



SONA CREA

Eighteenth Issue! September 2022



I am gratified to know that the Department of Civil Engineering is bringing out the sixteenth issue of their technical magazine "SONA CREA" of this academic year (2022 - 2023). This is a productive technical material and subsidiary skill-developing tool for the students. I wish the Civil Engineering Department a very big success in all their ventures. I also applaud the coordination and efforts behind the team to bring out this issue. I wish them all success.



SK
Dr. S.R.R. SENTHIL KUMAR,
Principal



R. Malathy
Dr. R. MALATHY, HoD / Civil,
Convenor/ ICI Student Chapter

I am glad in publishing the seventeenth issue of the magazine "SONA CREA" of our Civil Engineering Department, which is a reference of the most recent trends and activities in the field of AEC. This should serve as a source of guidance for the entire fraternity for building themselves with the beautiful colors. I acknowledge the efforts of the Editorial team who did a mind-blowing job in compiling activities for a year and disseminate them through this Magazine as well as on the website. I am feeling cherished in welcoming students with more innovation in bringing the article with more bright concepts and ideas in the next issue. I wish them success in to be colorful in their future.



ICI STUDENTS CHAPTER
COORDINATOR MESSAGE

A. MEENACHI

AP/ CIVIL | ICI Students Chapter Coordinator

This issue marks the seventeenth issue of our Newsletter SONA CREA, that aims to keep our students past and present updated about the trending one in our Civil Fraternity. This newsletter will feature about the programs, articles, achievements of our students and faculties. We have particularly designed this newsletter also as a platform for the students to update their talents and get exposed to the current technologies. So, I request everyone to use this in an efficient manner. In future expecting more contributions from the entire team to make it more useful and a vibrant one.

"We cannot always build the future for our youth, but we can build our youth for the future."

"My dear friends and juniors , You are the nation-builders. You are the movers of technology. You are the agents of change." It is our fervent hope that the years that you spend in Sona would enable you to equip with future skills. The knowledge that you will gain, the fine qualities that you will imbibe and the technical skills that you will learn to apply will be your major contribution to the nation. So "Learning is a celebration" as per our college's motto and asking everyone of you to utilize and contribute by giving your piece of mind.



Message from ICI
Student Chairman

Keerthivasan

Final Year

ICI Student Chapter Chairman

VISION & MISSION OF THE DEPARTMENT

To become a school of excellence that brings out civil engineers with high technical competencies and promotes high-end research to meet the current and future challenges in Civil Engineering.

MD1 : To become a school of excellence that brings out civil engineers with high technical competencies and promotes high-end research to meet the current and future challenges in Civil Engineering.

MD2: To provide quality education through Centre of Excellence in Research and Consulting with emerging technologies to industry and societal problems.

MD3: To impart knowledge and activities to students with emphasis in developing the leadership qualities and teamwork.

MD4: To impart knowledge and activities to students with emphasis in developing the leadership qualities and teamwork.

MD5: To encourage students to pursue higher education, take competitive exams and industry career with required training.

PROGRAM EDUCATIONAL OBJECTIVES (PEOS)

To encourage students to pursue higher education, take competitive exams and industry career with required training.

PEO 1: To encourage students to pursue higher education, take competitive exams and industry career with required training.

PEO 2: To analyze data and technical concepts pertaining to the development of infrastructure, design, sustainability, construction management and any other related field of civil engineering.

PEO 3: To analyze data and technical concepts pertaining to the development of infrastructure, design, sustainability, construction management and any other related field of civil engineering.

PROGRAMME OUTCOMES

Students in the Civil Engineering programme should, at the time of their graduation be able to:

- a) Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to offer a solution to complex engineering problems..
- b) Problem analysis:** Identify, formulate, review research literature, and analyse complex engineering problems reaching substantiated conclusions using the first principles of mathematics, natural sciences, and engineering sciences
- c) Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental property.
- d) Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- e) Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations
- f) The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- g) Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of and need for sustainable development.
- h) Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- i) Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- j) Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
- k) Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects in multidisciplinary environments.
- l) Life-long learning:** Recognize the need for and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAMME SPECIFIC OUTCOMES

On completion of the B.E (Civil Engineering) degree, the graduates will be able to:

- Plan, analyze, design, prepare cost estimates and execute all kinds of Civil Engineering Projects.
- Apply modern construction techniques, equipment and management tools so as to complete the project within specified time and funds.

KINETIC ROADS

INTRODUCTION

The electro-kinetic road ramp is a method of generating electricity by harnessing the kinetic energy of automobiles that drive over the ramp. In June 2009, one of the devices was installed in the car park at a Sainsbury's supermarket in Gloucester, United Kingdom, where it provides enough electricity to run all of the store's cash registers. The ramp was invented by Peter Hughes, an electrical and mechanical engineer who is employed by Highway Energy Systems Ltd. The company says that under normal traffic conditions, the apparatus will produce 30 kW of electricity. Other proposed applications for the road ramps include powering street and traffic lights, heating roads in the winter to prevent ice from forming, and ventilating tunnels to reduce pollution.

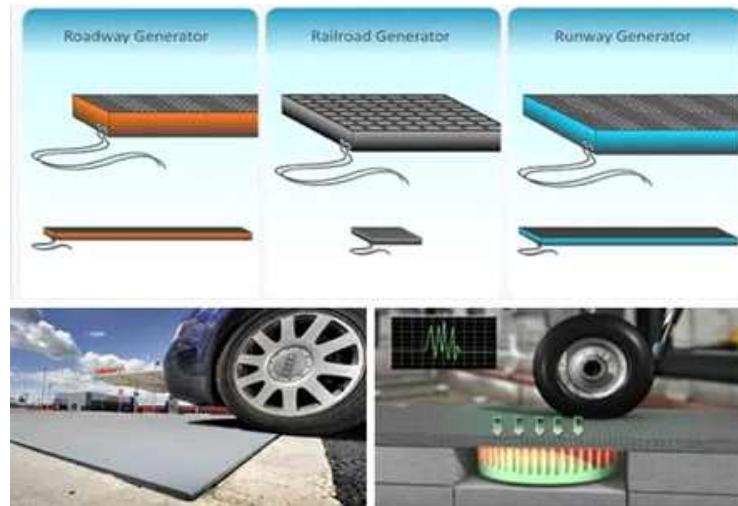
The idea was dismissed as Talk of 'kinetic energy plates' is a total waste of energy in the Guardian by David MacKay, the professor of natural philosophy in the department of Physics at the University of Cambridge. MacKay wrote, "The savings from parking at the green car park thus amount to one four-thousandth of the energy used by the trip to the supermarket."

WHAT IS KINETIC ROADS ?

The utility of kinetic energy potential in roadways is exploring by Italian startup Underground Power. The company has developed a technology called Lybra, a tire-like rubber paving that converts the kinetic energy produced by moving vehicles into electrical energy.

This technology is developed in collaboration with the Polytechnic University of Milan, Lybra operates on the principle that a braking car dissipates kinetic energy.

This new cutting-edge technology is able to collect, convert kinetic energy into electricity and pass it on to the electricity grid and also for improving road safety, the device upgrades and promotes sustainability of road innovation in construction.



KINETIC ROADS CONCEPT: ENERGY HARVESTING FROM ROADS

Kinetic Road is a term that can be defined as the system to harvest energy from the kinetic energy produced by moving vehicles and convert it into electric energy. Energy harvesting technologies from road infrastructure is a new research territory in civil engineering that encompasses technologies that capture the wasted energy that occurred at pavements, accumulate, and store it for later use. Their most enticing characteristic is that they already offer extended paved surfaces.

Paved surfaces with conductive pipes, PV sound barriers, nanomaterials or Phase Change Materials, piezo sensors and thermoelectrical generators, and induction heating techniques are just the most updated representatives. Their outputs can be listed as production of electric energy and district heating and cooling, deicing surfaces or powering wireless networks, and monitoring pavements conditions along with the enhancement of their self-healing process. Italian startup Underground Power is exploring the potential of kinetic energy in roadways. It has developed a technology called Lybra, a tire-like rubber paving that converts the kinetic energy produced by moving vehicles into electrical energy.

MOHANA PRIYA R
III Yr



EARTHQUAKE RESISTANCE BUILDINGS DESIGN

SEISMIC EFFECTS ON THE STRUCTURE



Earthquake causes shaking of the ground. So a building resting on it will experience motion at its base. From Newton's First Law of Motion, even though the base of the building moves with the ground, the roof has a tendency to stay in its original position. But since the walls and columns are connected to it, they drag the roof along with them. This tendency to continue to remain in the previous position is known as inertia. In the building, since the walls or columns are flexible, the motion of the roof is different from that of the ground.

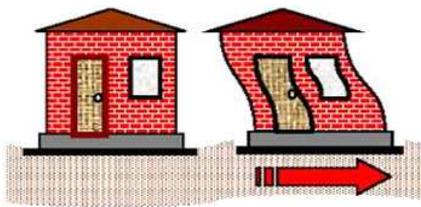


Fig 1: Effect of inertia in a building when shaken at its base

EFFECT OF DEFORMATIONS IN STRUCTURES

- The inertia force experienced by the roof is transferred to the ground via the columns, causing forces in columns.
- During earthquake shaking, the columns undergo relative movement between their ends. Inertia In Figure 2, this movement is shown as quantity u between the roof and the ground.
- The larger is the relative horizontal displacement u between the top and bottom of the column, the larger this internal force in columns.
- Also, the stiffer the columns are (i.e., bigger is the column size), larger is this force.
- For this reason, these internal forces in the columns are called stiffness forces. In fact, the stiffness force in a column is the column stiffness times the relative displacement between its ends.

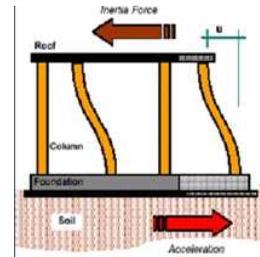


Fig 2: Inertia force and relative motion within a building

HORIZONTAL AND VERTICAL SHAKING

Principle

All structures are primarily designed to carry the gravity loads, The downward force Mg is called the gravity load.

The vertical acceleration during ground shaking either adds to or subtracts from the acceleration due to gravity.

Since factors of safety are used in the design of structures to resist the gravity loads, usually most structures tend to be adequate against vertical shaking.

However, horizontal shaking along X and Y directions (both + and - directions of each) remains a concern.

Structures designed for gravity loads, in general, may not be able to safely sustain the effects of horizontal earthquake shaking. Hence, it is necessary to ensure adequacy of the structures against horizontal earthquake effects.

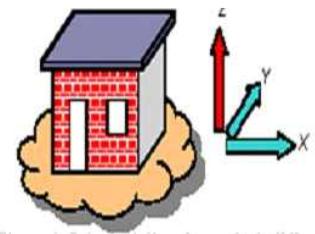


Fig 3: Principal directions of a building

HOW ARCHITECTURAL FEATURES AFFECT BUILDINGS DURING EARTHQUAKES?

The behavior of a building during earthquakes depends critically on its overall shape, size and geometry, in addition to how the earthquake forces are carried to the ground.

Hence, at the planning stage itself, architects and structural engineers must work together to ensure that the unfavorable features are avoided and a good building configuration is chosen.



K.K.KOWSALYA
III Yr



SPUR DIKES DESIGN AND REQUIREMENTS IN GEOMETRY

Spur dikes (or groynes) are structures constructed projecting from a bank to protect the bank from erosion. These are widely used for the purpose of river training and serve one or more of the following functions:

- Training the river along a desired course by attracting, deflecting (or repelling) and holding the flow in a channel. An attracting spur creates deep scour near the bank; a deflecting spur shifts deep scour away from the bank, and a holding spur maintains deep scour at the head of the spur.
- Creating a zone of slack flow with the object of silting up the area in the vicinity of the spur.
- Protecting the river bank by keeping the flow away from it

These structures may either be impermeable or permeable so as to allow some flow parallel to the bank, but at a low enough velocity to prevent erosion and / or encourage sediment deposition. Care needs to be exercised in the use of spurs to ensure that they do not simply transfer erosion from one location to

another, or initiate unforeseen changes in the general channel morphology.

By acting on the flow around them, spurs dikes tend to increase local velocities and turbulence levels in their vicinity. The structure of the dike itself may be liable to erosion; flow moving parallel to the bank is intercepted and accelerates along the upstream face of the dike towards the nose. The high velocities and strong curvature of flow near the nose of a spur can cause significant scouring of the adjacent channel bed. Unless the foundations of the structure are deep enough or are well protected, the end section of dike may be undermined by local scour and could lead to it.

SPURS REQUIREMENTS

The requirements of a spur are:

- Optimum alignment and angle consistent with the objective.
- Availability of a high river bank to anchor (or tie) the spur back, by extending it into the bank a sufficient distance to avoid it being outflanked.
- Sufficient freeboard provision (in case of non-submerged spurs).

- Adequate protection to nose/head against anticipated scour.
- Shank protection with stone pitching and stone apron for the length which is vulnerable to flow attack.

Depending upon the purpose, spurs can be used singly or in series. Spurs may be aligned either perpendicular to the bank line or at an angle pointing upstream or downstream. They can also be used in combination with other training measures. Their use in series is introduced if the river reach to be protected is long, or if a single spur is not efficient/strong enough to deflect the current and also not quite effective for sediment deposition upstream and downstream of itself. The structure located the farthest upstream in a series of spurs is much more susceptible to flow attack both on the river ward and landward ends. Thus it should be given special treatment to ensure its structural stability.

SPURS GEOMETRY

The position, length and shape of spurs depend on site conditions, and requires significant judgment on

behalf of the designer. No single type of spur is suitable for all locations.

A spur angled upstream repels the river flow away from it and is called a repelling spur. These are preferred where major channel changes are required. A spur originally angled upstream may eventually end up nearly perpendicular to the streamlines after development of upstream side silt pocket and scour hole at the head. Repelling spurs need a strong head to resist the direct attack of swirling current. A silt pocket is formed on the upstream side of the spur, but only when the spurs are sufficiently long. Repelling spurs are usually constructed in a group to throw the current away from the bank. Single spurs are neither strong enough to deflect the current nor as effective in causing silt deposition upstream and downstream.

A spur angled downstream attracts the river flow towards it and is called an attracting spur. The angle of deflection downstream ranges between 30 to 60 degrees. The attracting spur bears the full fury of the frontal attack of the river on its upstream face, where it has to be armored adequately. Heavy protection is not necessary on the downstream slope. It merges into the general stream

alignment more easily. The scour hole develops off the river-ward end of the structure.

When the upstream angled spur is of short length and changes only the direction of flow without repelling it, it is called a deflecting spur. It gives local protection only.

The angle which the spur makes with the current may affect the results. A spur built normal to the stream usually is the shortest possible and thus most economic. An upstream angle is better to protect the river ward end of the spur against scour. A downstream angle might be better for protecting a concave bank, especially if spacing and the lengths of the spurs are such to provide a continuous protection by deflecting the main currents away from the entire length of bank.

AKSHAYA R
III Yr



FUNDAMENTALS OF BUILDING DRAWING

A building is a structure that comprises of three parts - Foundation, Superstructure, Roof. It may be a residential building or non-residential building/commercial building whose components vary with the Nature of the building. Foundation is the bottom most part of a structure taken into the ground to get good anchorage and to form a stable base for the structural members to rest on. The structure above the floor level in ground floor is known as Superstructure. Roof is the uppermost part of a structure shielding it from the weathering conditions.

Drawing is the language of Engineers. Engineering drawing is a graphical language. it reveals not only the components, their

- Dimensions
- Relative position
- Materials
- Movement of doors and shutters
- Direction of flow of water lines.

Many drawings are used in building construction to provide necessary information to Engineers and contractors. These drawings are called as Working drawings.

Types of working drawings

- Pictorial drawings: represents how the building looks to the eye of the observer - Isometric, Oblique, Perspective drawings.
- Multi-view or Orthographic drawing: useful in actual construction of buildings. It represents the exact form and size of each side of an object in two or more views- Front, Bottom, Top, Side views.
- Structural drawings: shows the structural details of a member. These are also to estimate the quantum of materials required at various stage of construction.

Interpretation of Working Drawings

The complete set of detailed construction drawing of a building are :

- Floor plan
- Foundation plan
- Front elevation
- Rear elevation
- Right and left elevation
- Section plans
- Site plan
- Structural drawings
- Landscape plans
- Survey plans
- Electrical plans
- Plumbing plans

It is necessary to ready and interpret the drawing in correct sequence before commencement of actual construction, since the floor plan reveals more of the arrangements of the design than any other plan it should be studied first. Then, foundation plan, elevation plans and location plans (landscape ,survey, site plans). Scheduled specifications and estimations are done last since they are better understood after a knowledge of construction is acquired.

Building Plans Approval as per NBC

The stage of approval varies from state to state. However , the total approval procedure in principle should be on par with NBC. Various prescribed forms are to be submitted right from the stage of seeking permission for construction to the stage of occupancy of the building. The drawing documents submitted to the municipality for approval should contain the following:

- Key plan or location plan
- Site plan
- Layout or sub-division plan
- Plan, elevation ,section of the proposed building
- Service plans
- Specification, general and detailed
- Title of ownership of land.

Key Plan or Location Plan

A key plan shows the location of site with respect to neighborhood lands/ houses in layout of the development works. It should indicate : location of site , survey number, services available.

Site Plan

Site plan as per NBC should be drawn to the scale of not less than 1 in 500 for an area upto one hectare and not less than 1 in 1000 for more than one hectare. It should indicate :

- Size of plot
- Boundaries of the site
- Details of open space
- Name of the street
- All existing building
- Wells, drains, compound wall, landscape
- Prominent features: level , sloping , undulating.

Plan, Section, Elevation

The plan, section and elevations of building shall be drawn to a scale of 1 : 100. These are essential to design the various components of building and estimate construction and maintenance cost of total building. These drawings are to be submitted for the necessary approval of authority. These should contain:

- Floor plans of all floors
- Size and spacing of all framing members - columns and beams
- Dimensions of rooms, walls, passage
- Position of stairs, ramps
- Exact location of essential services such sink, bath etc ..
- At least section through stairs
- Appropriate section showing arrangement of footings, foundations, basement walls, columns , beams etc.
- North direction relative to plan
- Front elevation
- Time limit for approval: the time limit for disposal of building construction applications
- Residential building: 15 days
- Other building: 30 days

Duration of validity of approved plans shall remain up to three years. The permit shall be got revalidated before the expiry of this period, subject to the rules then in force.

PRABHAVATHI .R
III Yr



Data analytics and prediction has a vital role to play in the field of civil engineering. It is used for the analysis of data from survey forecasting how long concrete would last and much more. The expressions, rules and terms that are mentioned in the guidelines in IS codes are very complex for implementation in all those activities where a lot of data with many variables source from site investigations and laboratory tests are involved. In order to keep pace with the world and other engineering domains the construction industry is using Machine Learning and other interdisciplinary technologies for data management purposes.



MACHINE LEARNING IN CIVIL ENGINEERING: PERSPECTIVE TOWARDS CONSTRUCTION 4.0

Reducing risks of errors

In Machine Learning, computer algorithms are used - which automatically improve upon getting exposed to more information over a period. The errors in data management and prediction can be reduced significantly with the help of this interdisciplinary technology. Even a few years ago, this task involved a lot of accuracy but was also more error-prone due to human agencies involved in the process. With machine learning this has become more convenient.

Use of varied methods

Various methods are used in machine learning for grouping identifying and prediction of data. Decision Tree and Artificial Neural Network are some of the instances of these methods. Students of civil engineering can use concepts of machine learning at the beginning in

small sized projects. These can include:

- Using Sieve Analysis for determining type of soil
- Knowing about the coefficient of thermal expansion
- Getting an idea about the compressive strength of concrete, following some days
- Classification of soil with the use of Plasticity Index and Liquid Limit
- Using data of a building for energy variables estimation etc.

A few tools may also be used for ML projects like Google Co Labs, MATLAB, Anaconda and Weka. There can also be an implementation of Keras, Tensor Flow, Python and other libraries.

Higher scope of development

In the present age, a civil engineer with an idea about these interdisciplinary domains can be more successful in his profession and can also help the

construction industry to develop more. In the previous year, the construction industry witnessed a lot of losses due to non-use of interdisciplinary technologies. It is, thus, a good time to begin preparing students of civil engineering right from the roots. The use of interdisciplinary technologies like machine learning should be used in the field of civil engineering.

By automating some of the tasks that are currently done by human workers, AI is streamlining the civil engineering process and making it more efficient. This, in turn, is translating into cost saving and increased safety for workers and the public.

Smart construction design

Constructing a building isn't a one-day task that involves lots of pre-planning. Sometimes, it may take years to bring a particular vision to life. Therefore, the planning stage in construction has a lot to benefit from smart systems combined with Big data technologies in 2022. Thus, AI-enabled tools and programs can now automate the calculation and environmental analysis. Instead of manually compiling weather data, material properties, and others, architects can automatically pull necessary data. Parametric design, for instance, has been one of the fields that have benefited the most from automated workflows.

Construction 3D printing

Last but not least is a mind-boggling application of machine intelligence in 3D printing. In architecture, the construction of a building is a huge and costly undertaking. Not only do the architects have to design the building, but the engineers also need to calculate how it will stand up to wind loads, seismic forces, and other environmental stresses. Moreover, builders must find ways to make these structures not just habitable, but comfortable to live in, with features like air conditioning and insulation.

Conclusion

As we see from the current application areas, the future of AI in civil engineering is shrouded in potential but fraught with uncertainty. There are a number of ways that AI could be deployed within the civil engineering field, from the design and analysis of structures to the monitoring and maintenance of infrastructure.

GULSHAN TAJ M N A
Professor/Civil



G.VINOTH B.E - III Year who won **First Place** and received **Gold Medal** at Anna University Power Lifting Competition Conducted in AVS Engineering College, Salem on 21.03.2022.



B.Varunraj B.E - III Year has Won **Gold Medal** In Junior Level 80kg **Body Building Iron Man Contest** Under Student College Level Category as Mr. Salem, 2022 at Mettur, Tamilnadu Amateur Body Building Association on 24.04.2022.

Industrial Visit

By Our Student



III year students , Industrial visit of Kallanai Dam, Trichy on 06.05.2022.



Pammal

Pammal is a suburban neighbourhood of Chennai, Tamil Nadu, India. It is located 22 kilometers from Chennai Central Railway Station. It is located next to Pallavaram on the western side. It lies on the western side of the Grand Southern Trunk Road and close to Chennai International Airport. Wikipedia

PIN: 600075 (Pammal), 600044 (Nagalkeni)

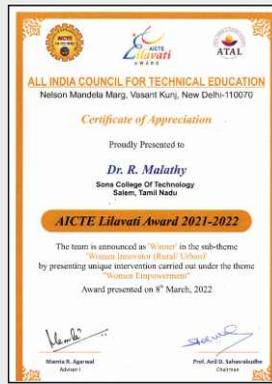
Taluk: Pallavaram



A Site Visit to Construction Site of Pre-stressing at Pallavaram, Chennai By II Year ME Students On 29.04.2022.

AWARDS RECEIVED

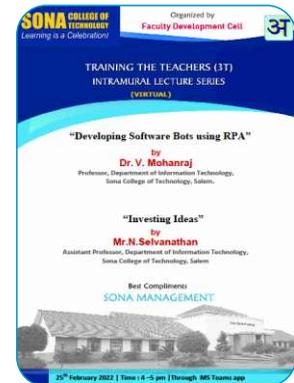
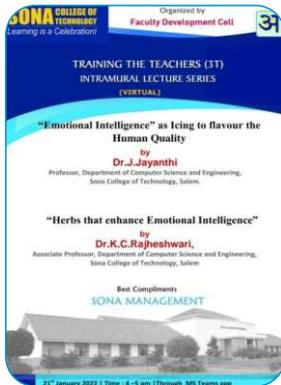
by Our Department Faculties



Dr. R. Malathy / Professor & Head & Dean (R&D) has received AICTE Lilavati Award 2021-2022 under the theme of Women Empowerment with the Sub-theme **Women Innovator (Rural)** on 08.03.2022.

Dr. M.N.A. Gulshan Taj / Associate Professor, Has Received AICTE Lilavati Award 2021-2022 Under The Theme Of Women Empowerment With The Sub-Theme **Women Innovator (Rural)** On 08.03.2022.

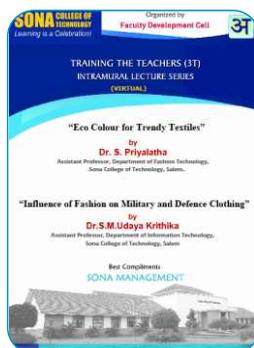
EVENTS ORGANIZED



Intramural Lecture Series conducted on 21.01.2022.

Alumni Meet for the Batch 2011-2015 held on 30.01.2022

Dr.R.Malathy/Professor and Prof.A.Meenachi has (3T) Intramural Lecture Series on "Developing Software Bots using RPA & Investing Ideas" dated on 25.02.2022.



Dr.Prabu & Team has organized Mapathon event Program on 18.02.2022

3T Intramural lecture series organized by our department, SCT on 18.03.2022

Dr.V.Sivaguru has organized webinar "Experimental Techniques on Structural Members" on 09.03.2022.



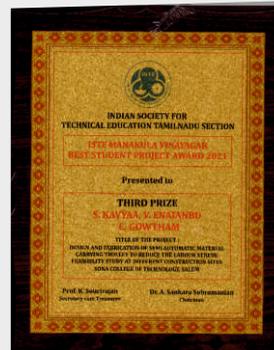
V.Aravindkumar, VKamalakaran , M.Prithivi Raja
 SU.Dineshkumar of Final year B.E./ Civil has Secured First Prize Under The Theme Name of Environment and Sustainability of Rs.1,000 In Pais- Innowah! Innovation Challenge Competition 21-22 Leads Team as Mentor by Dr.R.Malathy/ Head of the Department & Professor in the innoWAH!- of the Project - REPLAST INTERLOCKING BLOCKS AND PAVERS TECHNOLOGY for SOCIAL IMPACT on 19.03.2022.



Chandhini P A - B.E /IV Year has received ISTE Best student award 2021 for "Design And Fabrication of Semi-Automatic Material Carrying Trolley To Reduce The Labour Stress: Feasibility Study at Different Construction Sites" as on 10.05.2022.



C.Gowtham, V.Enaiyanbu - B.E /IV Year has received ISTE Manakula Vinayagar Best Student Award 2021 for "Design And Fabrication of Semi-Automatic Material Carrying Trolley to Reduce the Labour Stress: Feasibility Study At Different Construction Sites" as on 10.05.2022



Civil /all year students participated in 2nd International Conference on Digital Tools and Technologies for Sustainable Construction held on 25.05.2022 to 26.05.2022.





ME(STR & CEM) all students presented papers in 2nd International Conference on Digital Tools and Technologies for Sustainable Construction on 25 & 26 May

innoWAH! 21-22
 Announced on March 26, 2022
 The Prize winners and Recognised teams* of PALS innoWAH! 2021-22

Sustainability

Prize	PI – Team Name	Cash Prize
First Prize	SONA COLLEGE OF TECHNOLOGY – Replast Builders	Rs. 11,000
Second Prize	KCG COLLEGE OF TECHNOLOGY – Team Beyond	Rs. 9,000
Incubation worthy	KIT - KALAIKARNI KARUNANIDHI INSTITUTE OF TECHNOLOGY – Featers	
Incubation worthy	VELLORE INSTITUTE OF TECHNOLOGY – Team Vidyat	



VAravindkumar / B.E Final Year has participated in PALS InnoWAH 21-22 Competition and Won First Prize of Rs.11000 under the theme of Sustainability held on 26.03.2022

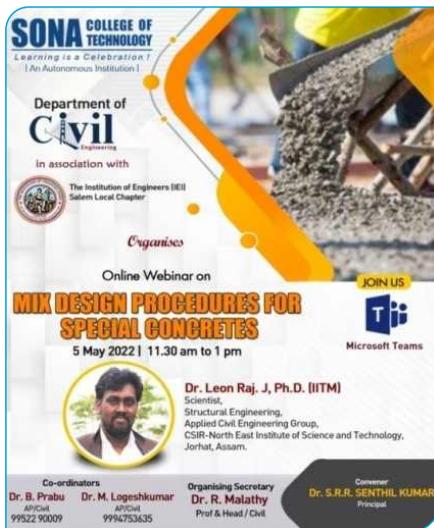


Dr.R.Malathy has successfully completed Swayam NPTEL completing the course Building Materials and Composites with a Consolidated Score of 86%

Dr.R.Malathy / Professor & Head & Dean (R&D) has successfully completed NPTEL on "Development and Applications of Special Concretes" during JAN-MAR 2022.



Dr.M.Kasiviswanathan/ Assistant Professor has successfully completed and received Topper in NPTEL on "Mechanics of Fibre Reinforced Polymer Composite Structures" during JAN-APR 2022.

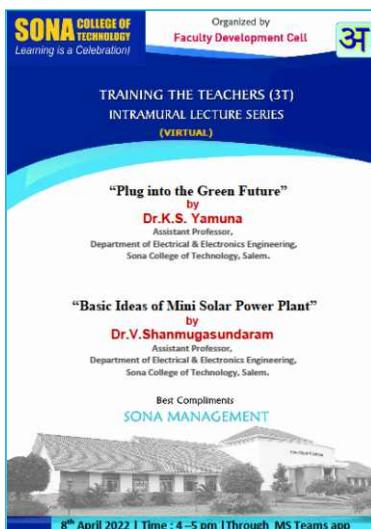


Dr.B.Prabu/Assistant Professor and Dr.M.Logeshkumar/Associate Professor has organized online webinar on mix Design Procedures for special concretes on 05.05.2022.



Dr.R.Malathy / Professor & Head & Dean (R&D) , Dr.M.N.N.A.Gulshan Taj/Professor, Dr.B.Prabu / Assistant Professor & Mr.D.Nandakumar / Assistant Professor has organized Short Term Training on Hands on Training on Drone Structures and Its Applications from 25.04.2022 To 05.05.2022.

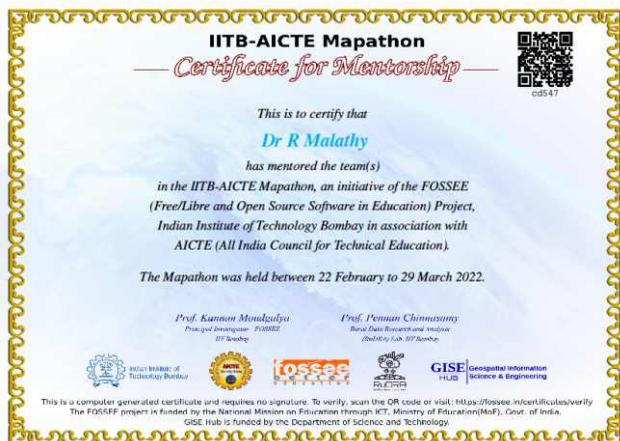
S.No	Topic Covered	Name of the Faculty	Day and Time
1	Introduction to Drone Surveying	Dr.R.Malathy	25-04-2022 & 04-30 - 05-30 pm
2	Drone 107 Platform & Characteristics Study of Drone Components	Dr.B.Prabu & Prof.D. Nanda Kumar	26-04-2022 & 04-30 - 05-30 pm
3	Rules and Regulations to India For Drone Pilot	Dr.B.Prabu	27-04-2022 & 04-30 - 05-30 pm
4	Characteristics and Way Point Demonstration	Prof.D. Nanda Kumar	28-04-2022 & 04-30 - 05-30 pm
5	Post Processing In Drone Surveying	Dr.Ordinar Taj, M.N. A	29-04-2022 & 04-30 - 05-30 pm
6	Drone For Various Applications: Case Studies	Prof.D Nanda Kumar	02-05-2022 & 04-30 - 05-30 pm
7	Drone Pilot: Hands on Training	Dr.B.Prabu & Prof.D Nanda Kumar	04-05-2022 & 04-30 - 05-30 pm
8	Assignment Submission and Assessment	Prof.D. Nanda Kumar	05-05-2022 & 04-30 - 05-30 pm



Dr.R.Malathy/Professor & Head & Dean (R&D) has organized by FDC cell, SCT of 3T intramural Lectures Series (Virtual) on "Plug into the Green Future" & "Basic Ideas of mini Solar Power Plant" held on 08.04.2022.



Dr.R.Malathy/Professor & Head & Dean (R&D) Leads Team as Mentor in the innoWAH! - Innovation Challenge Competition 2021-2022 of the Project - REPLAST INTERLOCKING BLOCKS AND PAVERS TECHNOLOGY for SOCIAL IMPACT on 19.03.2022.



Dr.R.Malathy /Professor & Head & Dean (R&D) Leads Team as Mentor has mentored the team(s) in the IITB-AICTE Mapathon, an initiative of the FOSSEE (Free/ Libre and Open Source Software in Education) Project, Indian Institute of Technology Bombay in association with AICTE (All India Council for Technical Education) was held between 22.02.2022 to 29.03.2022.



N.Karuppasamy /Assistant Professor Leads Team as Mentor has mentored the team(s) in the IITB-AICTE Mapathon, an initiative of the FOSSEE (Free/ Libre and Open Source Software in Education) Project, Indian Institute of Technology Bombay in association with AICTE (All India Council for Technical Education) was held between 22.02.2022 to 29.03.2022.



Dr.M.Logeshkumar/Assistant Professor Leads Team as Mentor has mentored the team(s) in the IITB-AICTE Mapathon, an initiative of the FOSSEE (Free/ Libre and Open Source Software in Education) Project, Indian Institute of Technology Bombay in association with AICTE (All India Council for Technical Education) was held between 22.02.2022 to 29.03.2022.



Dr.M.Harsha Vardhana Balaji has attended weeks Training Program for faculty members on AICTE Student Learning Assessment-STTP Parakh in collaboration with Construction Industry Development Council (CIDC) from 07.02.2022 to 19.02.2022.

Department Faculties Contributing Ideas Of Seelanayakanpatti Bye-pass Road, Salem



Dr. D. Jegatheeswaran / Professor & Dr. B. Prabu /Assistant Professor has attended the collector meet regarding Seelyanakanpatti Bye Pass Road Map on Feb, 11 2022



Dr.Prabu and team visited Seelanayakanpatti Bye Pass Road, Salem to contribute ideas free from accidents on Feb, 2022.



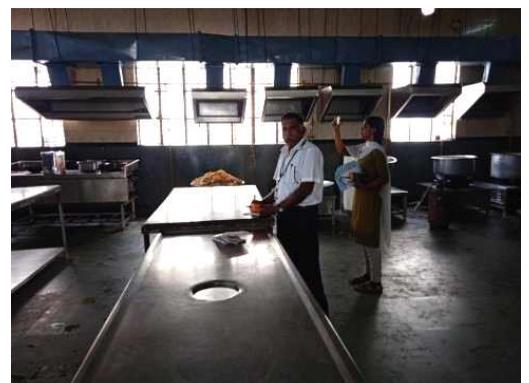
Dr. R. Malathy /Head & Professor organized meeting for Seelyanakanpatti Bye Pass Road Map discussion on Feb,15 2022



Our Department Faculties Dr.D.Jegatheeswaran & Dr.B.Prabu has attended the meeting and interact with Salem Collector along with Mr.K.N.Nehru regarding the problems of road accidents and delivered solutions of Seelanayakanpatti Bye Pass Road dated on 28.03.2022.



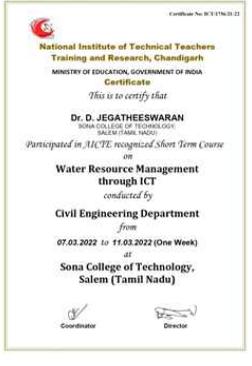
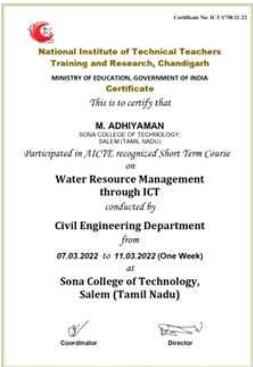
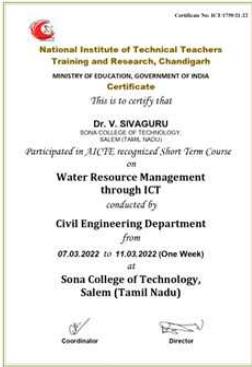
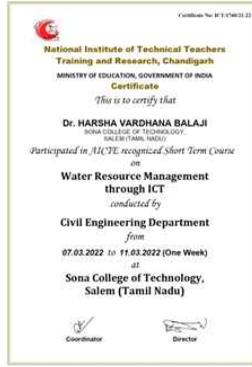
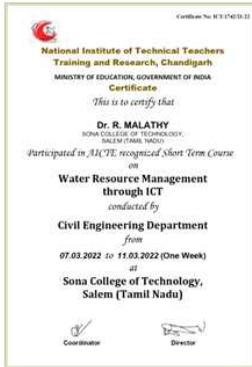
Dr.D.Jegatheeswaran / Professor has involved in audit process at Adhiyaman College Of Engineering, Hosur organized by Nature Science Foundation Coimbatore, Tamilnadu. held on 25.03.2022.



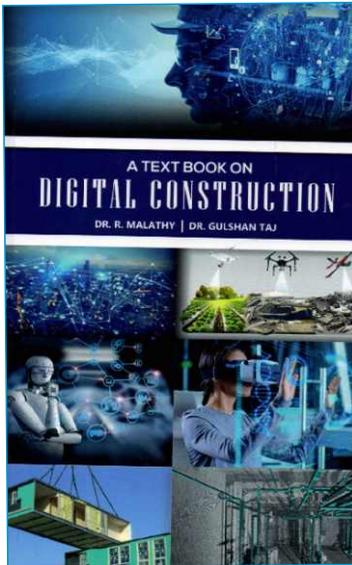
SHORT TERM COURSE

Attended by Our Department Faculties

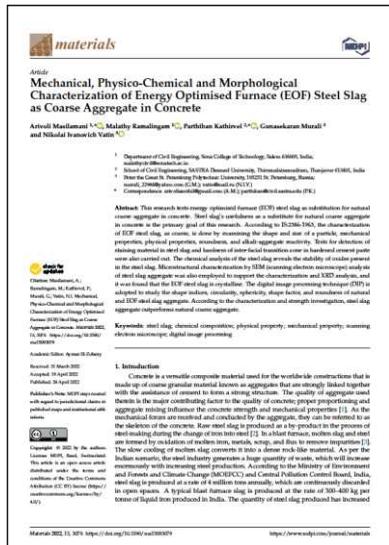
Department faculties attended the short term training program organized by NITTTR, Chandigarh on water resource management through ICT held between 07.03.2022 to 11.03.2022.



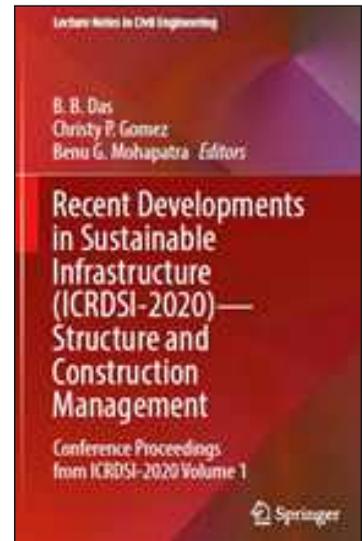
Our Department Has Signed MOU With Argus Group and associates dated on 07.03.2022



Dr.R.Malathy / Professor & Head & Dean (R&D), Dr.M.N.A.Gulshan Taj/ Professor has Published Text Book on Digital Construction by the publisher Creative dated on 21.04.2022.



Dr.R.Malathy/ Professor & Head & Dean (R&D) has published International Journal Papers in Materials-1683859, Construction and Building Materials (MDPI) on 24.04.2022.



Dr.R.Malathy/ Professor & Head & Dean (R&D) has published paper in Influence of Contact Time to Magnetic field of Mixing Water on Fresh and hardened properties of concrete on 30.04.2022.



Prof. a. divya and S. saranya /Assistant Professor has published the paper on Experimental Study on the mechanical and durability performance of Geopolymer Concrete using GGBS and Metakaolin on 30.04.2022.



Dr. D. Jagatheeswaran / Professor has published paper on Feasibility Study on Metakaolin Boiler Ash Blended with M-Sand in Geo-Polymer Concrete for production of Building Blocks on 30.04.2022.



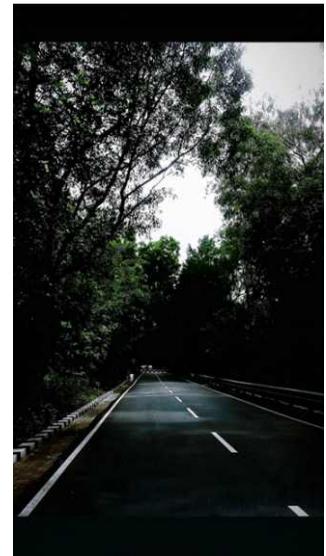
Dr. M. N. A. Gulshan Taj / Professor has published paper on Design of Energy Efficient Educational Institutional Building on 30.04.2022.



- By K K Kowsalya



- By Trishadharshini





FIVE OFFERS



AKKALESH S P

THREE OFFERS



Subiksha M



Aravinda Kumar V

TWO OFFERS



Bathrinathan S



Chandhini P A

