

Department of  
Civil Engineering

# CIVILIZATION



Scientists investigate that which already is; Engineers create that which has never been..

**-Albert Einstein**

We shape our buildings,  
thereafter they shape us.

**- Winston Churchill**

**CIVIL ENGINEERING**

**DESIGNING  
THE WORLD**

# **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.

# *Graphene – The Novel “Supermaterial”*

Graphene, the "*wonder material*" composed of a one-atom-thick sheet of linked carbon atoms, is the world's strongest manmade material. To make the concrete, a team from Britain's University of Exeter devised a technique of suspending flakes of graphene in water, then mixing that water with traditional concrete ingredients such as cement and aggregate. The process is reportedly inexpensive, and compatible with modern, large-scale manufacturing requirements.

When tested, the graphene-enhanced concrete was found to have a 146-percent increase in compressive strength as compared to regular concrete, a 79.5-percent increase in flexural strength, and a decrease in water permeability of almost 400 percent. The material meets British and European standards for construction.

The increased strength and water resistance should allow structures made with the concrete to last much longer than would otherwise be possible. Additionally, the inclusion of graphene in the concrete reportedly allows for a reduction of about 50 percent of other materials used, including cement. The scientists state that this factor should result in a 446 kg/tonne reduction in emitted CO<sub>2</sub>. "Finding greener ways to build is a crucial step forward in reducing carbon emissions around the world and so help protect our environment as much as possible," says PhD student Dimitar Dimov, who led the research. It is the first step, but a crucial step in the right direction to make a more sustainable construction industry for the future.

*Dr. A. Rose Enid Teresa*

*Professor & Head*

*Department of Civil Engineering*

# *Application of Nano Technology in Construction*

**“Nanotechnology is the engineering of functional systems at the molecular scale”**

**1 Nanometer =  $1 \times 10^{-9}$  m**

## *Application in concrete*

Addition of nano-scale materials into cement could improve its performance. Use of nano-SiO<sub>2</sub> could significantly increase the compressive strength of concrete containing large volume of fly ash, at an early age and also improves the pore size distribution by filling the pores between large fly ash and cement particles at nano-scale. The dispersion/slurry of amorphous nano-silica is used to improve segregation resistance for self-compacting concrete. It has also been reported that adding small amount of carbon nano tube (1%) by weight could increase both compressive and flexural strength. Cracking is a major concern for many structures. University of Illinois Urbana-Champaign is working on healing polymers, which include a microencapsulated healing agent and a catalytic chemical trigger. When the microcapsules are broken by a crack, the healing agent is released into the crack and contact with the catalyst. The polymerization happens and bond the crack faces. The self-healing polymer could be especially applicable to fix the micro-cracking in bridge piers and columns. But it requires costly epoxy injection.

## *Application in Steel*

Steel is a major construction material. Its properties, such as strength, corrosion resistance, and weld ability, are very important for the design and construction. It is possible to develop new, low carbon, high performance steel (HPS) with higher corrosion-resistance and weld ability by incorporating copper nano particles at the steel grain boundaries.

### ***Coating***

The coatings incorporating certain nano particles or nano layers have been developed for certain purpose. It is one of the major applications of nanotechnology in construction. For example, TiO<sub>2</sub> is used to coat glazing because of its sterilizing and anti-fouling properties. The TiO<sub>2</sub> will break down and disintegrate organic dirt through powerful catalytic reaction. Furthermore, it is hydrophilic, which allow the water to spread evenly over the surface and wash away dirt previously broken down. Other special coatings also have been developed, such as anti-graffiti, thermal control, energy saving, anti-reflection coating.

### ***Nano sensors***

Sensors have been developed and used in construction to monitor and/or control the environment condition and the materials/structure performance. One advantage of these sensors is their dimension ( $10^{-9}\text{m}$  to  $10^{-5}\text{m}$ ). These sensors could be embedded into the structure during the construction process. Smart aggregate, a low cost piezoceramic-based multi-functional device, has been applied to monitor early age concrete properties such as moisture, temperature, relative humidity and early age strength development. The sensors can also be used to monitor concrete corrosion and cracking. The smart aggregate can also be used for structural health monitoring. The disclosed system can monitor internal stresses, cracks and other physical forces in the structures during the structures' life. It is capable of providing an early indication of the health of the structure before a failure of the structure can occur.

***Mr. M.Manoharan***

***Assistant Professor***

***Department of Civil Engineering***

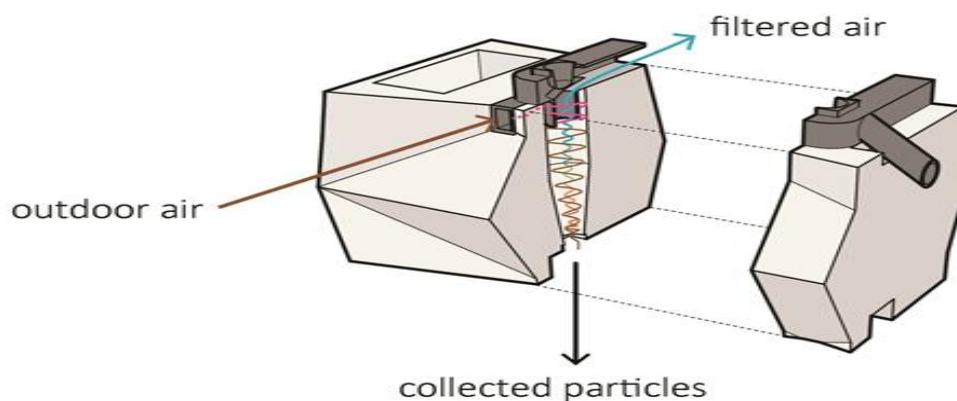
# *Air Cleaning Bricks*

The quality of the air in our surrounding is degrading day by day. The pollutants emerging from industries, power plants, refineries and vehicles, are responsible for the poor quality of air.

In order to maintain indoor air quality (IAQ) of the building, an innovative brick is developed by Carmen Trudell, assistant professor at Cal Poly San Luis Obispo's school of architecture and founder of both Landscape and Architecture.

The brick is designed to form a part of a building's regular ventilation system, with a double-layered facade of the specialist bricks on the outside, complemented by a standard internal layer providing insulation. At the centre of the brick's function is cyclone filtration, an idea borrowed from modern vacuum cleaners, which separates out the heavy pollutant particles from the air and drops them into a removable hopper at the base of the wall.

The system is composed of two key parts: concrete bricks, and a recycled plastic coupler, which both helps to align bricks and creates a route from the outside into the brick's hollow centre. The concrete bricks themselves feature a faceted surface which helps to direct air flow into the system, and a separate cavity for inserting steel structure.



The brick can function with both mechanical and passive ventilation systems, as the brick simply delivers filtered air into the wall plenum; this air can then be delivered to the building interior through mechanical equipment or through trickle vents driven by passive systems such as stack ventilation.

In windtunnel tests, the system was found to filter 30% of fine particles (such as airborne pollutants) and 100% of coarse particles such as dust. Overall the system is very efficient in controlling air pollution.

*C. MARIA DON BOSCO*

*III YEAR CIVIL A*

## *Exoskeleton for Construction Workers*

**TECHNOLOGY** is impacting the construction industry like never before.

From cloud-based collaboration and the development of digital twins to robots, super-materials, wearable tech, pollution-eating buildings and even artificial intelligence – an incredible array of developments are helping to improve a sector that shapes how every human being on Earth is able to live their lives.

Here we are about to look at one of the amazing technology which is going to make a huge difference in construction.

An electric exoskeleton that enables the wearer to lift 90 kg for extended periods has been introduced by US firm Sarcos, and is due to be commercially available in 2020. The Guardian XO Max (pictured) is a full-body exoskeleton that has been in development for 17 years, at an R&D cost of \$175m (£136.5m).

The batteries that power the suit last for eight hours on a single charge and can be swapped in and out without losing power. The suit requires 400W of power while walking at human speed, and it takes about a minute for operators to get in and out of it.

## ***Worker Safety***

Perhaps the most important benefit of exoskeletons is the improvement to worker safety. By taking on the brunt of the load, exoskeletons are able to minimise risk of injury or strain whilst still allowing workers to move naturally. Best practice lift technique and posture can be facilitated by exoskeletons and the risk of accidents from heavy objects is reduced as workers are able to carry and control more load with the help of the technology.

And there are long term benefits to worker health as well that should be considered. Often worse than a work site injury, is the long term effects to health that come with a career in construction. Long hours spent carrying out repetitive or strenuous tasks over a period of years can have severe effects on the spine and joints. The use of exoskeletons can minimise long term impacts on worker safety as well.

## ***Skills Shortage***

It's no secret that there is a growing skills shortage in the construction industry and exoskeletons could play a key role in tackling this issue. Older construction workers will be able to prolong their careers with exoskeletons as they are able to take on the more physical aspects of the job without as much strain.

In addition to the older generation, millennials are also likely to be more interested in a career in construction supplemented by sci-fi like technology. Exoskeletons could have an equally high appeal with younger construction professionals.

And then there are also just plain productivity gains. Construction workers achieve more with exoskeletons than without. At a time when the construction industry is experiencing a skills shortage, technology that delivers a measurable boost to the productivity of the existing workforce is a powerful tool.

Last but not least, exoskeletons could have a positive effect on the skills shortage by facilitating more diversity within the industry too. The number of women put off by a career in construction due to the assumption that they lack the physical attributes to



carry out the job is unquantifiable. Exoskeleton technology may be a great way to level the playing field and encourage more women to pursue a career in construction.

There are clear benefits to using exoskeletons in the construction sector and given the technology assists the workforce in carrying out their jobs rather than replacing them of their jobs altogether, we expect unhindered adoption as the technology grows and becomes mainstream. The key considerations for construction companies looking to supply their workers with exoskeletons will be cost and return on investment. For this reason, we expect larger companies to be the first movers in adopting the technology.

***S. SANDHIYA***

***III YEAR CIVIL B***

## ***Eco Floating Homes***

A floating building is a building unit with a flotation system at its base, to allow it to float on water. It is common to define such a building as being "permanently moored" and not usable in navigation. Floating buildings are usually towed into location by another ship and are unable to move under their own power. Affordable housing and overcrowding in cities are putting pressure on urban populations to make changes. To combat these issues, civil engineers are designing floating homes—practical living spaces that sit upon the water. The homes are designed to resist floods by floating on top of water using a foundation of concrete and Styrofoam, which makes them virtually unsinkable. This approach means that homes can be built in spaces that were previously off-limits, like rivers, lakes and other bodies of water. Civil engineers predict that modern floating home technology will lower the costs of flood damage in urban cities, while also providing compact inner-city populations with more diverse housing options.



The concept of floating buildings is not new, as they can be found all over the world, especially in traditional Asian villages. Although with modern civil engineering knowledge, these structures—and the infrastructure needed to make them sustainable—are gradually becoming more reliable and easier to maintain. However, introducing this concept in urban environments with large populations will prove to be somewhat tricky, as structures being built within or on above-ground water sources could impact environments negatively by disturbing the natural state of the land beneath bodies of water (e.g. lake bottoms or the ocean floor). The effect of humans on the environment should not be underestimated either, so civil engineers will need to remain focused on creating systems that inhibit floating houses and their residents from disrupting local water ecosystems, while improving the viability of this technology for use in low-income areas. Architects and city planners across the world are starting to look beyond the traditional confines of the city, towards building on water as one of the answers to reducing inner-city population density and also developing flood-resilient designs. Global damage to cities from flooding could amount to \$1tn a year by 2050 if no action is taken

***B THULASIRAM***  
***III YEAR CIVIL B***

# ***DEPARTMENTAL ACTIVITIES***

## ***STUDENT ACHIEVEMENTS***

### ***NPTEL COURSES COMPLETED BY STUDENTS***

<b>S. No.</b>	<b>Student Name</b>	<b>Year / Section</b>	<b>Course Name</b>	<b>Course Duration</b>	<b>NPTEL Score</b>	<b>Certificate Type</b>
1	K. Bharadwaj Balaji	IV / A	Soil Mechanics / Geotechnical Engineering I	January – April 2019	40	Successfully completed
2	Sathyapriya Korra	IV / A	Soil Mechanics / Geotechnical Engineering I	January – April 2019	43	Successfully completed
3	M.Aishwarya	IV / A	Soil Mechanics / Geotechnical Engineering I	January – April 2019	40	Successfully completed
4	D. Indumathi	IV / A	Soil Mechanics / Geotechnical Engineering I	January – April 2019	40	Successfully completed
5	B. Anjali Kumari Shaw	IV / A	Soil Mechanics / Geotechnical Engineering I	January – April 2019	57	Successfully completed
6	A.Karthick	IV / A	Soil Mechanics / Geotechnical Engineering I	January – April 2019	40	Successfully completed
7	T. Sakthi	IV / B	Subsurface Exploration: Importance and Techniques involved (considered as AICTE – FDP)	February – April 2019	40	Successfully completed
8	M. Nagaraj	III / A	Soil Mechanics / Geotechnical Engineering I	January – April 2019	42	Successfully completed
9	Narasingan Sudalai	III / A	Soil Mechanics / Geotechnical Engineering I	January – April 2019	44	Successfully completed
10	K. S. Manikandan	III / A	Soil Mechanics / Geotechnical Engineering I	January – April 2019	46	Successfully completed

11	G. Dhivya	III / A	Soil Mechanics / Geotechnical Engineering I	January – April 2019	44	Successfully completed
12	R. Harine	III / A	Soil Mechanics / Geotechnical Engineering I	January – April 2019	48	Successfully completed
13	E. Dhanush Kumar	III / A	Soil Mechanics / Geotechnical Engineering I	January – April 2019	40	Successfully completed
14	V.Hemanathan	III / A	Soil Mechanics / Geotechnical Engineering I	January – April 2019	48	Successfully completed
15	J. Govindha Krishnan	III / A	Soil Mechanics / Geotechnical Engineering I	January – April 2019	47	Successfully completed
16	G. Dilli Balaji	III / A	Soil Mechanics / Geotechnical Engineering I	January – April 2019	48	Successfully completed
17	Y. Aswin Samuel	III / A	Soil Mechanics / Geotechnical Engineering I	January – April 2019	40	Successfully completed
18	J. Dhayanand	III / A	Soil Mechanics / Geotechnical Engineering I	January – April 2019	40	Successfully completed
19	P.Bhuvaneshwaran	III / A	Soil Mechanics / Geotechnical Engineering I	January – April 2019	49	Successfully completed
20	C. Maria Don Bosco	III / A	Introduction to Remote Sensing	January – February 2019	71	Elite
21	B. Sanjay Akash	III / B	Soil Mechanics / Geotechnical Engineering I	January – April 2019	57	Successfully completed
22	B. Thulasi Ram	III / B	Soil Mechanics / Geotechnical Engineering I	January – April 2019	49	Successfully completed
23	A. Naveen Aravind	III / B	Soil Mechanics / Geotechnical Engineering I	January – April 2019	56	Successfully completed
24	I.Vasanth	III / B	Soil Mechanics / Geotechnical Engineering I	January – April 2019	40	Successfully completed
25	M. J. Satish Anand	III / B	Soil Mechanics / Geotechnical Engineering I	January – April 2019	44	Successfully completed

26	B. V. Agaliya	III / B	Soil Mechanics / Geotechnical Engineering I	January – April 2019	63	Elite
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- ✚ For the NPTEL course on “Soil Mechanics / Geotechnical Engineering I”, the students were mentored by Mrs. P. Anuradha/AP(SG), Mrs. S. Muthu Lakshmi/AP(SG) and Mr. M. Ammaiappan/AP(SS).

## ***STUDENT INPLANT TRAINING***

S. No.	Student Name	Year / Section	Name of the Company	Duration	
				From	To
1	A.Balamurugan	IV / A	Charis Construction Pvt. Ltd., Chennai	01/05/19	30/05/19
2	V. Yogesh	IV / B	Highway Research Station, Chennai	10/06/19	21/06/19
3	G. Yamini				
4	G. Swetha				
5	B.Kaaviya				
6	Viren Dave				
7	V. Unish Kumar				
8	K. C. Tharun Varshan				
9	P. K. Yashwanth Sathya Narayan				
10	A.Karthik	III / B	L&T Construction (Airport Project), Chennai	09/05/19	25/05/19
11	S. Surya Narayana Murthy				
12	C. T. Singaram				
13	B. Thulasi Ram	III / B	L&T - CSTI, Kancheepuram	09/05/19	25/05/19
14	E. Surya				
15	A.Naveen Aravind				
16	M. J. Satish Anand				
17	I.Vasanth	III / B	PWD, Chennai	20/05/19	28/05/19
18	N. Vishal Karthik				
19	R. Ranjith Raj				
20	K. Aravinthan	III / B	SPR City, Perambur	30/05/19	08/06/19
21	H. Soundar				
22	A.Vijay Anand	III / B	SPR City, Perambur	30/05/19	08/06/19

23	V. Yogesh	IV / B	Chennai Metro Rail Limited	20/05/19	24/05/19
24	G. Yamini				
25	G. Swetha				
26	K. C. Tharun Varshan				
27	P. K. Yashwanth Sathya Narayan				
28	V. Unish Kumar				
29	B. Kaaviya				
30	S. Surya Narayana Murthy				
31	S. Pragadeshwaran				
32	A.Karthik				
33	Viren Dave				
34	M. G. Mohan Ragu				
35	T. Sakthi	IV / B	Chennai Metro Rail Limited	17/06/19	22/06/19
36	T. Sithrubi				
37	P. S. Sowmiya				
38	M. Jayashree				
39	K. Sathyashriya	IV / A	Airport Authority of India, Chennai	27/05/19	31/05/19
40	D. Indhumathi				
41	T. Sithrubi	IV / B	Airport Authority of India, Chennai	27/05/19	31/05/19
42	K. Sathyashriya				
43	S. K. Saranya	III / B	PWD, Chennai	07/05/19	14/05/19
44	S. Priyadharshini				
45	M. Rindhiya				
46	E. P. Shanmughapriya				
47	S. Vedha Varshini				
48	S. Sandiya				
49	A.Vijay Sriram				
50	M. Navaneetha Krishnan				
51	K. Uma Shankar				
52	K. Udhaya	III / B	ICF, Chennai	17/05/19	23/05/19
53	Christina J. Maria	III / B	Desert Field Construction Company, Dubai	27/05/19	08/06/19

## ***GUEST LECTURES ARRANGED***

<b>S. No</b>	<b>Topic</b>	<b>Name of the Speaker</b>	<b>Organization</b>	<b>Student strength</b>	<b>Year/ Section</b>	<b>Date</b>
1	Introduction to Building Costing & Primavera	Mr. M. Dinesh Kumar	CADD Centre	90	IV A & B	25/06/19
2	Introduction to 3D Max	Ms. Megala	CADD Centre	106	III A & B	26/06/19
3	Introduction to Sketch Up	Mr. Vignesh	CADD Centre	82	II A & B	27/06/19

## ***SURVEY CAMP***

Survey camp was arranged for III year Civil Engineering students from 10<sup>th</sup> June 2019 to 13<sup>th</sup> June 2019 at Yelagiri. Mr. M. Manoharan, Mr. J. Jasper Daniel, Mr. S. Premkumar, Mrs. M. Gouthampriya and Mrs. M. Hemavathy accompanied 117 students of III year Civil Engineering and helped them in the successful conduction of the camp at Yelagiri.



***SURVEY CAMP AT YELAGIRI (10.06.2019 – 13.06.2019)***

# ***FACULTY ACCOMPLISHMENTS***

## ***RESEARCH PROPOSALS SUBMITTED***

- ✚ Research proposal submitted by Dr. S. Geetha and Dr. M. Selvakumar to DST-WTI on "Efficient Urban Storm Water Management System Using Pervious Concrete and Asphalt Pavements" for a budget of Rs. 40,24,350/-
- ✚ Dr. S. Geetha has submitted a research proposal to DST-FIST on "High Performance concrete with Nano mineral admixtures" for a budget of Rs. 40,24,350/-
- ✚ Dr. A. Rose Enid Teresa & Dr. Uma Magesvari have submitted a research proposal on "Utilization of waste material into Health-Development of pervious concrete pavement materials from industrial waste" for a budget of Rs.44,98,000/-
- ✚ Research proposal submitted by Dr. S. Geetha and Dr. M. Selvakumar to DST-CRG on " High Strength Ductile Concrete Composite for Earthquake Resistant Structures" for a budget of Rs. 39,42,371/-
- ✚ Research proposal submitted by Dr. S. Geetha and Dr. M. Selvakumar to DST (Waste Management Technology) on "Grinding Waste from automobile Industry as Sustainable Construction Materials" for a budget of Rs. 41,85,371/-

## ***FACULTY SABBATICAL***

- ✚ Dr. S. Geetha/Professor has joined women PDF on Sabbatical at IIT Madras with mentor Dr. K. Ramamurthy, Prof. & Head, Department of Civil Engineering, IIT Madras from 10th July 2019.



## ***Ph.D. REGISTRATION***

✚ Faculty members Mr. S. Premkumar/AP(SS) & Mr. M. Manoharan/AP of Civil Engineering department have registered for Ph.D. in Saveetha University.

### ***JOURNAL PUBLICATIONS BY FACULTY MEMBERS***

<b>S. No.</b>	<b>Authors</b>	<b>Title</b>	<b>Journal Name</b>	<b>Volume</b>	<b>Month &amp; Year</b>	<b>Issue</b>	<b>Page From</b>
1	Mr. J. Jasper Daniel, Mr. R. Madhava Perumal	Experimental Study on Glass Fiber Reinforced Geopolymer Concrete	Journal of Applied Science and Computations	Volume 6	May 2019	Issue 5	135 to 141
2	Mr. R. Madhava Perumal, Mr. P. Krishna Kumar	Experimental Study on Properties of Concrete with Partial Replacement of Glass Powder and CETP Ash for Fine Aggregate and Cement	Journal of Emerging Technologies and Innovative Research	Volume 6	May 2019	Issue 5	272 to 278
3	Mrs. S. Yugasini, Ms. T. Nithya, Mrs. S. Stella	Study of Self Compacting Concrete using Metakaolin and densified Silica Fume	Journal of Applied Science and Computations	Volume 6	May 2019	Issue 5	1185 to 1192
4	Mrs. S. Stella, Mrs. S. Yugasini, Dr. A. Rose Enid Teresa	Experimental Study of Glass Fibre Reinforced Cover Slab using Resin Mortar	Journal of Applied Science and Computations	Volume 6	May 2019	Issue 5	1980 to 1987
5	Mrs. S. Muthu Lakshmi, Ms. J. Mathura, Ms. U. Gayathri, Mrs. V. J. Vedhanayaghi	Enhancement of Shear Strength Characteristics by Microbial Cementation in Sand	International Journal of Innovative Research Explorer	Volume 6	May 2019	Issue 5	01 to 10

6	Mrs. S. Muthu Lakshmi, Ms. M. Ragapriya, Ms. K. Sindhoora, Ms. N. Udhayatharini	Establishment of Correlation between CBR and Resilient Modulus of Subgrade	SSRG- International Journal of Civil Engineering	Volume 6	May 2019	Issue 5	44 to 49
7	Mr. M. Manoharan, Mrs. S. Muthu Lakshmi, Mr. N. Aanandh	Experimental Investigation on the usage of Vermiculate Waste in Concrete	International Research Journal of Engineering and Technology	Volume 6	June 2019	Issue 6	3114 to 3117

***FDP's & WORKSHOP's  
ATTENDED BY FACULTY MEMBERS***

S. No.	Faculty Name	Title	Host Institution	Sponsoring Agency	Category	Date
1	All Faculty Members	Project Planning Management by Prayojana Engineering Services	Rajalakshmi Engineering College	REC	FDP	09/04/2019 to 11/04/2019
2	Mrs. S. Stella	ICI-IMPRINT seminar on Structural and Durability Performance of Post-Tensioned Bridges and Buildings	IIT, Madras	ICI	Seminar	12/04/2019
3.	Mrs. V. J. Vedhanayaghi	ICI-IMPRINT seminar on Structural and Durability Performance of Post-Tensioned Bridges and Buildings	IIT, Madras	ICI	Seminar	12/04/2019
4.	Mrs. V. J. Vedhanayaghi	Prestressed Concrete Structures	Rajalakshmi Engineering College	Anna University	FDTP	03/06/2019 to 10/06/2019

5.	Mr. M. Manoharan	Prestressed Concrete Structures	Rajalakshmi Engineering College	Anna University	FDTP	03/06/2019 to 10/06/2019
6.	Mr. P. Krishnakumar	Prestressed Concrete Structures	Rajalakshmi Engineering College	Anna University	FDTP	03/06/2019 to 10/06/2019
7.	Mrs. S. Yugasini	Prestressed Concrete Structures	Rajalakshmi Engineering College	Anna University	FDTP	03/06/2019 to 10/06/2019
8.	Mr. P. Muthiayan	Prestressed Concrete Structures	Rajalakshmi Engineering College	Anna University	FDTP	03/06/2019 to 10/06/2019

## ***NPTEL COURSES COMPLETED BY FACULTY MEMBERS***

S. No.	Faculty Name	Course Name	Course Duration	NPT EL Score	Certificate Type
1	Dr. M. Selvakumar	Electronic Waste Management – Issues and Challenges	January – February 2019	89	Elite + Silver
2	Dr. S. Geetha	Advanced Topics in the Science and Technology of Concrete	January – February 2019	75	Elite + Silver (Topper of 2% in this course)
3	Mrs. S. Muthu Lakshmi	Subsurface Exploration: Importance and Techniques involved (considered as AICTE – FDP)	February – April 2019	90	Elite + Gold (Topper of 1% in this course)
4	Mrs. V. J. Vedhanayaghi	Subsurface Exploration: Importance and Techniques involved (considered as AICTE – FDP)	February – April 2019	71	Elite
5	Mrs. K. Divya Susanna	Plastic Waste Management (considered as AICTE – FDP)	February – April 2019	91	Elite + Gold (Topper of 5% in this course)

6	Ms. A. J. Jeyarthi	Introduction to Remote Sensing	January – February 2019	94	Elite + Gold
7	Mrs. M. Goutham Priya	Introduction to Remote Sensing	January – February 2019	97	Elite + Gold (Topper of 2% in this course)
8	Mrs. P. Anuradha	Soil Mechanics / Geotechnical Engineering I	January – April 2019	95	Elite + Gold (Topper of 1% in this course)
9	Mrs. T. Eswary Devi	Plastic Waste Management (considered as AICTE – FDP)	February – April 2019	97	Elite + Gold (Topper of 1% in this course)
10	Mrs. S. Yugasini	Plastic Waste Management (considered as AICTE – FDP)	February – April 2019	77	Elite + Silver
11	Mrs. M. Hemavathy	Electronic Waste Management – Issues and Challenges	January – February 2019	96	Elite + Gold (Topper of 2% in this course)

## ***FDTP ORGANIZED BY THE DEPARTMENT***

The Department of Civil Engineering in association with Anna University, Chennai organized a Six-Day Faculty Development Training Programme on **CE6702 - PRESTRESSED CONCRETE STRUCTURES** from 3<sup>rd</sup> June 2019 to 10<sup>th</sup> June 2019. Partial Financial Assistance was provided by Anna University to conduct the programme. Speakers from reputed institutions and industries, shared their experience and enlightened the Faculty gathering. Eminent speakers from IIT-Madras, Anna University, B.S. Abdur Rahman Crescent Institute of Science and Technology and Industries like Jayam Construction, UltraCon Structural system, AECOM Constructions, Hi-tech Concrete solutions were invited to deliver valuable lecture on prestressed concrete construction. 13 external participants from various affiliated institutions and 5 internal participants from Rajalakshmi Engineering College attended the training programme and found it to be very useful. The programme was inaugurated by

Mr. M. Ramanathan, Director-Structures, Transit & Railways, Transportation, AECOM, Chennai followed by his lecture on “Basic concepts, advantages, systems and methods of prestressing”.

The speakers who made their valuable contribution to the FDP are as follows:

- ✚ Mr. M. Ramanathan, Director-Structures, Transit & Railways, Transportation, AECOM, Chennai.
- ✚ Mr.R.A. Aravith Raj, Structural Designer, Jayam Constructions.
- ✚ Dr. T. Ch. Madhavi, Professor & Head, Dept. of Civil Engineering, SRM Institute of Science and Technology.
- ✚ Dr. J. Revathy, Professor, B. S. Abdur Rahman Crescent Institute of Science and Technology.
- ✚ Ms. Prabha Mohandoss, Research Scholar, IIT-Madras
- ✚ Mr. Dhandapani, Research Scholar, IIT-Madras
- ✚ Mr. Najeeb Sheriff, Research Scholar, IIT-Madras
- ✚ Dr. Komathi Murugan, IIT-Madras.
- ✚ Dr. P. Gajalakshmi, AOP, B. S. Abdur Rahman Crescent Institute of Science and Technology.
- ✚ Dr. A. R. Santhakumar, Former Dean, Anna University.
- ✚ Ms. Sripriya Rengaraju, Research Scholar, IIT-Madras.
- ✚ Mr. P. Sachithanatham, HOD, Sri Lakshmi Ammal Engineering College.
- ✚ Dr. K. Balasubramaniam, Managing Director, HiTech Concrete Solutions.
- ✚ The FDTP was successfully completed with Mr. K. Kamalakannan, Director, UltraCon Structural Systems as the Chief Guest for the valedictory function.



*FDTP on PRESTRESSED CONCRETE STRUCTURES (03.06.2019 to 10.06.2019)*

## ***OTHER ACHIEVEMENTS***

- ✚ Dr. S. Geetha/Professor has been selected as Reviewer for the following Journals
  1. Composites Part B – Elsevier Publication
  2. Journal of Materials in Civil Engineering – ASCE
  3. Journal of Institution of Engineers Series A – Springer Publication
  
- ✚ Dr. S. Geetha/Professor has enrolled as Registered Structural Engineer Grade – I (SE) with Chennai Metropolitan Development Authority (CMDA) on 2<sup>nd</sup> April 2019.

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