



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	2021-06-14	21	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	2021-03-01	17	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	2021-07-01	12	10.1016/j.seppur.2020.118230
4.	Influence of surface distresses on smartphone-based pavement roughness evaluation	Janani, L. Sunitha, V. Mathew, S.	2021	2021-01-01	12	10.1080/10298436.2020.1714045
5.	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	2021-10-04	11	10.1016/j.conbuildmat.2021.124172
6.	Synthesis of seawater based geopolymer: Characterization and adsorption capacity of methylene blue from wastewater	Padmapriya, M. Ramesh, S.T. Biju, V.M.	2021	2021-01-01	10	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	2021-09-01	10	10.1007/s40030-021-00549-6
8.	Combustion characteristics of briquette fuels from sorghum panicle–pearl millets using cassava starch binder	Velusamy, S. Subbaiyan, A. Thangam, R.S.	2021	2021-05-01	10	10.1007/s11356-020-11790-0
9.	A Feasible RSU Deployment Planner Using Fusion Algorithm	Sankaranarayanan, M. Chelliah, M. Mathew, S.	2021	2021-02-01	9	10.1007/s11277-020-07768-3
10.	Effect of combining algorithms in smartphone-based pothole detection	Lekshmi pathy, J. Velayudhan, S. Mathew, S.	2021	2021-01-01	9	10.1007/s42947-020-0033-0
11.	Experimental Investigation of the Behavior of Monopile under Asymmetric Two-Way Cyclic Lateral Loads	Rathod, D. Nigitha, D. Krishnanunni, K.T.	2021	2021-03-01	8	10.1061/(ASCE)GM.1943-5622.0001920

12.	Effective removal of phosphorous from dairy wastewater by struvite precipitation: process optimization using response surface methodology and chemical equilibrium modeling	Lavanya, A. Sri Krishnapurumal Thanga, R.	2021	2021-01-01	7	10.1080/01496395.2019.1709080
13.	Effect of Rock-Socketing on Laterally Loaded Piles Installed in the Proximity of Sloping Ground	Raja, N. Muthukkumaran, K.	2021	2021-02-01	6	10.1061/(ASCE)GM.1943-5622.0001895
14.	The early-age prediction of concrete strength using maturity models: a review	Nandhini, K. Karthikeyan, J.	2021	2021-12-01	6	10.1007/s41024-020-00102-1
15.	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. Lekshmi pathy, J. Visvanathan, A.	2021	2021-06-01	6	10.1061/(ASCE)MT.1943-5533.0003724
16.	Performance of coir geotextile reinforced subgrade for low volume roads	Anusudha, V. Sunitha, V. Mathew, S.	2021	2021-03-01	5	10.1007/s42947-020-0325-4
17.	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	2021-01-01	5	10.1007/978-981-16-1303-6_6
18.	Experimental investigation on rcc external beam-column joints retrofitted with basalt textile fabric under static loading	Sakthimurugan, K. Baskar, K.	2021	2021-07-15	5	10.1016/j.compstruct.2021.114001
19.	Upgradation of pavement deterioration models for urban roads by non-hierarchical clustering	Rejani, V.U. Sunitha, V. Mathew, S.	2021	2021-03-01	5	10.1007/s42947-020-0105-1
20.	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	2021-12-01	5	10.1007/s41324-021-00385-7
21.	Analyzing Urban Freight System, Supply Chain Characteristics and Temporal Travel Pattern in Indian context	Venkadavarahan, M. Marisamynathan, S.	2021	2021-03-01	5	10.1016/j.cstp.2021.01.012
22.	Performance of polypropylene textile encased stone columns	Rathod, D. Abid, M.S. Vanapalli, S.K.	2021	2021-02-01	4	10.1016/j.geotextmem.2020.10.025
23.	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	2021-09-15	4	10.1016/j.icarus.2021.114511

24.	Some durability characteristics of ternary blended SCC containing crushed stone and induction furnace slag as coarse aggregate	Chandru, P. Karthikeyan, J. Sahu, A.K. Sharma, K. Natarajan, C.	2021	2021-02-08	4	10.1016/j.conbuildmat.2020.121483
25.	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	2021-12-01	4	10.1007/s12040-020-01532-8
26.	Assessment of geotechnical properties of lunar soil simulant's for lunar missions	Thannasi, P. Muthukkumaran, K. Indaram, V.	2021	2021-08-01	3	-
27.	Non-linear performance analysis of free headed piles in consolidating soil subjected to lateral loads	Sivaraman, S. Muthukkumaran, K.	2021	2021-04-01	3	10.1016/j.jestch.2020.09.007
28.	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	2021-01-18	3	10.1016/j.conbuildmat.2020.120953
29.	Affordable housing: Cost effective construction materials for economically weaker section	Arun, M. Baskar, K. Geethapriya, B.S. Jayabarathi, M. Angayarkkani, R.	2021	2021-01-01	3	10.1016/j.matpr.2020.12.265
30.	Mechanical and structural performance evaluation of pervious interlocking paver blocks	Arjun Siva Rathan, R.T. V, A.S. V, S.	2021	2021-07-19	3	10.1016/j.conbuildmat.2021.123438
31.	Crystal seed-enhanced ammonia nitrogen and phosphate recovery from landfill leachate using struvite precipitation technique	Lavanya, A. Ramesh, S.K.T.	2021	2021-11-01	3	10.1007/s11356-021-14950-y
32.	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	2021-12-01	3	10.1016/j.pss.2021.105354
33.	Numerical studies on restrained cold-formed steel column subjected to transient thermal loading	Senthilkumar, R. Prem Kumar, D.	2021	2021-08-01	2	10.1016/j.istruc.2021.03.030
34.	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	2021-10-04	2	10.1016/j.conbuildmat.2021.124342
35.	Correlations between the hardened properties of combination type SCC containing UFGGBFs	Chandru, P. Karthikeyan, J. Natarajan, C.	2021	2021-01-01	2	10.1520/ACEM20190233

36.	Mineralization of stabilized landfill leachate by heterogeneous Fenton process with RSM optimization	Niveditha, S.V. Gandhimathi, R.	2021	2021-01-01	2	10.1080/01496395.2020.1725573
37.	Evaluation of Pavement Stripping Using Ground-Penetrating Radar: A Case Study	Muthukkumaran, K. Raja, N. Umaiyar, U.	2021	2021-02-01	2	10.1007/s40098-020-00460-0
38.	Road traffic congestion (traco) estimation using multi-layer continuous virtual loop (mcvl)	Sankaranarayanan, M. Mala, C. Mathew, S.	2021	2021-04-01	2	10.4018/IJIT.2021040103
39.	Accelerating the Consolidation of Soft Clay Soil Using Pervious Concrete Pile	Umanath, U. Nandhagopal, A.R. Muthukkumaran, K.	2021	2021-01-01	2	10.1007/978-981-15-9988-0_12
40.	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	2021-12-20	2	10.1016/j.jclepro.2021.129579
41.	Behaviour of thin-walled castellated beams strengthened using CFRP	Cyril Thomas, A. Baskar, K.	2021	2021-04-01	2	10.1016/j.istruc.2020.12.083
42.	Effect of hybrid E-glass and basalt fibre on the flexural behaviour of concrete	Rathod, D. Manikandaprabhu, S.	2021	2021-01-01	2	10.1680/jcoma.20.00051
43.	Performance of the HFRC beam with E-glass and Basalt fibre under Torsion	Sundaramoorthy, M. Rathod, D.	2021	2021-12-01	2	10.1007/s41062-021-00561-6
44.	Radioactive Hazards in Utilization of Industrial By-Products: Comprehensive Review	Sahoo, P. Joseph, J.	2021	2021-07-01	2	10.1061/(ASCE)HZ.2153-5515.0000612
45.	Evaluation of efficacy of basalt textile fabric on retrofitting of damaged reinforced concrete external beam-column joints	Sakthimurugan, K. Baskar, K.	2021	2021-06-01	1	10.1007/s41062-021-00499-9
46.	Spatial interdependence of fractal dimension and topological parameters of road network: a geographically weighted regression approach	Daniel, C.B. Mathew, S. Saravanan, S.	2021	2021-10-01	1	10.1007/s41324-021-00390-w
47.	Estimation of lateral capacity of rock socketed piles in layered soil-rock profile	Prakash, A.R. Muthukkumaran, K.	2021	2021-12-01	1	10.1186/s40703-021-00140-9
48.	A Study on Characteristics of Vehicular Lateral Position on Rural Highways	Singh, S. Rajesh, V. Panda, R.K. Moses Santhakumar, S.	2021	2021-08-03	1	10.1088/1755-1315/796/1/012046
49.	Evaluation of driver behavior and safety at urban mid-block sections under mixed traffic conditions	Sowjanya Santhakumar, S.M.	2021	2021-01-01	1	10.1016/j.matpr.2021.07.387
50.	Effect of tie rod anchor on the behaviour of berthing structures	Premalatha, P. Muthukkumaran, K. Jayabalan, P.	2021	2021-12-01	1	10.1680/jmaen.2017.28
51.	Pre-processing framework with virtual mono-layer sequence of boxes for video-based vehicle detection applications	Sankaranarayanan, M. C, M. Mathew, S.	2021	2021-01-01	1	10.1007/s11042-020-09587-x

52.	Speciation and effectiveness of aluminum formate as a coagulant: Promising for water treatment	Lavanya, A. Ramesh, S.T.	2021	2021-01-01	0	10.5004/dwt.2021.26827
53.	Wave attenuation by coastal heterospecific vegetation-modeling of synthetic plant meadows by Response Surface Methodology (RSM)	Hemavathi, S. Manjula, R.	2021	2021-03-01	0	-
54.	Estimation of rider's shifting intention for electric bike adoption: An integrated choice and latent variable approach	Venkadavarahan, M. Marisamynathan, S.	2021	2021-01-01	0	10.1080/19427867.2021.2000815
55.	Development of design procedure for interlocking concrete block pavement	Arjun Siva Rathan, R.T. Sunitha, V.	2021	2021-01-01	0	10.1080/10298436.2021.1990290
56.	A study on groundwater quality and its characteristics in Tuticorin coastal region using geo-statistical approaches, Tamil Nadu, India	Sakthivel, G. Manjula, R.	2021	2021-04-01	0	-
57.	Vehicular Relaxation And Amphan Cyclone: Is It A Double Threat To India Towards Combat Of COVID-19	Sriram, A. Swaminathan, G.	2021	2021-01-01	0	-
58.	Analysis of a monopile under two-way cyclic loading	Nigitha, D. Rathod, D. Krishnanunni, K.T.	2021	2021-07-01	0	10.4018/IJGEE.2021070103
59.	Improved Performance of ITS Application with Verified Traffic Congestion Statistics (TraCoS)	Sankaranarayanan, M. Mala, C. Mathew, S.	2021	2021-01-01	0	10.1109/ComPE53109.2021.9752412
60.	Exploring spatial interaction effects in freight trip generation model for intermediate and pure receiver establishment	Venkadavarahan, M. Marisamynathan, S.	2021	2021-12-01	0	10.1016/j.cstp.2021.08.007
61.	Mechanical and microstructural properties of copper slag based blended geopolymers concrete	Rathanasalam, V. Perumalsami, J. Jayakumar, K.	2021	2021-01-01	0	10.5755/j02.ms.26521
62.	Development of congestion index model and analysis of mitigation measures on urban arterials using microsimulation	Akshara, S. Marisamynathan, S.	2021	2021-03-01	0	10.48295/ET.2021.81.7
63.	A Single Pile Located on Sloping Ground Under Dynamic Loading	Rathod, D. Nigitha, D. Krishnanunni, K.T.	2021	2021-01-01	0	10.1007/978-981-33-6564-3_43
64.	Modeling Urban Freight Trip Generation for Pure Receiver Establishment	Venkadavarahan, M. Marisamynathan, S.	2021	2021-01-01	0	-
65.	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	2021-04-01	0	10.1007/s12524-020-01260-y

66.	Flood risk assessment for a medium size city using geospatial techniques with integrated flood models	Natarajan, S. Radhakrishnan, N.	2021	2021-01-01	0	10.1007/978-3-030-67865-4_3
67.	Geotechnical Properties of Lunar Soil Simulations	Prabu, T. Venugopal, I. Muthukkumaran, K.	2021	2021-01-01	0	10.1007/978-981-33-4001-5_8
68.	Numerical Study on the Effect of Slope and Loading Direction on Laterally Loaded Piles in Sand	Nandhagopal, A.R. Muthukkumaran, K.	2021	2021-01-01	0	10.1007/978-981-33-6466-0_52