



**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 (2020-21)**

S. No.	Title	Authors	Year	Full date	Citations	DOI
1.	Groundwater potential zone mapping using analytical hierarchy process (AHP) and GIS for Kancheepuram District, Tamilnadu, India	Saranya, T.   Saravanan, S.	2020	01-06-2020	64	10.1007/s40808-020-00744-7
2.	Stabilized landfill leachate treatment by zero valent aluminium-acid system combined with hydrogen peroxide and persulfate based advanced oxidation process	Antony, J.   Niveditha, S.V.   Gandhimathi, R.   Ramesh, S.T.   Nidheesh, P.V.	2020	01-04-2020	35	10.1016/j.wasman.2020.03.005
3.	Flyash augmented Fe <sub>3</sub> O <sub>4</sub> as a heterogeneous catalyst for degradation of stabilized landfill leachate in Fenton process	Niveditha, S.V.   Gandhimathi, R.	2020	01-03-2020	32	10.1016/j.chemosphere.2019.125189
4.	Optimization of batch electrocoagulation process using Box-Behnken experimental design for the treatment of crude vegetable oil refinery wastewater	Preethi, V.   Ramesh, S.T.   Gandhimathi, R.   Nidheesh, P.V.	2020	20-03-2020	19	10.1080/01932691.2019.1595640
5.	Vibration vs. vision: best approach for automated pavement distress detection	Lekshmipathy, J.   Samuel, N.M.   Velayudhan, S.	2020	01-07-2020	17	10.1007/s42947-020-0302-y
6.	Energy conservation – A novel approach of co-combustion of paint sludge and Australian lignite by principal component analysis, response surface methodology and artificial neural network modeling	Sathiya Prabhakaran, S.P.   Swaminathan, G.   Joshi, V.V.	2020	01-11-2020	15	10.1016/j.eti.2020.101061
7.	Delineation of groundwater potential zone using analytical hierarchy process and GIS for Gundihalla watershed, Karnataka, India	Saravanan, S.   Saranya, T.   Jennifer, J.J.   Singh, L.   Selvaraj, A.   Abijith, D.	2020	01-08-2020	14	10.1007/s12517-020-05712-0

8.	Influence of using agro-waste as a partial replacement in cement on the compressive strength of concrete – A statistical approach	Banu, S.S.   Kartikeyan, J.   Jayabalan, P.	2020	30-07-2020	14	10.1016/j.conbuildmat.2020.118746
9.	Analysis of laterally loaded group of piles located on sloping ground	Deendayal, R.   Muthukkumaran, K.   Sitharam, T.G.	2020	03-07-2020	12	10.1080/19386362.2018.1448521
10.	Continuous treatability of oily wastewater from locomotive wash facilities by electrocoagulation	Sravanth, T.   Ramesh, S.T.   Gandhimathi, R.   Nidheesh, P.V.	2020	11-02-2020	11	10.1080/01496395.2019.1567548
11.	Mamdani fuzzy based decision support system for prediction of groundwater quality: an application of soft computing in water resources	Selvaraj, A.   Saravanan, S.   Jennifer, J.J.	2020	01-07-2020	10	10.1007/s11356-020-08803-3
12.	Study on geomechanical properties of lunar soil simulant (LSS-ISAC-1) for chandrayaan mission	Venugopal, I.   Muthukkumaran, K.   Annadurai, M.   Prabu, T.   Anbazhagan, S.	2020	01-12-2020	10	10.1016/j.asr.2020.08.021
13.	Integration of SAR and multi-spectral imagery in flood inundation mapping—a case study on Kerala floods 2018	Jacinth Jennifer, J.   Saravanan, S.   Abijith, D.	2020	01-01-2020	10	10.1080/09715010.2020.1791265
14.	A Review on Conventional and Innovative Pile System for Offshore Wind Turbines	Rathod, D.   Krishnanunni, K.T.   Nigitha, D.	2020	01-08-2020	10	10.1007/s10706-020-01254-0
15.	Infra-red sensor-based technology for collecting speed and headway data on highways under mixed traffic conditions	Singh, S.   Shukla, B.K.   Moses Santhakumar, S.	2020	01-02-2020	10	10.1109/SPIN48934.2020.9070829
16.	Photoelectro-peroxone process for the degradation of reactive azo dye in aqueous solution	Joy, A.C.   Gandhimathi, R.   Niveditha, S.V.   Ramesh, S.T.   Nidheesh, P.V.	2020	21-09-2020	10	10.1080/01496395.2019.1634732
17.	Heterogeneous Fenton process coupled with microfiltration for the treatment of water with higher arsenic content	Pramod, L.   Gandhimathi, R.   Lavanya, A.   Ramesh, S.T.   Nidheesh, P.V.	2020	01-12-2020	9	10.1080/00986445.2019.1674814
18.	Prioritisation of pavement maintenance sections deploying functional characteristics of pavements	Janani, L.   Dixit, R.K.   Sunitha, V.   Mathew, S.	2020	05-12-2020	9	10.1080/10298436.2019.1567923
19.	An integrated electrochemical-Adsorption system for removal of nitrate from water	Jasna, R.S.   Gandhimathi, R.   Lavanya, A.   Ramesh, S.T.	2020	01-10-2020	8	10.1016/j.jece.2020.104387

20.	Development of a novel lunar highland soil simulant (LSS-ISAC-1) and its geotechnical properties for Chandrayaan missions	Venugopal, I.   Prabu, T.   Muthukkumaran, K.   Annadurai, M.	2020	01-12-2020	8	10.1016/j.pss.2020.105116
21.	Pedestrian safety evaluation of signalized intersections using surrogate safety measures	Marisamynathan, S.   Vedagiri, P.	2020	03-01-2020	8	10.3846/transport.2020.12157
22.	Impact of climate change on hydrology components using CORDEX South Asia climate model in Wunna, Bharathpuzha, and Mahanadi, India	Singh, L.   Saravanan, S.	2020	01-11-2020	8	10.1007/s10661-020-08637-z
23.	Effect of agro-waste on strength and durability properties of concrete	Shameem Banu, S.   Karthikeyan, J.   Jayabalan, P.	2020	20-10-2020	7	10.1016/j.conbuildmat.2020.120322
24.	An Integrated Hydrologic and Hydraulic Flood Modeling Study for a Medium-Sized Ungauged Urban Catchment Area: A Case Study of Tiruchirappalli City Using HEC-HMS and HEC-RAS	Natarajan, S.   Radhakrishnan, N.	2020	01-06-2020	7	10.1007/s40030-019-00427-2
25.	GIS based road connectivity evaluation using graph theory	Daniel, C.B.   Saravanan, S.   Mathew, S.	2020	01-01-2020	7	10.1007/978-981-32-9042-6_17
26.	Flood hazard delineation in an ungauged catchment by coupling hydrologic and hydraulic models with geospatial techniques—a case study of Koraiyar basin, Tiruchirappalli City, Tamil Nadu, India	Natarajan, S.   Radhakrishnan, N.	2020	01-11-2020	7	10.1007/s10661-020-08650-2
27.	Development of freight travel demand model with characteristics of vehicle tour activities	Venkadavarahan, M.   Raj, C.T.   Marisamynathan, S.	2020	01-11-2020	6	10.1016/j.trip.2020.100241
28.	A review for comparing SWAT and SWAT coupled models and its applications	Yamini Priya, R.   Manjula, R.	2020	01-01-2020	6	10.1016/j.matpr.2021.02.414
29.	A collaborative framework for traffic information in vehicular adhoc network applications	Manipriya, S.   Mala, C.   Mathew, S.	2020	01-08-2020	6	10.22667/JISIS.2020.08.31.093
30.	Spatial accessibility analysis of schools using geospatial techniques	Rekha, R.S.   Radhakrishnan, N.   Mathew, S.	2020	01-12-2020	5	10.1007/s41324-020-00326-w
31.	Satellite-derived GRACE groundwater storage variation in complex aquifer system	Singh, L.   Saravanan, S.	2020	01-06-2020	5	10.1007/s40899-020-00399-3

	in India					
32.	Characterization, morphology and stability assessment of low-cost industrial by-product as an adsorbent for the removal of methylene blue from aqueous solution	Murugan, P.   Ramesh, S.T.   Biju, V.M.	2020	11-02-2020	5	10.1080/01496395.2019.1567549
33.	Artificial neural network to predict the compressive strength of semilightweight concrete containing ultrafine GGBS	Parthiban, P.   Karthikeyan, J.	2020	01-03-2020	4	10.1520/JTE20180597
34.	A study on mechanical properties of concrete including activated recycled plastic waste	Ashok, M.   Jayabalan, P.   Saraswathy, V.   Muralidharan, S.	2020	01-02-2020	4	10.12989/acc.2020.9.2.207
35.	Characteristics of blended geopolymer concrete using ultrafine ground granulated blast furnace slag and copper slag	Rathanasalam, V.   Perumalsami, J.   Jayakumar, K.	2020	01-12-2020	4	10.18280/ACSM.440610
36.	Effectiveness of ozone pretreatment on bioconversion of oily bilge water into biopolymer	Uma, V.   Gandhimathi, R.	2020	01-08-2020	4	10.1016/j.jwpe.2020.101275
37.	Compressive strength estimation of mesh embedded masonry prism using empirical and neural network models	Kanchidurai, S.   Krishnan, P.A.   Baskar, K.	2020	01-01-2020	4	10.22115/SCCE.2020.228611.1213
38.	Invention of Indian Moon Soil (Lunar Highland Soil Simulant) for Chandrayaan Missions	Venugopal, I.   Muthukkumaran, K.   Sriram, K.V.   Anbazhagan, S.   Prabu, T.   Arivazhagan, S.   Shukla, S.K.	2020	01-12-2020	4	10.1007/s40891-020-00231-0
39.	Assessment and evaluation of groundwater vulnerability index maps of Upper Palar River Basin, Tamilnadu, India	Saravanan, S.   Pitchaikani, S.   Venkatesan, G.	2020	01-12-2020	4	10.1007/s12040-020-01425-w
40.	Partition tolerant collaborative gateway architecture for interoperable ITS applications	Sankaranarayanan, M.   Mala, C.   Mathew, S.	2020	01-01-2020	4	10.1504/IJAHUC.2020.111463
41.	Stabilization of Montmorillonite-Rich Bentonite Clay Using Neem Leaves Ash	Muthukkumaran, K.   Selvan, S.S.	2020	01-06-2020	3	10.1007/s40891-020-0194-6
42.	Assessing the factors affecting the water chemistry parameters in the auxiliary water system of a nuclear power plant	Suganya, P.   Swaminathan, G.   Anoop, B.   Siva Prasad, G.V.R.R.S.G.   Nagarajan, J.	2020	01-11-2020	3	10.1007/s42452-020-03693-z

43.	Dynamic soft sensor based parameters and demand curve estimation for Water Distribution System: Theoretical and Experimental cross validation	Sankaranarayanan, S.   Sivakumaran, N.   Radhakrishnan, T.K.   Swaminathan, G.	2020	01-09-2020	3	10.1016/j.conengprac.2020.104544
44.	Virtual mono-layered continuous containers for vehicle detection applications in intelligent transportation systems	Sankaranarayanan, M.   Mala, C.   Mathew, S.	2020	02-01-2020	3	10.1080/09720529.2020.1721865
45.	Study on Behavior of Copper Slag and Lime-Treated Clay under Static and Dynamic Loading	Muthukkumaran, K.   Anusudha, V.	2020	01-08-2020	2	10.1061/(ASCE)MT.1943-5533.0003259
46.	Seismic performance of semi-rigid steel-concrete composite frames	Senthilkumar, R.   Satish Kumar, S.R.	2020	01-04-2020	2	10.1016/j.istruc.2020.01.046
47.	Finite Element Analysis on Shear Strength of a Castellated Beam with Hexagonal Web Opening	Deepa, R.   Jayalekshmi, S.	2020	24-12-2020	1	10.1088/1757-899X/1006/1/012009
48.	Reduction of wave energy due to monotypic coastal vegetation using response surface methodology (RSM)	Hemavathi, S.   Manjula, R.	2020	01-12-2020	1	10.46488/NEPT.2020.v19i05.021
49.	A Study on the Consolidation and Permeability Behaviour of Soils of State of Tamil Nadu, India	Jayalekshmi, S.   Elamathi, V.	2020	24-12-2020	1	10.1088/1757-899X/1006/1/012017
50.	Deciphering the frozen music in building architecture and vice-versa process	Sendhil, A.   Muthukkumaran, K.   Punniyamoorthy, M.   Veerapandian, S.A.   Sangeetha, G.	2020	01-05-2020	1	10.1007/s11042-019-08316-3
51.	Coastal shallow aquifer characterization in Tiruchendur coastal district of Tuticorin, Tamil Nadu, India utilizing geophysical and geochemical approaches	Govindaraj, S.   Renganathan, M.	2020	01-01-2020	1	10.1016/j.matpr.2020.10.522
52.	A Review on Correlations for Consolidation Characteristics of Various Soils	Jayalekshmi, S.   Elamathi, V.	2020	24-12-2020	1	10.1088/1757-899X/1006/1/012007
53.	Wave attenuation by heterospecific coastal vegetation-modelling through response surface methodology on synthetic plant meadows	Hemavathi, S.   Manjula, R.	2020	10-08-2020	1	10.18520/cs/v119/i3/497-506
54.	A GIS-based spatially distributed crop water	Saravanan, S.   Jennifer, J.J.	2020	01-10-2020	1	10.1007/s12517-020-06014-1

	demand modelling for Pullambadi canal command area in lower Cauvery basin, Tamil Nadu, India	Abijith, D.   Singh, L.				
55.	Estimation of flood mitigation parameter for Tiruchirappalli city using Mathematical Relational Model	Surendar, N.   Nisha, R.	2020	01-07-2020	1	-
56.	Mechanical properties of a geopolymer concrete/ultrafine material based composite	Rathanasalam, V.   Perumalsami, J.   Jayakumar, K.	2020	01-01-2020	1	10.17222/mit.2020.072
57.	Improved Security Schemes for Efficient Traffic Management in Vehicular Ad-Hoc Network	Sankaranarayanan, M.   Mala, C.   Mathew, S.	2020	01-01-2020	1	10.1007/978-981-15-9609-4_10
58.	Numerical Studies on Coir Geotextile Reinforced Flexible Pavement	Anusudha, V.   Sunitha, V.   Babu, C.   Bhole, C.R.   Mathew, S.	2020	01-01-2020	1	10.1007/978-3-030-48679-2_59
59.	Removal of rose bengal dye from aqueous solutions using biosorbent obtained from mangifera indica	Aswin Sriram, G.   Swaminathan, G.	2020	01-01-2020	1	-
60.	Enhancing the nitrogen removal of vertical flow constructed wetland by using organic media	Soundaranayaki, K.   Gandhimathi, R.	2020	01-01-2020	1	10.5004/dwt.2020.24927
61.	Development of spectral library of mangrove native species of the Muthupet lagoon, Tamil Nadu, India using field spectroscopic instrument	Selvaraj, A.   Saravanan, S.   Rani, N.	2020	01-05-2020	0	-
62.	Wave attenuation by coastal vegetation - An Empirical study on synthetic models	Hemavathi, S.   Manjula, R.	2020	01-07-2020	0	-
63.	Numerical Analysis of Laterally Loaded Pile Under Cyclic Loading	Deendayal, R.   Nigitha, D.   Krishnanunni, K.T.	2020	01-01-2020	0	10.1007/978-981-15-6086-6_82
64.	Household structure and the travel pattern of senior citizens for leisure trips	Priya, G.N.   Mathew, S.   Subbaiyan, G.	2020	01-01-2020	0	10.1007/978-981-32-9042-6_26
65.	Structural Assessment of Cyclone Hudhud in Vizag, Andhra Pradesh	Chen, S.-E.   Murugan, B.   Sai, R.   Satyanarayana, P.   Waran, L.   Kumar, S.   Alhaider, I.   Natarajan, C.   Calvo, J.   Janardhanam, R.	2020	01-10-2020	0	10.1061/(ASCE)CF.1943-5509.0001499
66.	Study of trend of rainfall data: A case study of Koraiyar basin, Tamil Nadu	Surendar, N.   Nisha, R.	2020	01-11-2020	0	-

67.	Numerical modelling and laboratory observation for wave attenuation by coastal vegetation	Hemavathi, S.   Manjula, R.	2020	01-01-2020	0	-
68.	Efficient pre-processing and retrieval of reflectance using calibration modules for Hyperspectral satellite data (Hyperion) and denoising of Hyperspectral reference spectra using wavelet based Adaptive Bilateral Filtering (HABF)-A case study on mangroves forest in Muthupet lagoon, Tamil Nadu	Selvaraj, A.   Saravanan, S.	2020	01-10-2020	0	-