

DEPARTMENT OF

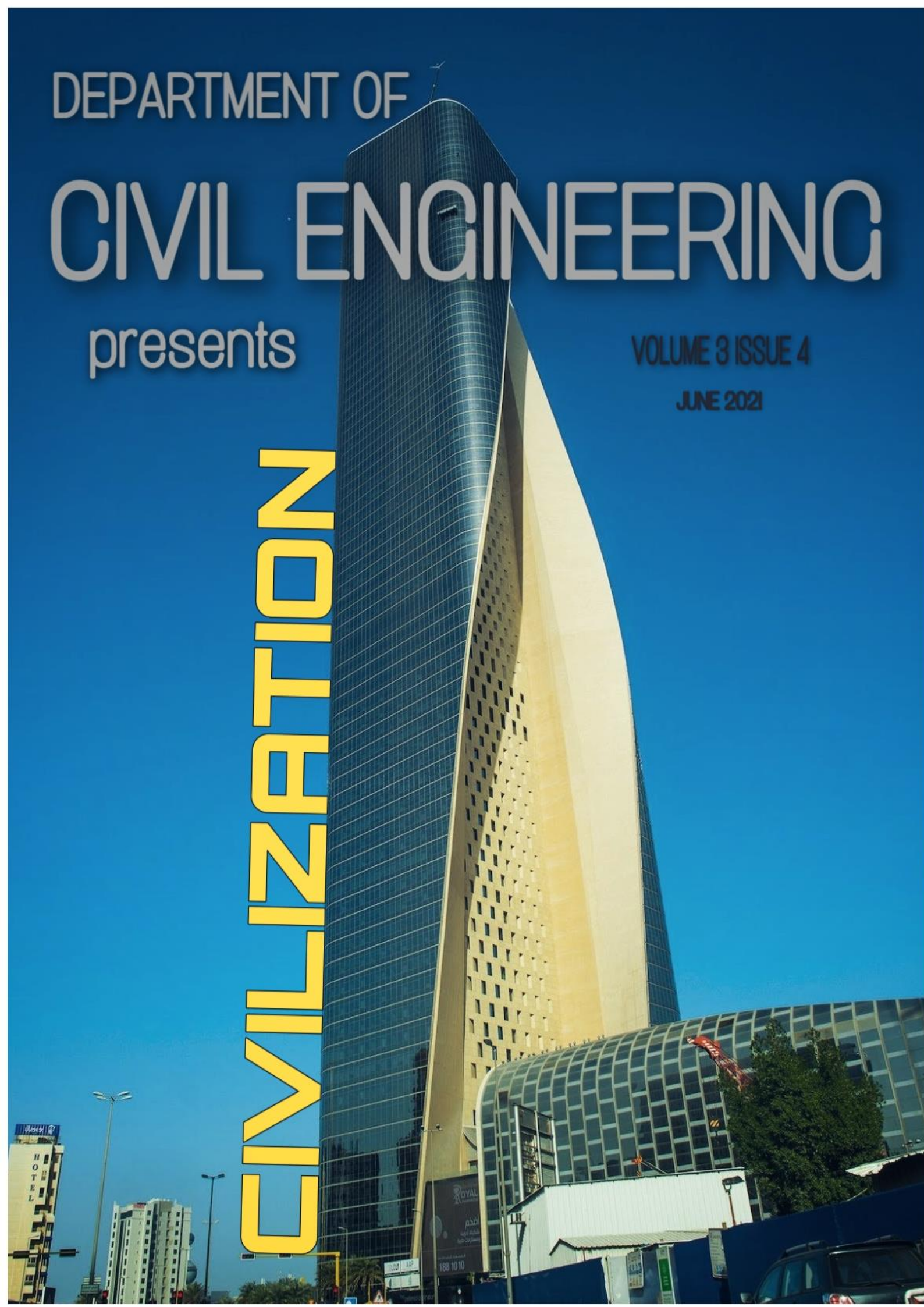
# CIVIL ENGINEERING

presents

VOLUME 3 ISSUE 4

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CIVILIZATION



# **VISION**

- ❖ *To be a Department imparting knowledge in Civil Engineering Education, Research, Entrepreneurship and Industry outreach services for creating sustainable infrastructure and enhancing the quality of Life with professional and ethical values.*

# **MISSION**

- ❖ *To provide an effective learning environment enabling to be a competent Civil Engineer.*
- ❖ *To motivate Research and Entrepreneurial initiatives in the field of Civil Engineering.*
- ❖ *To inculcate ethical values to serve the society with high order Professionalism.*

# ***ATAL TUNNEL***

Atal Tunnel (also known as Rohtang Tunnel) is a highway tunnel built under the Rohtang Pass in the eastern Pir Panjal range of the Himalayas on the Leh-Manali Highway in Himachal Pradesh, India. At a length of 9.02 km, it is the longest tunnel above 10,000 feet (3,048 m) in the world and is named after former Prime Minister of India, Atal Bihari Vajpayee. With the existing Atal Tunnel and after the completion of under-construction Shingo La Tunnel, which is targeted to be completed by 2024, both the Leh-Manali Highway and the Nimmu–Padum–Darcha road routes will become all-weather roads.

The tunnel reduces the travel time and overall distance between Manali and Keylong on the way to Leh. The route, which previously went through Gramphu, was 116 km (72.1 miles) long and took 5 to 6 hours in good conditions. A traveller now reaches the South Portal of the tunnel from Manali, a distance of 24.4 km (15.2 miles) in about 45 minutes, goes through the 9.02 km (5.6 miles) long tunnel in about 15 minutes, and reaches Keylong which is 37 km (23.0 miles) away in about 60 minutes. The new route via the tunnel brings down the total distance travelled to 71 km (44.1 miles) which can be covered in about 2 hours, a reduction of around 3 to 4 hours when compared to the earlier route. Moreover, the tunnel bypasses most of the sites that were prone to road blockades, avalanches, and traffic snarls.



## ***TIMELINE***

The Total length of tunnel is 9.02 km.

- ❖ The project was announced by the then Prime Minister Atal Bihari Vajpayee on 3 June 2000. The work was entrusted to BRO on 6 May 2002.

- ❖ The foundation stone of the project was laid on 28 June 2010 by Sonia Gandhi in her capacity as the Chairperson of National Advisory Council.
- ❖ As of June 2012, two years after the start of the project, 3.5 km of the tunnel digging had been completed.
- ❖ Only a little progress was made in the next one year due to heavy ingress of water at serri-nullah fault zone, that required constant dewatering and slowed the digging and blasting to a crawl.
- ❖ As of October 2013, a little more than 4 km of the tunnel had been dug. However, about 30 m portion of the roof of the tunnel collapsed towards the north portal on 17 October 2013 and the digging had to be stopped.
- ❖ As of September 2014, 4.4 km of the tunnel, i.e., half of 8.8 km planned length had been dug.
- ❖ As of December 2016, 7.6 km of the tunnel digging had been completed. Excavation was expected to be completed in 2017, with opening in the second half of 2019.
- ❖ As on 13 October 2017 both ends of the tunnel met. The Defence Minister, Nirmala Sitharaman, visited the site on 15 October 2017.
- ❖ As on 22 November 2017, it was decided to allow patients to be carried through the under-construction tunnel only in the gravest of emergency when the helicopter service was not available and not to allow civilians to enter the tunnel before completion due to risks of falling rocks, lack of oxygen in the tunnel as ventilation system was yet to be installed, etc. and likely interruption in construction work due to presence of civilians.
- ❖ Sep 2018: The tunnel was used for evacuation of people stranded in Lahaul after sudden spell of bad weather blocked Rohtang La due to snowfall.
- ❖ Jan 2019: 90% work completed. To be opened for emergency traffic by Oct-2019 end. To be opened for general traffic by Sep-2020.
- ❖ Nov 2019: Bus service trial started through the yet-incomplete tunnel on 17 November 2019. A Himachal Road Transport Corporation bus carrying 44

passengers entered tunnel from the south portal and the passengers alighted at the north portal. The bus service operated for next five winter months for residents of Lahaul and Spiti valleys. Private vehicles were not allowed through the tunnel.

- ❖ Dec 2019: On 25 December the tunnel, which was known as Rohtang tunnel till then, was officially renamed as the Atal Tunnel.
- ❖ Sept 2020: 100% completion of project.
- ❖ Oct 2020: The tunnel was inaugurated by the Prime Minister, Narendra Modi on 3 October 2020, in the presence of Minister of Defence, Rajnath Singh and Chief Minister of Himachal Pradesh, Jai Ram Thakur and Minister of State for Finance, Anurag Thakur.

## ***CHALLENGES***

The most challenging task was to continue the excavation during heavy snowfall in winter. Excavation for tunnelling was done from both ends. However, as Rohtang pass closes during the winter, the north portal was not accessible during winter and the excavation was being done only from the south portal in winters. Only about one-fourth of the entire tunnel was excavated from the north end and three-fourths was excavated from the south end. There were more than 46 avalanche sites on approaches to the tunnel.

Other challenges to the progress of the tunnel included difficulties in disposing more than 8 lakh m<sup>3</sup> of excavated rock and soil, heavy ingress of water (as much as 30 lakh litres per day in June 2012) that required constant dewatering, costlier treatment and slowed the progress of excavation from 5-metre per day to just half a metre a day and unstable rocks that slowed blasting and digging. A cloud-burst and flash flood on 8 August 2003 killed 42 labourers who were building the temporary access road. Questions were also raised on the impact of cutting down more than 700 trees on the ecology.

## ***SPECIFICATIONS***

The tunnel is intended to create an all-weather route to Leh and Lahaul and Spiti valleys in Himachal Pradesh. The Salient features of the Atal Tunnel are as follows:

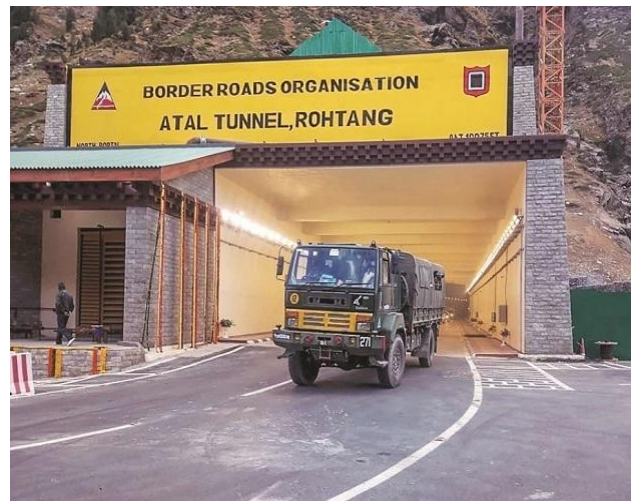
<b>FEATURES</b>	<b>VALUES</b>
Length	9.02 km (5.6 miles)
Shape (cross-section) of Tunnel	Horseshoe
Finished width	10.00 m (32.8 ft) at road level (8m pavement and 1m footpath on both sides)
General altitude of the tunnel	3,000–3,100 m or 9,840–10,170 ft
Designated vehicular speed	80 km/h (50 mph)
Geology of tunnelling media	Uniformly dipping alternate sequence of quartzites, quartzitic schists, quartz-diolite-schist with thin bands. Tunnel boring machines were not used because of the inability to see inside the mountain, instead blasting and digging used to build the tunnel.
Temperature variation in the area	25–30 °C (77–86 °F) during May–June, –30 to –20 °C (–22 to –4 °F) during Dec–Jan.
Overburden	Maximum 1,900 metres (6,230 ft), average more than 600 m (1,970 ft)
Construction technique	Drill & Blast with NATM
Support system	Fibre-reinforced concrete (100–300mm or 0–10-inch-thick) combined with rock bolt (26.50mm dia, 5,000–9,000mm or 200–350-inch-long) has been used as the principal support system. In areas of poor rock condition, yieldable steel ribs (ISMB 150/ISMB 300) have been used.
Tunnel ventilation	Semi-transverse system of ventilation. A 2.25 m high and 3.6 m wide emergency tunnel is integrated in the tunnel cross-section beneath the main carriageway.

## ***DESIGN CONSIDERATIONS***

The following parameters have been set in design:

- (a) Upper tolerance limit for concentration – 150ppm
- (b) Visibility factor – 0.009/m
- (c) Vehicles
  - (i) Cars – 3000 Nos.
  - (ii) Trucks – 1500 Nos.
- (d) Peak hour traffic – 337.50 PCUs
- (e) Design vehicular speed in Tunnel
  - (i) Maximum Speed – 80 km/h (50 mph)
  - (ii) Minimum Speed – 30 km/h (19 mph)

The tunnel is at an elevation of 3,100 metres (10,171 ft) whereas the Rohtang Pass is at an elevation of 3,978 metres (13,051 ft). It was inaugurated by Prime Minister Narendra Modi on 3 October 2020. The cost of the entire project is ₹3,200 crores (US\$438 million).



*By Mr. M. Manoharan*  
*Assistant Professor*  
*Department of Civil Engineering*

# ***CROSS LAMINATED TIMBER***

CLT is a sustainable and resilient form of engineered wood which does not require burning of any fossil fuels during its construction.

It is made by gluing layers of solid-sawn lumber together and layers lay perpendicular to each other making it more tensile and greater compressive strength.

Originated in Europe, CLT is now worldly used, plays to be an excellent building material due to faster production, great quality and flexibility in design. The initial costs of the material are higher but when taken an account on the complete building costs, it saves up. Due to its natural-looking aesthetics and strength, designers and builders are now coming up with building CLT based skyscrapers.

## ***DALSTON WORKS, LONDON (One of the world's largest CLT building)***



Number of stories : 10

Residential units : 121

It is built almost entirely of CLT, reducing the building's carbon footprint in both material production and onsite energy consumption. However, the building designed by Waugh Thistleton Architects doesn't even appear to be made of CLT. The outside of the building is constructed using clad brick with steel balconies and was designed to fit in with other buildings in the neighborhood.



## ***69 A STREET, BOSTON***

Construction Location: Boston

Industry: Architecture firm Margulies Perruzzi

The design team selected CLT for their construction, as it aligns with the industrial brick and beam nature of the building. CLT offers new possibilities in wood construction due to its superior strength and stability. Nordic Structures, a company in the construction industry, says wood is five times lighter than concrete and 15 times lighter than steel.



## ***SIDEYARD, PORTLAND***



Construction Location: Portland

Contractor: Anderson Construction

A prominent material used was CLT, particularly inside the building. General contractor Anderson Construction championed the timber for its regional relevance, availability, and simplicity of assembly.

It minimizes onsite construction waste and offers high seismic and thermal performance. Most of the space's visitors are commuters, considering it is located on the corner of a popular bicycle commuter route. The openness of the communal space promises adaptability to suit the neighborhood's needs over time.

*By Mrs. S. Yugasini*

*Assistant Professor*

*Department of Civil Engineering*

# ***DEPARTMENTAL ACTIVITIES***

## ***STUDENT ACTIVITIES***

### ***STUDENT PARTICIPATION IN ONLINE WEBINAR & ONLINE COURSES***

<b>Sl. No.</b>	<b>Name of the Student</b>	<b>Year/ Section</b>	<b>Course Title</b>	<b>Organized / Offered by</b>	<b>Event</b>	<b>Date</b>
<b><i>APRIL 2021</i></b>						
1	Sumithra T	III B	Art of Writing Research Papers and Ethics in Publishing	Rajalakshmi Institute of Technology	Webinar	24-Apr-21
2	Srinivasan D	III B	Art of Writing Research Papers and Ethics in Publishing	Rajalakshmi Institute of Technology	Webinar	24-Apr-21
3	Sumithra T	III B	Essential Google Cloud Infrastructure: Foundation	Coursera	Online Course	01-Apr-21

4	Sumithra T	III B	Google Cloud Platform Fundamentals: Core Infrastructure	Coursera	Online Course	05-Apr-21
<b><i>JUNE 2021</i></b>						
1	Shashank N	III B	How to Improve Placement Quotient?	Webinar	FACE Prep	04-Jun-21
2	Shashank N	III B	TCS iON Career Edge - Young Professional	TCS iON	Online Course	12-Jun-21 to 26-Jun-21
3	Sumithra T	III B	Preparing for the Google Cloud Associate Cloud Engineer Exam	Coursera	Online Course	03-Jun-21
4	Sreemathi R.	III B	Design and Analysis of Buildings using STAAD.Pro   EN	Bentley Institute & ICT Academy, TN	Online Course	07-May-21
5	Sreemathi R.	III B	ReCogNurize-Sparkling Stars	Cognizant Digital Nurture	Online Course	May-21
6	Sreemathi R.	III B	ReCogNurize-Learning Paladins	Cognizant Digital Nurture	Online Course	May-21
7	Sreemathi R.	III B	Reliable Google Cloud Infrastructure: Design and Process	Coursera	Online Course	20-Apr-21
8	Sreemathi R.	III B	Elastic Google Cloud Infrastructure:	Coursera	Online Course	18-Apr-21

			Scaling and Automation			
9	Sreemathi R.	III B	Essential Google Cloud Infrastructure: Core Services	Coursera	Online Course	16-Apr-21
10	Sreemathi R.	III B	Essential Google Cloud Infrastructure: Foundation	Coursera	Online Course	14-Apr-21
11	Sreemathi R.	III B	Google Cloud Platform Fundamentals: Core Infrastructure	Coursera	Online Course	12-Apr-21

## ***FACULTY ACCOMPLISHMENTS***

### ***JOURNAL PUBLICATION***

✚ **Dr. M. Selvakumar** and **Dr. S. Geetha** published a Journal Paper titled “**Characteristics of High Strength Concrete with Basalt Fibre and Glass Powder as Partial Replacement of Fine Aggregate**” in Materials Today: Proceedings, Volume 43, Part 2, 2021, pp.1460-1464. (Elsevier, Scopus Indexed).

✚ **Dr. M. Selvakumar** and **Dr. S. Geetha** published a Journal Paper titled “**Optimization of multifunctional Nano Cement Composite for self – sensing**” in Materials Today: Proceedings, Volume 44, Part 1, 2021, pp. 70-74. (Elsevier, Scopus Indexed).

- ✚ **Dr. M. Selvakumar and Dr. S. Geetha** published a Journal Paper titled “**Alkali activated porous material with Nano Graphene Oxide as adsorbent in Wastewater Treatment**” in *Materials Today: Proceedings*, Volume 45, Part 4, 2021, pp. 4087-4090. (Elsevier, Scopus Indexed).
  
- ✚ **Dr. A. Rose Enid Teresa, Dr. M. Uma Magesvari, Mrs. S. Yugasini and Mr. P. Muthaiyan** published a Journal Paper titled “**Eco Bricks from Industrial Wastes such as Tannery Sludge and Sugarcane Bagasse Ash**” in *IOP Conference Series, Materials Science and Engineering*, 1126 (2021) 012076.
  
- ✚ **Mrs. S. Muthu Lakshmi, Dr. S. Geetha and Dr. M. Selvakumar** published a Journal Paper titled “**Predicting soaked CBR of SC subgrade from dry density for light and heavy compaction**” in *Materials Today: Proceedings*, Volume 45, Part 2, 2021, pp. 1664-1670. (Elsevier, Scopus Indexed).
  
- ✚ **Mrs. S. Muthu Lakshmi, M. Arshad Gani, V. Kamalesh, V. Mahalakshmi and P. M. Padmesh** published a Journal Paper titled titled “**Correlating Unsoaked CBR with UCC Strength for SC and SP Soil**” in *Materials Today: Proceedings*, Volume 43, Part 2, 2021, pp. 1293-1303 . (Elsevier, Scopus Indexed).
  
- ✚ **Mrs. S. Muthu Lakshmi, R. Rishikesan, S. Vijay Gokulavasan, B. S. Sunil Babu, A. K. Nafeel, M. J. Satish Anand and A. Naveen Aravind** published a Journal Paper titled “**Enhancement of strength characteristics of Clayey Sand using Flyash and Geonet**” in *Materials Today: Proceedings*, Volume 45, Part 2, 2021, pp. 479 – 485. (Elsevier, Scopus Indexed).

## ***CONFERENCE PAPER PUBLICATION***

- ✚ Dr. M. Selvakumar, Dr. S. Geetha and Mrs. S. Muthu Lakshmi** presented a conference paper titled **“Prediction of Air Pollution due to Mobile Sources using Line Source Models”** in 1<sup>st</sup> International Conference on ‘Construction Materials and Environment (ICCME 2021)’ organized online by Jaypee University of Information Technology, Solan and IGS – Shimla Chapter on 3<sup>rd</sup> and 4<sup>th</sup> June 2021.
- ✚ Dr. A. Rose Enid Teresa** presented a conference paper titled **“Road Bridges across Cooum and Adyar Rivers in Chennai City - Need for Structural Health Monitoring”** in 1<sup>st</sup> International Conference on ‘Construction Materials and Environment (ICCME 2021)’ organized online by Jaypee University of Information Technology, Solan and IGS – Shimla Chapter on 3<sup>rd</sup> and 4<sup>th</sup> June 2021.
- ✚ Mrs. S. Muthu Lakshmi, Dr. S. Geetha, Dr. M. Selvakumar, S. Revathy and K. M. ShriVarshini** presented a conference paper titled **“Application of Industrial Wastes for Soil Strength Improvement”** in 1<sup>st</sup> International Conference on ‘Construction Materials and Environment (ICCME 2021)’ organized online by Jaypee University of Information Technology, Solan and IGS – Shimla Chapter on 3<sup>rd</sup> and 4<sup>th</sup> June 2021.
- ✚ Mrs. M. Goutham Priya** presented a conference paper titled **“Trend Modelling for Air Quality - An Approach”** in 1<sup>st</sup> International Conference on ‘Construction Materials and Environment (ICCME 2021)’ organized online by Jaypee University of Information Technology, Solan and IGS – Shimla Chapter on 3<sup>rd</sup> and 4<sup>th</sup> June 2021.

## ***TECHNICAL WEBINAR ORGANIZED BY THE DEPARTMENT***

- ✚ One-day Technical Webinar was organized on “**Construction of Low-Cost Buildings using Glass Fibre Reinforced Gypsum Panels**” for Faculty and Students through Google Meet. The lecture was delivered by **Mr. R. Saravanakumar, Trainee Junior Engineer, Design, Drawing, and Estimation, Southern Railways** on 26<sup>th</sup> June 2021. The Webinar was organized by the Department in association with Indian Concrete Institute (ICI) & Institution’s Innovation Council (IIC).
- ✚ One-day Technical Webinar was organized on “**Career guidance for Civil Engineers**” for Faculty and Students through Google Meet. The lecture was delivered by **Ms. Megha Jawale, Career Growth Mentor for Engineering Professionals** on 30<sup>th</sup> June 2021. The Webinar was organized by the Department in association with Indian Concrete Institute (ICI) & Institution’s Innovation Council (IIC).

## ***PROPOSAL SUBMITTED***

- ✚ A joint Proposal by Department of Civil & Mechanical Engineering has been submitted for study tour Grant under the scheme “**AICTE – Youth Undertaking Visit for Acquiring Knowledge (YUVAK): Study tour of Atal Tunnel, Himachal Pradesh**”.

## ***OTHER ACHIEVEMENTS***

- ✚ **Dr. M. Selvakumar** has been recognized as **Reviewer** for manuscripts submitted to **Springer Proceedings**.
- ✚ **Dr. M. Selvakumar** has been recognized as **Reviewer** for manuscripts submitted to **AIP Conference Proceedings**.

- ✚ **Dr. S. Geetha** has been recognized as **Reviewer** for manuscripts submitted to **AIP Conference Proceedings**.
- ✚ **Dr A Rose Enid Teresa**, has been recognised as **Reviewer** for **Innovative Infrastructure Solutions (IISS) (Springer)**, a peer-reviewed international journal and **Materials Today Proceedings**.
- ✚ **Dr A Rose Enid Teresa**, has been appointed as **Editorial Board member** of **Indonesian Journal of Environment and Sustainability**.
- ✚ **Mr. M. Manoharan** successfully completed the course "**Architecting with Google Compute Engine**" offered by Google Cloud through Coursera from 12<sup>th</sup> feb'21 to 14<sup>th</sup> April'21 and also mentored 18 students of Civil Engineering Department.
- ✚ **Mr. P. Muthaiyan** delivered a **Lecture** on "**Strength of Materials**" for **Akshaya College of Engineering and Technology**, Kinathukadavu, Coimbatore on 11<sup>th</sup> Jun'21.

***FACULTY PARTICIPATION IN  
ONLINE WEBINAR / FDP /  
CONFERENCE / QUIZ / WORKSHOP***

Sl. No	Name of the Faculty Member	Course Title	Organized by	Event	Date
<b><i>APRIL 2021</i></b>					
1.	Dr. M. Selvakumar	IPR, Patents & Research Proposals	Sengunthar Engineering College	Webinar	10.04.2021
2.		Introduction to UHPC	QcreteReadymix India (P) Ltd	Webinar	28.04.2021
3.	Dr. S. Geetha	IPR, Patents & Research Proposals	Sengunthar Engineering College	Webinar	10.04.2021
4.		Introduction to UHPC	QcreteReadymix India (P) Ltd	Webinar	28.04.2021



5.	Mr. M. Manoharan	Materials Engineering with Sustainable Value	Confederation of Indian Industry (CII).	Conference	30.04.2021
6.	Mrs. V. J. Vedhanayaghi	FDP on “Modern Housing Design in Revit Architecture (Online Live FDP)”	ICT Academy	10 Hrs FDP	05.04.2021 to 09.04.2021
7.		FDP on “Introduction to Python Programming (Online Live FDP)”	ICT Academy	12 Hrs FDP	26.04.2021 to 30.04.2021

**MAY 2021**

1.	Dr. M. Selvakumar	Basics of Geopolymer Concretes and their Applications	Qcrete Readymix India (P) Ltd	Webinar	20.05.2021
2.		Smart Cities- Infrastructure & Sustainability	IIT Ropar	ATAL FDP sponsored by AICTE	24.05.2021 to 28.05.2021
3.		Understanding Structural Health in India - A need	Qcrete Readymix India (P) Ltd	Webinar	27.05.2021
4.		Latest Techniques for Rehabilitation of Structures	Chandubhai S. Patel Institute of Technology, Gujarat	Webinar	29.05.2021
5.	Dr. S. Geetha	Basics of Geopolymer Concretes and their Applications	Qcrete Readymix India (P) Ltd	Webinar	20.05.2021
6.		Smart Cities- Infrastructure & Sustainability	IIT Ropar	ATAL FDP sponsored by AICTE	24.05.2021 to 28.05.2021

7.		Understanding Structural Health in India - A need	Qcrete Readymix India (P) Ltd	Webinar	27.05.2021
8.		Latest Techniques for Rehabilitation of Structures	Chandubhai S. Patel Institute of Technology, Gujarat	Webinar	29.05.2021
9.	Mr. E. S. Karthic	Plastic Waste Management	WeCare in association with Recykal, supported by 12 Leading FMCG Brands.	Workshop	24.05.2021
10.		Building Approval Procedures and Quality Check in Construction	Care College Of Engineering	Webinar	20.05.2021 to 21.05.2021

***JUNE 2021***

1.	Dr. M. Selvakumar	Sustainable Practices in Civil Engineering	Visvesvaraya College of Engineering, Bangalore University	ATAL FDP sponsored by AICTE	14.06.2021 to 18.06.2021
2.	Dr A Rose Enid Teresa	Augmented reality and Virtual Reality for Civil Engineering Applications	Sona College of Technology	Webinar	04.06.2021
3.		Opportunity for autonomous colleges in NEP 2020	Rajalakshmi Engineering College	Webinar	10.06.2021
4.		Life Lessons on Leadership	IWN Southern Region StarTrek Session	CII	18.06.2021
5.		Construction of Low Cost Building using Glass Fibre	Rajalakshmi Engineering College	Webinar	26.06.2021

		Reinforced Gypsum Panels.			
6.		Career Guidance for Civil Engineers	REC,Chennai	Webinar	30.06.2021
7.	Dr. S. Geetha	Sustainable Practices in Civil Engineering	Visvesvaraya College of Engineering, Bangalore University	ATAL FDP sponsored by AICTE	14.06.2021 to 18.06.2021
8.	Dr. M. Uma Magesvari	Structural Analysis I	Sri Venkateshwara College of Engineering, Chennai	Anna University Sponsored 6 days Virtual FDP	16.06.2021 to 19.06.2021
9.	Mrs. S. Muthu Lakshmi	Construction of Low Cost Building using Glass Fibre Reinforced Gypsum Panels.	REC,Chennai	Webinar	26.06.2021
10.		Career Guidance for Civil Engineers	REC,Chennai	Webinar	30.06.2021
11.		Geotechnical Engineering	St.Joseph's College of Engineering	Quiz (Secured 90%)	27.06.2021
12.	Mrs. M. Goutham Priya	Implementation of NEP 2020 in HEIs	B.S. Abdur Rahman Crescent Institute of Science and Technology	National Webinar	16.06.2021
13.		Opportunity for autonomous colleges in NEP 2020	Rajalakshmi Engineering College	Webinar	10.06.2021
14.		Green Building Innovations and Opportunities	St.Joseph's College of Engineering	Webinar	09.06.2021

15.		Construction of Low cost Building using Glass fibre Reinforced Gypsum Panels	Rajalakshmi Engineering College	Webinar	26.06.2021
16.		Advanced Surveying using 3D Laser Scanners	RMK Engineering College	Webinar	28.06.2021
17.		Career Guidance for Civil Engineers	Rajalakshmi Engineering College	Webinar	30.06.2021
18.	Mr. M. Ammaiappan	Construction of Low Cost Building using Glass Fibre Reinforced Gypsum Panels.	REC,Chennai	Webinar	26.06.2021
19.		Geotechnical Engineering	St.Joseph's College of Engineering	Quiz (Secured 80%)	27.06.2021
20.		Career Guidance for Civil Engineers	REC,Chennai	Webinar	30.06.2021
21.	Mrs. A. J. Jeya Arthi	Opportunity for autonomous colleges in NEP 2020	Rajalakshmi Engineering College	Webinar	10.06.2021
22.		Green Building Innovations and Opportunities	St.Joseph's College of Engineering	Webinar	09.06.2021
23.		Construction of Low cost Building using Glass fibre Reinforced Gypsum Panels	Rajalakshmi Engineering College	Webinar	26.06.2021
24.		Advanced Surveying using 3D Laser Scanners	RMK Engineering College	Webinar	28.06.2021

25.		Career Guidance for Civil Engineers	Rajalakshmi Engineering College	Webinar	30.06.2021
26.	Mrs. V. J. Vedhanayghi	Construction of Low Cost Building using Glass Fibre Reinforced Gypsum Panels.	REC,Chennai	Webinar	26.06.2021
27.	Mrs. S. Yugasini	Fibre Reinforced Concrete –and its mechanism	Vel Tech Dr RR & SR R&D Institute of Technology	Webinar	23.06.2021
28.		Construction of Low Cost Building using Glass Fibre Reinforced Gypsum Panels.	REC,Chennai	Webinar	26.06.2021
29.		Career Guidance for Civil Engineers	REC,Chennai	Webinar	30.06.2021
30.	Mr. P. Muthaiyan	Fibre Reinforced Concrete –and its mechanism	Vel Tech Dr RR & SR R&D Institute of Technology	Webinar	23.06.2021
31.		Construction of Low Cost Building using Glass Fibre Reinforced Gypsum Panels.	REC,Chennai	Webinar	26.06.2021
32.		Geotechnical Engineering	St.Joseph's College of Engineering	Quiz (80%)	27.06.2021
33.		Career Guidance for Civil Engineers	REC,Chennai	Webinar	30.06.2021

# ***EDITORIAL BOARD MEMBERS***

## ***STAFF INCHARGE***

***Mrs. S. Muthu Lakshmi / AP(SG)***

## ***STUDENT INCHARGES***

***M. J. Vignesh (II/B)***

***A. S. Dawn Adaikaladass (III/A)***

***G. Yogashree (III/B)***

***M. J. Satish Anand (IV/B)***