



DEPARTMENT OF CIVIL ENGINEERING / नागरिक अभियांत्रिकी विभाग
NATIONAL INSTITUTE OF TECHNOLOGY / राष्ट्रीय प्रौद्योगिकी संस्थान

Tiruchirappalli – 620 015, Tamil Nadu, India / तिरुचिरापल्ली, तमिलनाडु - ६२००१५, भारत

Research publications (2022-23)

S. No.	Title	Authors	Year	Full date	Citations	DOI
1.	Assessment of potentially vulnerable zones using geospatial approach along the coast of Cuddalore district, East coast of India	Parthasarathy, K.S.S. Saravanan, S. Deka, P.C. Devanantham, A.	2022	01-01-2022	15	10.1080/09715010.2020.1753250
2.	Assessment of land use and land cover change detection and prediction using remote sensing and CA Markov in the northern coastal districts of Tamil Nadu, India	Abijith, D. Saravanan, S.	2022	01-12-2022	14	10.1007/s11356-021-15782-6
3.	Artificial neural network and sensitivity analysis in the landslide susceptibility mapping of Idukki district, India	Jacynth Jennifer, J. Saravanan, S.	2022	01-01-2022	13	10.1080/10106049.2021.1923831
4.	Platoon-Based Impact Assessment of Heavy-Duty Vehicles on Traffic Stream Characteristics of Highway Lanes Under Mixed Traffic Environment	Singh, S. Santhakumar, S.M.	2022	01-04-2022	11	10.1007/s13177-021-00268-z
5.	Effective degradation of azo dye from textile wastewater by electro-peroxone process	Koulini, G.V. Laiju, A.R. Ramesh, S.T. Gandhimathi, R. Nidheesh, P.V.	2022	01-02-2022	10	10.1016/j.chemosphere.2021.133152
6.	Empirical analysis of impact of multi-class commercial vehicles on multi-lane highway traffic characteristics under mixed traffic conditions	Singh, S. Santhakumar, S.M.	2022	01-09-2022	10	10.1016/j.ijtst.2021.07.005
7.	Assessment of groundwater vulnerability using analytical hierarchy process and evidential belief function with DRASTIC parameters, Cuddalore, India	Saranya, T. Saravanan, S.	2022	01-01-2022	9	10.1007/s13762-022-03944-z

8.	Persistent Scatterer Interferometry in the post-event monitoring of the Idukki Landslides	Jennifer, J.J. Saravanan, S. Pradhan, B.	2022	01-01-2022	8	10.1080/10106049.2020.1778101
9.	Soft computing-based models and decolorization of Reactive Yellow 81 using Ulva Prolifera biochar	Ravindiran, G. Saravanan, P. Alagumalai, A. Subbarayan, S.	2022	01-01-2022	8	10.1016/j.chemosphere.2021.132368
10.	Effective utilization of waste eggshell powder in cement mortar	Nandhini, K. Karthikeyan, J.	2022	01-01-2022	7	10.1016/j.matpr.2021.11.328
11.	Influence of Industrial and Agricultural by-Products as Cementitious Blends in Self-Compacting Concrete – A Review	Nandhini, K. Karthikeyan, J.	2022	01-04-2022	6	10.1007/s12633-021-01043-1
12.	Analysis of barriers to adopt electric vehicles in India using fuzzy DEMATEL and Relative importance Index approaches	Murugan, M. Marisamynathan, S.	2022	01-06-2022	6	10.1016/j.cstp.2022.02.007
13.	Field Evaluation of Coir Geotextile Reinforced Subgrade for Low Volume Pavements	Visvanathan, A. Velayudhan, S. Mathew, S.	2022	01-01-2022	6	10.1080/15440478.2020.1758279
14.	Thermal kinetic analysis of mustard biomass with equiatomic iron–nickel catalyst and its predictive modeling	Jacob, G.A. Prabhakaran, S.P.S. Swaminathan, G. Joseyphus, R.J.	2022	01-01-2022	5	10.1016/j.chemosphere.2021.131901
15.	Assessing the impacts of heavy vehicles on traffic characteristics of highways under mixed traffic platooning conditions	Singh, S. Santhakumar, S.M.	2022	01-01-2022	5	10.48295/ET.2022.86.3
16.	Mechanical and microstructural study on interlocking concrete block pavers using waste granite dust	Arjun Siva Rathan, R.T. Sunitha, V.	2022	01-01-2022	4	10.1080/10298436.2020.1746312
17.	Combustion and pyrolysis kinetics of Australian lignite coal and validation by artificial neural networks	Prabhakaran, S.S. Swaminathan, G. Joshi, V.V.	2022	01-03-2022	4	10.1016/j.energy.2021.122949
18.	Application of frequency ratio, analytical hierarchy process, and multi-influencing factor methods for delineating groundwater potential zones	Saravanan, S. Saranya, T. Abijith, D.	2022	01-12-2022	3	10.1007/s13762-021-03794-1
19.	Contribution of SAR-driven displacement measurement in assessing the triggering factors of rainfall-induced landslides	Jacynth Jennifer, J. Saravanan, S.	2022	01-01-2022	3	10.1080/10106049.2020.1844313

20.	Integrated GIS and AHP techniques for land suitability assessment of cotton crop in Perambalur District, South India	Sathiyamurthi, S. Saravanan, S. Sankriti, R. Aluru, M. Sivaranjani, S. Srivel, R.	2022	01-01-2022	3	10.1007/s13198-022-01705-2
21.	Flood susceptibility mapping of Northeast coastal districts of Tamil Nadu India using Multi-source Geospatial data and Machine Learning techniques	Saravanan, S. Abijith, D.	2022	01-01-2022	3	10.1080/10106049.2022.2096702
22.	Sustainable and greener concrete production by utilizing waste eggshell powder as cementitious material – A review	Nandhini, K. Karthikeyan, J.	2022	13-06-2022	3	10.1016/j.conbuildmat.2022.127482
23.	Assessing streamflow modeling using single and multi-site calibration approach on Bharathpuzha catchment, India: a case study	Singh, L. Saravanan, S.	2022	01-09-2022	3	10.1007/s40808-022-01353-2
24.	Evaluation of Coir Geotextile Reinforcement for Low-Volume Roads	Anusudha, V. Sunitha, V. Mathew, S.	2022	01-01-2022	2	10.1080/15440478.2020.1818346
25.	Evaluation of composite briquettes from dry leaves in energy applications for agrarian communities in India	TT, A.K. Mech, N. Ramesh, S.T. Gandhimathi, R.	2022	20-05-2022	2	10.1016/j.jclepro.2022.131312
26.	Evaluation of various spatial rainfall datasets for streamflow simulation using SWAT model of Wunna basin, India	Singh, L. Saravanan, S.	2022	01-01-2022	2	10.1080/15715124.2020.1776305
27.	A review on sustainable production of self-compacting concrete utilizing industrial by-products as cementitious materials	Nandhini, K. Karthikeyan, J.	2022	01-06-2022	2	10.1007/s41062-022-00792-1
28.	A comparative analysis on groundwater vulnerability models—fuzzy DRASTIC and fuzzy DRASTIC-L	Saranya, T. Saravanan, S.	2022	01-12-2022	2	10.1007/s11356-021-16195-1
29.	GIS-Based Study on the Association Between Road Centrality and Socio-demographic Parameters: a Case Study	Daniel, C.B. Mathew, S. Subbarayan, S.	2022	01-06-2022	2	10.1007/s41651-021-00095-6
30.	Evaluation of the accuracy of seven gridded satellite precipitation products over the Godavari River basin, India	Reddy, N.M. Saravanan, S.	2022	01-01-2022	2	10.1007/s13762-022-04524-x
31.	Influence of Eggshell Powder as	Nandhini, K. Karthikeyan, J.	2022	01-01-2022	2	10.4028/p-x6ixk6

	Cementitious Blends in Cement Mortar					
32.	Influence of Platooning of Heavy Transport Vehicles Operation on Traffic Flow Mix of Intercity Highways	Singh, S. Santhakumar, S.M.	2022	01-01-2022	2	10.1007/978-981-16-8259-9_29
33.	Investigation on service life prediction models of reinforced concrete structures exposed to chloride laden environment	Athibaranan, S. Karthikeyan, J. Rawat, S.	2022	01-12-2022	1	10.1007/s41024-021-00149-8
34.	Study on low gravity effect on bearing capacity and slope stability of a new lunar highland soil simulant (LSS-ISAC-1) for futuristic moon habitation	Prabu, T. Muthukkumaran, K. Venugopal, I.	2022	01-10-2022	1	10.1016/j.asr.2022.06.026
35.	Sustainable production of cashew nutshell briquettes: experimental assessment and optimization of factors affecting the physical and fuel characteristics	Ajith Kumar, T.T. Ramesh, S.T.	2022	01-01-2022	1	10.1007/s13399-021-02234-x
36.	Assessment of innovative dented sheet liner on the improvement of hydraulic properties of pervious concrete pile	Umanath, U. Muthukkumaran, K.	2022	01-02-2022	1	10.1016/j.jestch.2021.04.015
37.	Building material synthesization using municipal solid waste incineration ash: A state-of-the-art review	Devahi, P. Rathod, D. Muthukkumaran, K.	2022	01-01-2022	1	10.1080/21622515.2021.2024890
38.	Assessment of dynamic properties of a new lunar highland soil simulant (LSS-ISAC-1) developed for Chandrayaan missions	Prabu, T. Muthukkumaran, K. Venugopal, I.	2022	01-04-2022	1	10.1016/j.soildyn.2022.107178
39.	A Network Level Pavement Maintenance Optimisation Approach Deploying GAMS	Rejani, V.U. Sunitha, V. Mathew, S. Veeraragavan, A.	2022	01-07-2022	1	10.1007/s42947-021-00058-6
40.	Recovery of phosphate as hydroxyapatite by fluidized bed homogeneous crystallization technique	Divya, K.B. Ramesh, S.T. Lavanya, A. Gandhimathi, R.	2022	01-06-2022	1	10.1007/s11356-022-19135-9
41.	Development of Deflection Prediction Model for Interlocking Concrete Block Pavements	Rathan, R.T.A.S. Sunitha, V.	2022	01-03-2022	1	10.1177/03611981211051339
42.	Obtaining high durability strength using bacteria in light weight concrete	Shanmugamoorthy, M. Velusamy, S. Subbaiyyan, A. Yogeswaran, R. Krishnanbabu, R. Senthilkumar, R.	2022	01-01-2022	1	10.1016/j.matpr.2022.03.526

43.	Elucidating the Indian customers requirements for electric vehicle adoption: An integrated analytical hierarchy process – Quality function deployment approach	Murugan, M. Marisamynathan, S.	2022	01-06-2022	1	10.1016/j.cstp.2022.03.017
44.	A Study on Urban Heat Island Using Geospatial Techniques	Haripavan, N. Radhakrishnan, N. Kannamma, D.	2022	01-01-2022	1	10.1007/978-981-19-0189-8_19
45.	Mode shift behaviour and user willingness to adopt the electric two-wheeler: A study based on Indian road user preferences	Murugan, M. Marisamynathan, S.	2022	01-01-2022	1	10.1016/j.ijst.2022.03.008
46.	Development of urban freight trip generation models concerning establishment classification process for a developing country	Venkadavarahan, M. Marisamynathan, S.	2022	01-09-2022	1	10.1016/j.ijst.2021.08.001
47.	Concurrent Spatial Color Information Processing for Video-Based Vehicle Detection Applications	Manipriya, S. Mala, C. Mathew, S.	2022	01-01-2022	0	10.1007/978-3-030-78750-9_5
48.	Behaviour of cold-formed steel-concrete composite columns under axial compression: Experimental and numerical study	Senthilkumar, R. Divya, M. Divya Roy, S. Bahurudeen, A. Avudaiappan, S. Tsavdaridis, K.D.	2022	01-10-2022	0	10.1016/j.istruc.2022.07.086
49.	Zinc Ions adsorption from aqueous solution using raw and acid-modified orange peels: Kinetics, Isotherm, Thermodynamics, and Adsorption mechanism	Parashar, D. Gandhimathi, R.	2022	01-10-2022	0	10.1007/s11270-022-05857-6
50.	Numerical Analysis on Stability Assessment of Left Bank Rock Slopes, Polavaram Irrigation Tunnel	Kumar, P.R. Muthukkumaran, K.	2022	01-01-2022	0	10.1007/978-981-16-5605-7_23
51.	Numerical Study on the Effect of Rock-Socketing on Laterally Loaded Piles in the Proximity of Sloping Ground	Raja, N. Muthukkumaran, K.	2022	01-01-2022	0	10.1007/978-981-16-5605-7_22
52.	Behaviour of Hybrid fibre in RC column with basalt and E-glass fibre under axial loading	Sundaramoorthy, M. Rathod, D.	2022	01-01-2022	0	10.36909/jer.ACMM.16293
53.	Estimation of rider's shifting intention for electric bike adoption: An integrated choice and latent variable approach	Venkadavarahan, M. Marisamynathan, S.	2022	01-01-2022	0	10.1080/19427867.2021.2000815
54.	Stabilization of subgrade of flexible	Sampath, P. Palanikumar, M.	2022	01-01-2022	0	10.1016/j.matpr.2022.02.263

	pavement using paper mill waste ash	Manjula, R.				
55.	Editorial Message for IGC 2021 Keynote Volume	Muthukkumaran, K. Krishna, A.M. Satyam, N.	2022	01-10-2022	0	10.1007/s40098-022-00670-8
56.	Pedestrian Road Crossing Behavior and Optimal Selection of Pedestrian Facilities at Mid-Block Crossings	Albert, S. Marisamynathan, S.	2022	01-06-2022	0	10.48295/ET.2022.87.1
57.	Thermogravimetric study of textile lime sludge and cement raw meal for co-processing as alternative raw material for cement production using response surface methodology and neural networks	S.P., S.P. Swaminathan, G.	2022	01-02-2022	0	10.1016/j.eti.2021.102100
58.	Strategic Pavement Maintenance and Rehabilitation Analysis of Urban Road Network Using HDM-4	Rejani, V.U. Janani, L. Venkateswaralu, K. Sunitha, V. Mathew, S.	2022	01-01-2022	0	10.1007/s42947-022-00171-0
59.	Spatio-temporal modelling of particulate matter concentrations using satellite derived aerosol optical depth over coastal region of Chennai in India	Raju, L. Gandhimathi, R. Mathew, A. Ramesh, S.T.	2022	01-07-2022	0	10.1016/j.ecoinf.2022.101681
60.	Macroscopic Analysis of Traffic Flow Behaviour on Multilane Highways Under Heterogeneous Traffic Conditions	Anusha, K. Yugendar, P. Santhakumar, S.M.	2022	01-01-2022	0	10.1007/978-981-16-4396-5_55
61.	Delay models for Signalised Intersections with Vehicle Actuated Controlled system in Heterogeneous Traffic Conditions	Barhmaiah, B. Chandrasekar, A. Ramya, T. Moses Santhakumar, S.	2022	01-01-2022	0	10.1088/1755-1315/1084/1/012038
62.	Development of design procedure for interlocking concrete block pavement	Arjun Siva Rathan, R.T. Sunitha, V.	2022	01-01-2022	0	10.1080/10298436.2021.1990290
63.	Reuse of Uncontrolled Burnt Bagasse Ash from Sugar Industries with Waste Rubber Powder in Construction: A Waste to Wealth Approach for Sugar Mills	Teja, K.S. Senthilkumar, R. Athira, G. Bahurudeen, A.	2022	01-08-2022	0	10.1007/s12355-022-01140-4
64.	Investigating the Individual house holders' preference to adopt home-based charging and solar rooftop facility for electric vehicle charging	Murugan, M. Marisamynathan, S.	2022	01-01-2022	0	10.1080/19427867.2022.2101310
65.	Trajectory Data and Driver Behavior Analysis at Urban Mid-Block Section	Sowjanya, T. Santhakumar, S.M.	2022	01-01-2022	0	10.1007/978-981-16-8259-9_33

66.	Influence of bedding and jointing sand on the shear strength characteristics of Interlocking Paver Blocks–bedding sand interface	Arjun Siva Rathan, R.T. Sunitha, V. Murshida, P. Anusudha, V.	2022	01-01-2022	0	10.1080/10298436.2020.1847286
67.	Strategies for Quantifying Metal Recovery from Waste Electrical and Electronic Equipment (WEEE/E-waste) Using Mathematical Approach	Sakthivel, U. Swaminathan, G. Anis, J.J.J.	2022	01-09-2022	0	10.1007/s41660-022-00250-6
68.	Prediction Model for Evaluating the Raw Water Quality Parameters and Its Significance in Pipe Failures of Nuclear Power Plant	Suganya, P. Swaminathan, G. Anoop, B. Prabhakaran, S.P.S. Kavitha, M.	2022	01-01-2022	0	10.1007/978-981-16-5501-2_27
69.	Improved radial consolidation in soft clay using pervious concrete piles	Umaiyar, U. Muthukkumaran, K.	2022	01-01-2022	0	10.1680/jgeen.22.00046
70.	Estimation of two-wheeler users' mode shift behavior and policy analysis to encourage electric-bike adoption in India	Murugan, M. Marisamynathan, S.	2022	01-09-2022	0	10.1016/j.cstp.2022.06.006
71.	Development of effective wearing layer elastic modulus for interlocking concrete block pavements	Arjun Siva Rathan, R.T. Sunitha, V.	2022	25-07-2022	0	10.1016/j.conbuildmat.2022.127796
72.	Bearing Capacity of Asphalt-Coated Jute Textile Reinforced Sand	Abid, M.S. Rathod, D.	2022	01-07-2022	0	10.1007/s10706-022-02106-9
73.	Parametric study to investigate the deflection and stress behaviour of Interlocking Concrete Block Pavement	Arjun Siva Rathan, R.T. Sunitha, V. Anusudha, V.	2022	01-01-2022	0	10.1080/14680629.2021.1963819
74.	MI-EC k u: A novel methodology for estimating unsaturated hydraulic conductivity of porous media	Joseph, J. Rakshith, S. Singh, D.N. Tang, C.S.	2022	01-09-2022	0	10.1007/s11440-022-01500-0
75.	Influence of palm oil fuel ash in concrete and a systematic comparison with widely accepted fly ash and slag: A step towards sustainable reuse of agro-waste ashes	Chinnu, S.N. Minnu, S.N. Bahurudeen, A. Senthilkumar, R.	2022	01-09-2022	0	10.1016/j.clema.2022.100122
76.	Consolidation Effect on Pile Capacity Assessment Based on Instrumented Field Pile Load Test	Sivaraman, S. Muthukkumaran, K.	2022	01-04-2022	0	10.1007/s13369-021-06305-z
77.	Coagulation performance evaluation of	Saranya, P. Ramesh, S.T.	2022	01-01-2022	0	10.2166/wpt.2021.123

	alginate as a natural coagulant for the treatment of turbid water	Gandhimathi, R.				
78.	Influence of moisture and compaction effect on volumetric and mechanical properties of bituminous mix	Jegan Bharath Kumar, A. Sunitha, V. Arjun Siva Rathan, R.T. Murshida, P. Mathew, S.	2022	01-01-2022	0	10.1080/10298436.2022.2144312
79.	A comparative study of LULC classifiers for analysing the cover management factor and support practice factor in RUSLE model	Sampath, V.K. Radhakrishnan, N.	2022	01-01-2022	0	10.1007/s12145-022-00911-7
80.	The Behaviour of a Large-Diameter Monopile under Two-Way Lateral Cyclic Load	Nigitha, D. Rathod, D.	2022	01-01-2022	0	10.1007/s40098-022-00677-1
81.	Numerical Study on the Effect of Using Dented Sheet Liner in Pervious Concrete Pile to Improve Soft Soil	Umaiyan, U. Muthukkumaran, K.	2022	01-09-2022	0	10.1061/(ASCE)GM.1943-5622.0002482
82.	Improved Vehicle Detection Accuracy and Processing Time for Video Based ITS Applications	Sankaranarayanan, M. Mala, C. Mathew, S.	2022	01-05-2022	0	10.1007/s42979-022-01130-z
83.	Effect of Two-Wheeler Proportion on Passenger Car Unit at Urban Signalised Intersections	Singh, S. Santhakumar, S.M.	2022	01-01-2022	0	10.1007/978-981-16-8259-9_28
84.	Experimental study on evaluating the lateral load capacity of raker pile in sloping ground	Kayalvizhi, S.K. Muthukkumaran, K. Shukla, S.K.	2022	01-01-2022	0	10.1080/14488353.2022.2059136
85.	Effect of alkali treated sisal fibre on expansive clay	Muthukkumaran, K. Sindhujha, R. Anusudha, V.	2022	01-01-2022	0	10.1680/jgrim.21.00033
86.	Precision enhancement of smartphone sensor-based pavement roughness estimation by standardizing host vehicle speed	Janani, L. Doley, R. Sunitha, V. Mathew, S.	2022	01-01-2022	0	10.1139/cjce-2021-0182
87.	Sustainable reuse potential of landfill mining waste retrieved from urban mining sites in South India	Devahi, D.P. Rathod, D. Muthukkumaran, K.	2022	01-11-2022	0	10.1007/s10163-022-01506-6
88.	Fe3O4-functionalised biochar for persulphate systems towards the removal of Remazol Brilliant Orange 3R: machine learning-based approach and toxicity	John, J. Gandhimathi, R. Sillanpää, M. Chellam, P.V.	2022	01-01-2022	0	10.1007/s13399-022-03056-1

	analysis					
89.	Development of Non-dimensional Design Chart Incorporating the Effect of Raker Piles in Pile Groups Under Lateral Load	Kayalvizhi, S.K. Muthukkumaran, K.	2022	01-02-2022	0	10.1007/s40999-021-00652-6