucleus	Pakistan Institute of Nuclear Science and Technology	0029-5698	2306-6539	Physics
809	Afrika Statistika	Saint-Louis Senega University	2316-090X	NA	Statistics
810	Aligarh Journal of Statistics	Department of Statistics and Operations Research, Aligarh Muslim University	0971-0388	NA	Statistics
811	Calcutta Statistical Association Bulletin	Calcutta Statistical Association	0008-0683	2456-6462	Statistics
812	International Journal of Mathematics and Statistics	Centre for Environment and Socio-Economic Research Publications	0974-7117	0973-8347	Statistics

813	International Journal of Statistics and Reliability Engineering	Indian Association for Reliability and Statistics	2350-0174	2456-2378	Statistics
814	Journal of Statistical Distributions and Applications	Springer	NA	2195-5832	Statistics
815	Journal of Statistical Theory and Applications	Atlantis Press	1538-7887	2214-1766	Statistics
816	Journal of Statistics Applications and Probability	Natural Sciences Publishing	2090-8423	2090-8431	Statistics
817	Journal of the French Statistical Society	Societe Francaise De Statistique	NA	2102-6238	Statistics
818	Journal of the Indian Society for Probability and Statistics	Indian Society for Probability and Statistics	NA	2364-9569	Statistics
819	Journal of the Indian Statistical Association	Indian Statistical Association	0537-2585	NA	Statistics
820	Statistica	Department of Statistical Sciences Paolo Fortunato, University of Bologna	0390-590X	1973-2201	Statistics
821	Statistics and Applications	Society of Statistics, Computer and Applications	NA	2454-7395	Statistics
822	Acta Fytotechnica et Zootechnica	Slovak University of Agriculture in Nitra	1335-258X	1336-9245	Zoology
823	Advances in Zoology and Botany	Horizon Research Publishing	2331-5083	2331-5091	Zoology
824	Animal Systematics, Evolution and Diversity	Korean Society of Systematic Zoology	2234-6953	2234-8190	Zoology
825	Antennae: The Journal of Nature in Visual Culture	University of Strathclyde	1756-9575	NA	Zoology

826	Caucasian Entomological Bulletin	Institute of Arid Zones SSC RAS	NA	1814-3326	Zoology
827	Ela Journal of Forestry and Wildlife	Ela Foundation	2319-4361	NA	Zoology
828	Indian Journal of Animal Nutrition	Animal Nutrition Society of India	0970-3209	2231-6744	Zoology

829	Indian Journal of Small Ruminants	Indian Society for Sheep and Goat Production and Utilization	0971-9857	0973-9718	Zoology
830	IRCF Journal Reptiles and Amphibians: Conservation and Natural History	The International Reptile Conservation Foundation	2330-3956	2332-4961	Zoology
831	Journal of Animal Ethics	University of Illinois Press	2156-5414	2160-1267	Zoology
832	Journal of the Marine Biological Association of India	The Marine Biological Association of India	0025-3146	2321-7898	Zoology
833	Palaeovertebrata	Department of Paleontology, Institut des Sciences de l' Evolution	0031-0247	2274-0333	Zoology
834	Proceedings of the Zoological Society	Springer	0373-5893	0974-6919	Zoology
835	Record of the Zoological Survey of India	Zoological Survey of India Kolkata	0375-1511	2581-8686	Zoology
836	Research in Ornithology	Page Press	0035-6875	2385-0833	Zoology
837	Romanian Journal of Biology- Zoology	Institute of Biology, Romanian Academy	2248-3799	1843-7761	Zoology
838	The Ring	Sciendo, De Gruyter	NA	2083-3520	Zoology
839	Uttar Pradesh Journal of Zoology	Uttar Pradesh Zoological Society	0256-971X	NA	Zoology
840	International Journal of Food and Nutritional Sciences	Global E smart Technologies	2319-1775	2320-7876	nutrition
841	The Indian Journal of Nutrition and Dietetics	Avinashilingam Institute for Home Science and Higher Education for Women	2348-621X	0022-3174	nutrition