



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 (2021-22)

S. No.	Title	Authors	Year	Full date	Citations	DOI
1.	Recycling of industrial and agricultural wastes as alternative coarse aggregates: A step towards cleaner production of concrete	Chinnu, S.N. Minnu, S.N. Bahurudeen, A. Senthilkumar, R.	2021	14-06-2021	25	10.1016/j.conbuildmat.2021.123056
2.	Thermogravimetric analysis of hazardous waste: Pet-coke, by kinetic models and Artificial neural network modeling	Sathiya Prabhakaran, S.P. Swaminathan, G. Joshi, V.V.	2021	01-03-2021	19	10.1016/j.fuel.2020.119470
3.	Ultrasound aided heterogeneous Fenton degradation of Acid Blue 15 over green synthesized magnetite nanoparticles	Prakash, L.V. Gopinath, A. Gandhimathi, R. Velmathi, S. Ramesh, S.T. Nidheesh, P.V.	2021	01-07-2021	14	10.1016/j.seppur.2020.118230
4.	Reuse of industrial and agricultural by-products as pozzolan and aggregates in lightweight concrete	Chinnu, S.N. Minnu, S.N. Bahurudeen, A. Senthilkumar, R.	2021	04-10-2021	13	10.1016/j.conbuildmat.2021.124172
5.	Influence of surface distresses on smartphone-based pavement roughness evaluation	Janani, L. Sunitha, V. Mathew, S.	2021	01-01-2021	12	10.1080/10298436.2020.1714045
6.	Synthesis of seawater based geopolymer: Characterization and adsorption capacity of methylene blue from wastewater	Padmapriya, M. Ramesh, S.T. Biju, V.M.	2021	01-01-2021	12	10.1016/j.matpr.2021.03.030
7.	Evaluation of Lane-Based Traffic Characteristics of Highways Under Mixed Traffic Conditions by Different Methods	Singh, S. Santhakumar, S.M.	2021	01-09-2021	12	10.1007/s40030-021-00549-6
8.	A Feasible RSU Deployment Planner Using Fusion Algorithm	Sankaranarayanan, M. Chelliah, M. Mathew, S.	2021	01-02-2021	11	10.1007/s11277-020-07768-3
9.	Effect of combining algorithms in smartphone based pothole detection	Lekshmi pathy, J. Velayudhan, S. Mathew, S.	2021	01-01-2021	11	10.1007/s42947-020-0033-0

10.	Combustion characteristics of briquette fuels from sorghum panicle–pearl millets using cassava starch binder	Velusamy, S. Subbaiyan, A. Thangam, R.S.	2021	01-05-2021	11	10.1007/s11356-020-11790-0
11.	Experimental Investigation of the Behavior of Monopile under Asymmetric Two-Way Cyclic Lateral Loads	Rathod, D. Nigitha, D. Krishnanunni, K.T.	2021	01-03-2021	10	10.1061/(ASCE)GM.1943-5622.0001920
12.	The early-age prediction of concrete strength using maturity models: a review	Nandhini, K. Karthikeyan, J.	2021	01-12-2021	9	10.1007/s41024-020-00102-1
13.	Evolution of a hybrid approach for groundwater vulnerability assessment using hierarchical fuzzy-DRASTIC models in the Cuddalore Region, India	Saranya, T. Saravanan, S.	2021	01-03-2021	8	10.1007/s12665-021-09479-9
14.	Performance of polypropylene textile encased stone columns	Rathod, D. Abid, M.S. Vanapalli, S.K.	2021	01-02-2021	7	10.1016/j.geotextmem.2020.10.025
15.	Experimental investigation on rcc external beam-column joints retrofitted with basalt textile fabric under static loading	Sakthimurugan, K. Baskar, K.	2021	15-07-2021	7	10.1016/j.compstruct.2021.114001
16.	Effective removal of phosphorous from dairy wastewater by struvite precipitation: process optimization using response surface methodology and chemical equilibrium modeling	Lavanya, A. Sri Krishnaperumal Thanga, R.	2021	01-01-2021	7	10.1080/01496395.2019.1709080
17.	Application of multi-influence factor (MIF) technique for the identification of suitable sites for urban settlement in Tiruchirappalli City, Tamil Nadu, India	Singh, L. Saravanan, S. Jennifer, J.J. Abijith, D.	2021	01-10-2021	7	10.1007/s41685-021-00194-8
18.	Impact of land-use change on soil erosion in the Coonoor Watershed, Nilgiris Mountain Range, Tamil Nadu, India	Saravanan, S. Jennifer, J.J. Singh, L. Thiyagarajan, S. Sankaralingam, S.	2021	01-03-2021	7	10.1007/s12517-021-06817-w
19.	Performance of coir geotextile reinforced subgrade for low volume roads	Anusudha, V. Sunitha, V. Mathew, S.	2021	01-03-2021	6	10.1007/s42947-020-0325-4
20.	Analysis of Traffic Flow Characteristics Based on Area-Occupancy Concept on Urban Arterial Roads Under Heterogeneous Traffic Scenario—A Case Study of Tiruchirappalli City	Singh, S. Vidya, R. Shukla, B.K. Moses Santhakumar, S.	2021	01-01-2021	6	10.1007/978-981-16-1303-6_6

21.	Effect of Rock-Socketing on Laterally Loaded Piles Installed in the Proximity of Sloping Ground	Raja, N. Muthukkumaran, K.	2021	01-02-2021	6	10.1061/(ASCE)GM.1943-5622.0001895
22.	Experimental and Numerical Evaluation of the Parameters Influencing the Shear-Stress Behavior of Interlocking Paver Blocks-Bedding Sand Interface Using Large-Scale Direct Shear Test	Raveendran Thulasibai, A.S.R. Velayudhan, S. Pathath, M. Lekshmipathy, J. Visvanathan, A.	2021	01-06-2021	6	10.1061/(ASCE)MT.1943-5533.0003724
23.	Simulation of rainfall-runoff process for an ungauged catchment using an event-based hydrologic model: A case study of koraiyar basin in Tiruchirappalli city, India	Natarajan, S. Radhakrishnan, N.	2021	01-12-2021	6	10.1007/s12040-020-01532-8
24.	Performance evaluation between ternary blended SCC mixes containing induction furnace slag and crushed stone as coarse aggregate	Chandru, P. Karthikeyan, J. Sahu, A.K. Sharma, K. Natarajan, C.	2021	18-01-2021	5	10.1016/j.conbuildmat.2020.120953
25.	A lunar soil simulant (LSS-ISAC-1) for the lunar exploration programme of the Indian Space Research Organisation	Anbazhagan, S. Venugopal, I. Arivazhagan, S. Chinnamuthu, M. Paramasivam, C.R. Nagesh, G. Kannan, S.A. Shamarao Babu, V.C. Annadurai, M. Muthukkumaran, K. Rajesh, V.J.	2021	15-09-2021	5	10.1016/j.icarus.2021.114511
26.	Network constrained and classified spatial pattern analysis of healthcare facilities and their relationship with the road structure: a case study of Thiruvananthapuram city	Daniel, C.B. Mathew, S. Saravanan, S.	2021	01-12-2021	5	10.1007/s41324-021-00385-7
27.	Upgradation of pavement deterioration models for urban roads by non-hierarchical clustering	Rejani, V.U. Sunitha, V. Mathew, S.	2021	01-03-2021	5	10.1007/s42947-020-0105-1
28.	Analyzing Urban Freight System, Supply Chain Characteristics and Temporal Travel Pattern in Indian context	Venkadavarahan, M. Marisamynathan, S.	2021	01-03-2021	5	10.1016/j.cstp.2021.01.012
29.	Assessing the impact of damage and government response toward the cyclone Gaja in Tamil Nadu, India	Abijith, D. Saravanan, S. Jennifer, J.J. Parthasarathy, K.S.S. Singh, L. Sankriti, R.	2021	01-01-2021	4	10.1016/B978-0-323-85195-4.00016-0
30.	Some durability characteristics of ternary	Chandru, P. Karthikeyan, J.	2021	08-02-2021	4	10.1016/j.conbuildmat.2020.1214

	blended SCC containing crushed stone and induction furnace slag as coarse aggregate	Sahu, A.K. Sharma, K. Natarajan, C.				83
31.	Mechanical and structural performance evaluation of pervious interlocking paver blocks	Arjun Siva Rathan, R.T. V, A.S. V, S.	2021	19-07-2021	4	10.1016/j.conbuildmat.2021.123438
32.	Behaviour of thin-walled castellated beams strengthened using CFRP	Cyril Thomas, A. Baskar, K.	2021	01-04-2021	4	10.1016/j.istruc.2020.12.083
33.	Assessment of shear strength and compressibility characteristics of a newly developed lunar highland soil simulant (LSS-ISAC-1) for Chandrayaan lander and rover missions	Prabu, T. Muthukkumaran, K. Venugopal, I. Anbazhagan, S.	2021	01-12-2021	4	10.1016/j.pss.2021.105354
34.	Non-linear performance analysis of free headed piles in consolidating soil subjected to lateral loads	Sivaraman, S. Muthukkumaran, K.	2021	01-04-2021	3	10.1016/j.jestch.2020.09.007
35.	Estimation of lateral capacity of rock socketed piles in layered soil-rock profile	Prakash, A.R. Muthukkumaran, K.	2021	01-12-2021	3	10.1186/s40703-021-00140-9
36.	Assessment of geotechnical properties of lunar soil simulant's for lunar missions	Thannasi, P. Muthukkumaran, K. Indaram, V.	2021	01-08-2021	3	-
37.	Models to predict the mechanical properties of blended SCC containing recycled steel slag and crushed granite stone as coarse aggregate	Chandru, P. Karthikeyan, J.	2021	04-10-2021	3	10.1016/j.conbuildmat.2021.124342
38.	Morphometric analysis and prioritization of sub-watersheds of Himayatsagar catchment, Ranga Reddy District, Telangana, India using remote sensing and GIS techniques	Sankriti, R. Subbarayan, S. Aluru, M. AbijithDevanantham Reddy, N.M. Ayyakkannu, S.	2021	01-01-2021	3	10.1007/s13198-021-01187-8
39.	Correlations between the hardened properties of combination type SCC containing UFGGBFs	Chandru, P. Karthikeyan, J. Natarajan, C.	2021	01-01-2021	3	10.1520/ACEM20190233
40.	Affordable housing: Cost effective construction materials for economically weaker section	Arun, M. Baskar, K. Geethapriya, B.S. Jayabarathi, M. Angayarkkani, R.	2021	01-01-2021	3	10.1016/j.matpr.2020.12.265
41.	Assessing the impact of 2018 tropical rainfall and the consecutive flood-related	Parthasarathy, K.S.S. Deka, P.C. Saravanan, S. Abijith, D. Jacinth	2021	01-01-2021	3	10.1016/B978-0-323-85195-4.00013-5

	damages for the state of Kerala, India	Jennifer, J.				
42.	Delineation of groundwater potential zones for Arkavathi sub-watershed, Karnataka, India using remote sensing and GIS	Saravanan, S. Saranya, T. Abijith, D. Jacinth, J.J. Singh, L.	2021	01-12-2021	3	10.1016/j.envc.2021.100380
43.	Crystal seed-enhanced ammonia nitrogen and phosphate recovery from landfill leachate using struvite precipitation technique	Lavanya, A. Ramesh, S.K.T.	2021	01-11-2021	3	10.1007/s11356-021-14950-y
44.	Radioactive Hazards in Utilization of Industrial By-Products: Comprehensive Review	Sahoo, P. Joseph, J.	2021	01-07-2021	3	10.1061/(ASCE)HZ.2153-5515.0000612
45.	Application of Frequency Ratio and Logistic Regression Model in the Assessment of Landslide Susceptibility Mapping for Nilgiris District, Tamilnadu, India	Jennifer, J.J. Saravanan, S. Abijith, D.	2021	01-08-2021	2	10.1007/s40098-021-00520-z
46.	Numerical studies on restrained cold-formed steel column subjected to transient thermal loading	Senthilkumar, R. Prem Kumar, D.	2021	01-08-2021	2	10.1016/j.istruc.2021.03.030
47.	Road traffic congestion (traco) estimation using multi-layer continuous virtual loop (mcvl)	Sankaranarayanan, M. Mala, C. Mathew, S.	2021	01-04-2021	2	10.4018/IJIT.2021040103
48.	Mineralization of stabilized landfill leachate by heterogeneous Fenton process with RSM optimization	Niveditha, S.V. Gandhimathi, R.	2021	01-01-2021	2	10.1080/01496395.2020.1725573
49.	Evaluation of Pavement Stripping Using Ground-Penetrating Radar: A Case Study	Muthukkumaran, K. Raja, N. Umaiyar, U.	2021	01-02-2021	2	10.1007/s40098-020-00460-0
50.	Accelerating the Consolidation of Soft Clay Soil Using Pervious Concrete Pile	Umanath, U. Nandhagopal, A.R. Muthukkumaran, K.	2021	01-01-2021	2	10.1007/978-981-15-9988-0_12
51.	Life cycle assessment of the co-combustion system of single-use plastic waste and lignite coal to promote circular economy	Joshi, V.V. Swaminathan, G. Prabhakaran, S.S.	2021	20-12-2021	2	10.1016/j.jclepro.2021.129579
52.	Effect of hybrid E-glass and basalt fibre on the flexural behaviour of concrete	Rathod, D. Manikandaprabhu, S.	2021	01-01-2021	2	10.1680/jcoma.20.00051
53.	Performance of the HFRC beam with E-glass and Basalt fibre under Torsion	Sundaramoorthy, M. Rathod, D.	2021	01-12-2021	2	10.1007/s41062-021-00561-6

54.	Evaluation of efficacy of basalt textile fabric on retrofitting of damaged reinforced concrete external beam–column joints	Sakthimurugan, K. Baskar, K.	2021	01-06-2021	1	10.1007/s41062-021-00499-9
55.	Spatial interdependence of fractal dimension and topological parameters of road network: a geographically weighted regression approach	Daniel, C.B. Mathew, S. Saravanan, S.	2021	01-10-2021	1	10.1007/s41324-021-00390-w
56.	A Study on Characteristics of Vehicular Lateral Position on Rural Highways	Singh, S. Rajesh, V. Panda, R.K. Moses Santhakumar, S.	2021	03-08-2021	1	10.1088/1755-1315/796/1/012046
57.	Evaluation of driver behavior and safety at urban mid-block sections under mixed traffic conditions	Sowjanya Santhakumar, S.M.	2021	01-01-2021	1	10.1016/j.matpr.2021.07.387
58.	Effect of tie rod anchor on the behaviour of berthing structures	Premalatha, P. Muthukkumaran, K. Jayabalan, P.	2021	01-12-2021	1	10.1680/jmaen.2017.28
59.	Analysis of a monopile under two-way cyclic loading	Nigitha, D. Rathod, D. Krishnanunni, K.T.	2021	01-07-2021	1	10.4018/IJGEE.2021070103
60.	Assessment of groundwater vulnerability in highly industrialized Noyyal basin using AHP-DRASTIC and Geographic Information System	Saranya, T. Saravanan, S. Jennifer, J.J. Singh, L.	2021	01-01-2021	1	10.1016/B978-0-323-85195-4.00009-3
61.	Pre-processing framework with virtual mono-layer sequence of boxes for video based vehicle detection applications	Sankaranarayanan, M. C, M. Mathew, S.	2021	01-01-2021	1	10.1007/s11042-020-09587-x
62.	Wave attenuation by coastal heterospecific vegetation-modeling of synthetic plant meadows by Response Surface Methodology (RSM)	Hemavathi, S. Manjula, R.	2021	01-03-2021	0	-
63.	Speciation and effectiveness of aluminum formate as a coagulant: Promising for water treatment	Lavanya, A. Ramesh, S.T.	2021	01-01-2021	0	10.5004/dwt.2021.26827
64.	A study on groundwater quality and its characteristics in Tuticorin coastal region using geo-statistical approaches, Tamil Nadu, India	Sakthivel, G. Manjula, R.	2021	01-04-2021	0	-
65.	Vehicular Relaxation And Amphan Cyclone: Is It A Double Threat To India Towards	Sriram, A. Swaminathan, G.	2021	01-01-2021	0	-

	Combat Of COVID-19					
66.	Development of congestion index model and analysis of mitigation measures on urban arterials using microsimulation	Akshara, S. Marisamynathan, S.	2021	01-03-2021	0	10.48295/ET.2021.81.7
67.	Landslide susceptibility assessment using frequency ratio technique - A case study of NH67 road corridor in the Nilgiris district, Tamilnadu, India	Saravanan, S. Istijono, B. Jennifer, J.J. Abijith, D. Sivaranjani, S.	2021	26-04-2021	0	10.1088/1755-1315/708/1/012017
68.	Improved Performance of ITS Application with Verified Traffic Congestion Statistics (TraCoS)	Sankaranarayanan, M. Mala, C. Mathew, S.	2021	01-01-2021	0	10.1109/ComPE53109.2021.9752412
69.	Mechanical and microstructural properties of copper slag based blended geopolymer concrete	Rathanasalam, V. Perumalsami, J. Jayakumar, K.	2021	01-01-2021	0	10.5755/j02.ms.26521
70.	Identification of drought intensity and development of drought resilience in the Rayalaseema region of Andhra Pradesh, India	Sankriti, R. Saravanan, S. Aluru, M. Singh, L. Jennifer, J.J. Abijith, D.	2021	01-01-2021	0	10.1016/B978-0-323-85195-4.00017-2
71.	Exploring spatial interaction effects in freight trip generation model for intermediate and pure receiver establishment	Venkadavarahan, M. Marisamynathan, S.	2021	01-12-2021	0	10.1016/j.cstp.2021.08.007
72.	Modeling Urban Freight Trip Generation for Pure Receiver Establishment	Venkadavarahan, M. Marisamynathan, S.	2021	01-01-2021	0	-
73.	A Single Pile Located on Sloping Ground Under Dynamic Loading	Rathod, D. Nigitha, D. Krishnanunni, K.T.	2021	01-01-2021	0	10.1007/978-981-33-6564-3_43
74.	Assessment of Rainfall–Runoff Due to the Impacts of Land-Use Changes by Integrated Geospatial Empirical Approach: Study on Koraiyar Basin, Tiruchirappalli City, India	Natarajan, S. Radhakrishnan, N.	2021	01-04-2021	0	10.1007/s12524-020-01260-y
75.	Flood risk assessment for a medium size city using geospatial techniques with integrated flood models	Natarajan, S. Radhakrishnan, N.	2021	01-01-2021	0	10.1007/978-3-030-67865-4_3
76.	Geotechnical Properties of Lunar Soil Simulations	Prabu, T. Venugopal, I. Muthukkumaran, K.	2021	01-01-2021	0	10.1007/978-981-33-4001-5_8

77.	Numerical Study on the Effect of Slope and Loading Direction on Laterally Loaded Piles in Sand	Nandhagopal, A.R. Muthukkumaran, K.	2021	01-01-2021	0	10.1007/978-981-33-6466-0_52
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