



PERI

INSTITUTE OF TECHNOLOGY

IV

24 PAGES

TWENTY21

DEPARTMENT EVENTS

Events conducted by our department



JOURNAL PUBLICATIONS

Project journals of our students & staffs



ARTICLES

Check - out our staff's & students articles



RESEARCH SCHOLARS

Research and results by our scholars

Events, articles & more.

DEPARTMENT NEWSLETTER

PACT TIMES

PERI ASSOCIATION OF CIVIL ENGINEERING

OUR COLLEGE

PERI Institute of Technology (PERI IT) was established in 2010 by the PERI Educational and Charitable Trust with the objective of providing quality technical education. The vision of the trust is to provide a world class nodal center of education where academics, communication, comprehension, visualization, practical application and leadership skills are imparted through encouraging research, training and development in technical and non-technical areas.

As part of its vision, the trust established PERI Institute of Technology in 2010 with B.E. courses in Mechanical, Civil, Computers and EEE. In 2011, B.E. ECE was introduced. M.E. Applied Electronics and M.E. Computer Science were added in 2012. M.E. Power Electronics & Drives and M.E. Communication Systems were introduced in 2014.

PERI IT is the brainchild of Mr. Saravanan Periasamy, the founding President & CEO of PERI Software Solutions Inc., a leading multinational IT Consulting and Services Company based in USA and the Chairman of the PERI Educational and Charitable Trust. He is the source of inspiration and the pathfinder for this institution.

OUR DEPARTMENT

Civil Engineering in PERI IT is your stepping stone into the world of buildings and structures. Civil engineers work with the design, construction and maintenance of different structures in both public and private sectors. Civil work spans large structures like dams, bridges and multi-storey buildings to small structures such as individual homes. The vast nature of this field ensures that there is a steady demand for civil engineers.

PERI
INSTITUTE OF TECHNOLOGY



I am proud to have students from civil engineering department to come up with such a good collection of information. I would like to encourage them to continue their good work

Our Chairman's Wish.....!



Mr. Saravanan Periasamy has over 15 years of experience in the fields of IT, business development, team building and management. He has an engineering degree in Electrical & Electronics and a Masters Degree in Computer Science from U.S.A. He is primarily responsible for providing direction and vision to PERI IT.

MR. SARAVANAN PERIASAMY
CHAIRMAN, PERI EDUCATION &
CEO & PRESIDENT, PERI SOFTWARE SOLUTIONS INC., U.S.A.



I congratulate all the students who have put their effort in bringing forth this newsletter of their department and also I like to congratulate all the faculty members for motivating their students towards this fulfillment.

COO'S MESSAGE

Mr. SASIKUMAR VEERARAJAN
COO, PERI EDUCATION

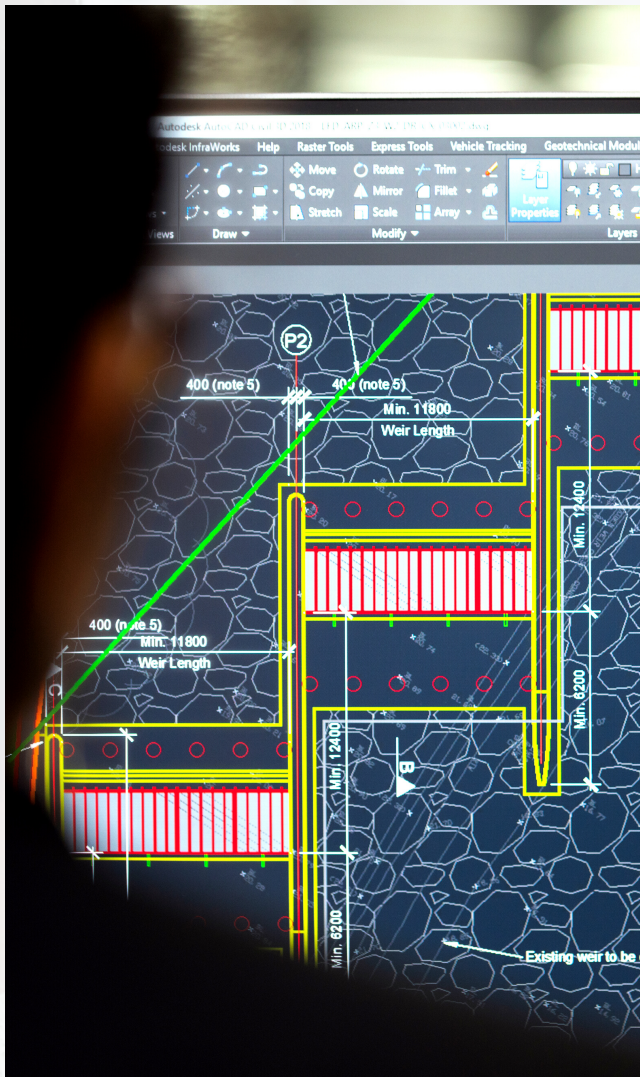


I am very happy to know that the civil department comes up with their newsletter. It's first of its kind in PERI IT. This forum will offer opportunity to students to exchange their ideas and views. I congratulate the whole team for their effort in the release of the newsletter.

PRINCIPAL'S MESSAGE

Dr. R. PALSON KENNEDY
PRINCIPAL, PERI INSTITUTE OF TECHNOLOGY

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Interview with



Er. PREMA

Site Supervisor & Quality Control Engineering
Rail Vikas Nigam Limited



QUESTIONER SESSION

How will you certify a grider is suitable to carry load?

Through load test it is done with loading weight of 25T of old sleepers or sand bags on grider and note the undulations with the meter fixed with jacky. Based on those values it will be certified.

What is the permeability limit and how will you found it?

Permeability limit is < 20 mm. We may achieve below 10mm majority it is done by cubes tested during concreting usually we cast 3No's one for 3rd party and 2 for internal testing.

What is the lifetime of the bridge?

Lifetime of the bridge depends on the maintenance we done to the bridge.

What is the 1st bridge construction you admire?

It was the pedestrian subway in nemillicherry railway station Chennai. Cut & Cover method adopted in that bridge and completed within 3 months.

From your point of view which type of bridge construction is very easy?

Box type bridge this type of bridge construction is very easy comparing its designing but it is not suitable for all type of soils.

Why did you choose civil? As a girl don't you feel field work is difficult?

Why not girls choose civil! Yes it will be very difficult until you trust yours. If and the peoples work with you or around you. Only one thing you should know your limits and the words you are using others

STUDENTS ACHEIVEMENT

DEPARTMENT OF CIVIL ENGINEERING

Kiran Kumar J S and Raghul R of third year civil engineering students are undergone in-plant training at “PIRANAVAM CONSTRUCTION, Kanyakumari”, from 25.03.2021 to 04.03.2021 and Ananda Ganapathy of the same year undergone In-plant training at “PYRRAMID TECTONICS (P) LTD, Chennai”, from 18.02.2021 to 28.02.2021. Prasanth J of third year has successfully completed Coursera courses on “Autodesk Certified Professional: AutoCAD for Design and Drafting Exam Prep” by Autodesk and SathyaPriya S of final year has successfully completed Coursera courses on “BIM Fundamentals for Engineers and BIM Application for Engineers” by National Taiwan University.



STAFF ACHIEVEMENT

Mr. B. Magesh, has successfully completed NPTEL course on “Leading Positive change through appreciative inquiry and Social Psychology” and Mrs. G. Karthika, , has successfully completed Coursera course on “Introduction to GIS mapping and Spatial analysis and satellite imagery in a GIS”. Our facilities were attended various webinars and conferences even during COVID 19 to enhanced their knowledge.

STAFF ARTICLES

LAVANYA C

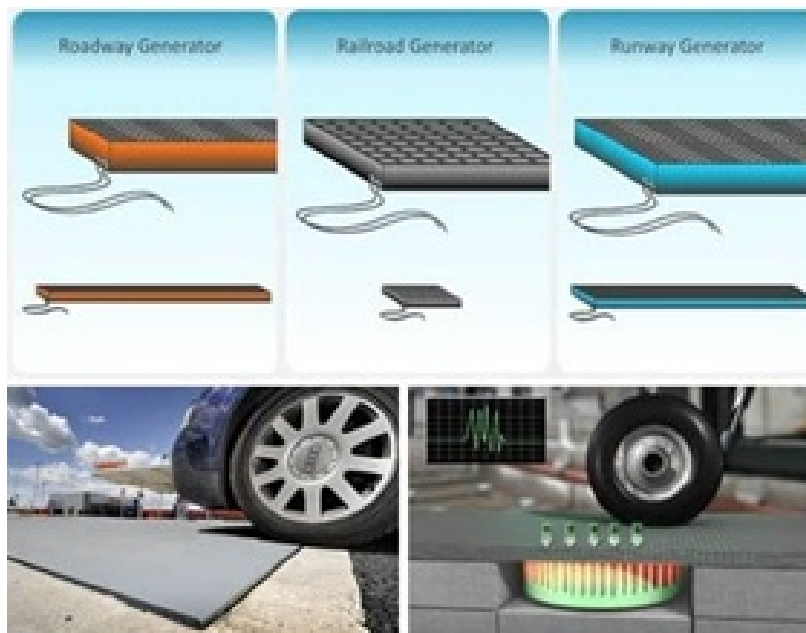
Assistant professor



KINETIC ROADS

Another technology is kinetic energy which is under development that is Pavegen provides a technology that enables flooring INNOVATION IN CONSTRUCTION harness the energy of footsteps. It may be utilized indoors or outdoors in high traffic areas and generates electricity from pedestrian footfall using electromagnetic induction process and flywheel energy storage.

The Kinetic footfall is most efficient to transport hubs where a large flow of people will pass over it. The company deployment has done so far is in a football pitch in Rio de Janeiro to help power the floodlights around the pitch. It has a temporary installed outside London's Canary Wharf station powering street lights. These are one of important Innovation in Civil Engineering 2019.



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

This technology is developed 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

PERFORMANCE OF CONNECTION: PRECAST WALL TO FOUNDATION

Written by E.Ezhilarasi
Assistant Professor PERIIT



In precast concrete construction, structural members (e.g., beams, columns, wall panels, and floor units) and architectural members (e.g., cladding) are produced in a manufacturing facility, transported to the structure site, and erected and connected in place.

The cost effectiveness and high quality of this construction method have resulted in its widespread use, including a number of countries with high seismicity (e.g., New Zealand, Japan, and Chile). The seismic behavior of precast building and bridge structures is highly dependent on the characteristics (i.e., strength, stiffness, and deformation capacity) of the connections between the precast structural members and between the members at the base and the foundation.

The precast construction has less popularity among the public due to poor performance of precast buildings in past earthquakes. The seismic resistance of a structure depends on efficiency of the connections. Therefore the detailing of precast wall to foundation connection to withstand seismic loading place a key role to withstand seismic loading.

A detailed investigation and analysis are conducted for the design of structural connections in a seismic resistance structure. An earthquake of 6.7 Magnitude January 17, 1994 at California California State Northridge's precast parking structure.





BUILDING INFORMATION MODELLING SOFTWARE

Building information modelling (BIM) is a collaborative process that allows all involved parties to communicate throughout a project's lifecycle. BIM is present during the planning, design, construction, operation, and maintenance using a smart model, typically 3D. Now, many companies are also using 4D, 5D, and 6D modelling along with the other tools built into this software. BIM relies heavily on data and utilizes the Internet of Things (IoT) along with augmented reality (AR).



Mr. P. RAMACHANDRAN
Asst. Prof.

**“Do what you do the BEST,
Outsource the rest.”**

Internet of Things (IoT) refers to an interrelated system of devices with the ability to automatically transfer data or communicate with each other. For example, think about smart home products, everything from locks to fireplaces to lights can all be interconnected, automated, and controlled. IoT is continuously growing with the introduction of new technologies. The most critical part of BIM is the actionable data it gathers. “The data can be used to improve accuracy, express design intent from the office to the field, improve knowledge transfer from stakeholder to stakeholder, reduce change orders and field coordination problems, and provide insight into existing buildings for renovation projects later on.”

With data shared amongst all stakeholders, inefficiencies in procurement, communication, and scheduling become reduced, ultimately saving involved parties both time and money.

STUDENT ARTICLES



Anand Ganapathy
third Year

SMART MATERIALS IN CONSTRUCTION

1. Smart concrete (a composite of carbon fibres and concrete) used in smart structures is capable of sensing minute structural cracks / flaws. Unlike conventional concrete, the smart concrete has higher potential and enhanced strength. It can be used in electromagnetic shielding and for enhanced electrical conductivity of concrete. Smart concrete under loading and unloading process will lose and regain its conductivity, thus serving as a structural material as well as a sensor. Smart concrete plays a vital role in the construction of road pavements as a traffic-sensing recorder, and also melts ice on highways and airfields during snowfall in winter season by passing low voltage current through it.

2. Smart materials have applications in the design of smart buildings. Smart materials are used for vibration control, noise mitigation, safety and performance.

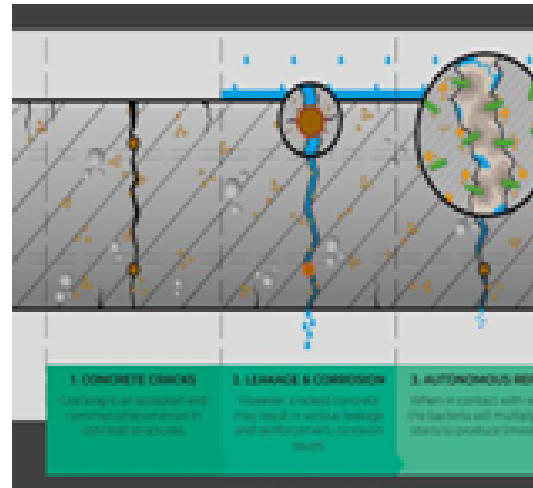
3. In construction of smart buildings, for environmental control, structural health monitoring.

4. In smart building, it is used to transform efficiency, comfort, and safety for people and assets.

5. Smart materials reduce the effects of earthquakes.

6. In marine and rail transport applications for strain monitoring using embedded fibre optic sensors.

7. The use of smart materials permits the construction of smart bridges especially cable stayed bridge with a wider span to avoid the increased susceptibility to vibrations caused by ambient factors such as wind, rain or traffic. Hence, the structure required less maintenance and the response of the structure can be monitored.



TOP SITES RELATED TO CIVIL ENGINEERING



TOP WEBSITE

Swetha A Final Year



Best civil engineering software - 2021

<https://www.constructionplacements.com/civil-engineering-software/>

Trends in architecture and engineering - 2021

<https://www.sehinc.com/news/8-trends-architecture-and-engineering-2021>

<https://www.bigrentz.com/blog/construction-trends>

Top 10 civil engineering blogs - 2021

<https://www.constructionplacements.com/civil-engineering-blogs/>

Civil engineering work measurements

<https://www.civilology.com/civil-engineering-measurements/>

Civil engineering calculators

<https://www.civil-engineering-calculators.com/>

Civil engineering basics

<https://www.mylearnings.in/civil-engineering-basics/>

<https://www.mylearnings.in/building-materials-in-construction/>

<https://www.mylearnings.in/structural-engineering-basics/>

<https://www.mylearnings.in/design-of-underground-water-tank/>

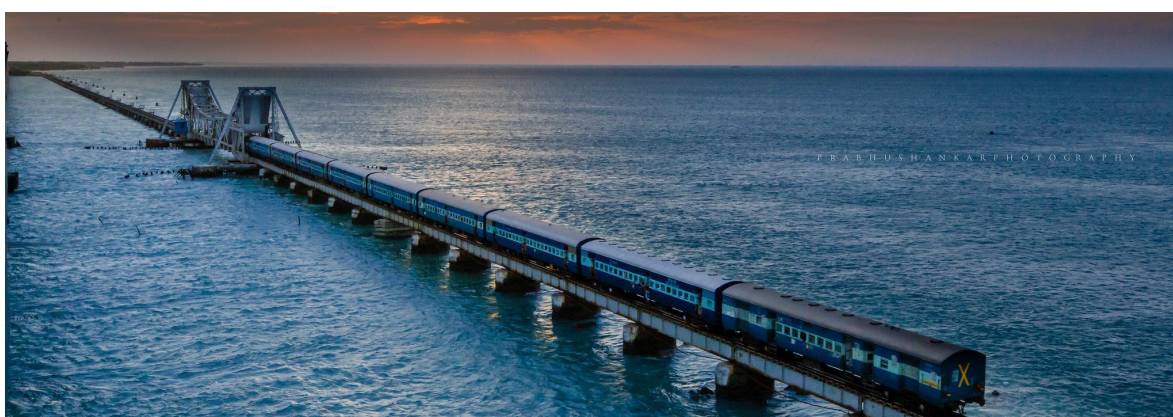
<https://www.mylearnings.in/what-is-floor-area-ratio/>

<https://www.mylearnings.in/what-is-damp-proof-course-dpc-in-civil-engineering/>

<https://www.mylearnings.in/how-to-calculate-the-tiles-needed-for-a-floor/>

PAMBAN BRIDGE

The rail bridge is, for the most part, a conventional bridge resting on concrete piers, but has a double-leaf bascule section midway, which can be raised to let ships and barges pass through.



Pamban Bridge is a railway bridge which connects the town of Mandapam in mainland India with Pamban Island, and Rameswaram. Opened on 24 February 1914, it was India's first sea bridge, and was the longest sea bridge in India until the opening of the Bandra-Worli Sea Link in 2010. The rail bridge is, for the most part, a conventional bridge resting on concrete piers, but has a double-leaf bascule section midway, which can be raised to let ships and barges pass through. Until 1988, the Pamban bridge was the only surface transport that connected Tamil Nadu's island of Rameswaram to the mainland. In Dec-2018, the bascule of this bridge was damaged, which suspended the transportation on the bridge for 3 months. Rail movement was again restored on 27 February 2019.

Coordinates	9°16'57.25"N 79°12'5.91"E.
Locale	Rameswaram, Tamil Nadu, India
Carries	Rail
Owner	Indian Railways

Characteristics

Total length	6,776 feet (2,065 m)
No. of spans	144

History

Construction start	1911
Construction end	1914
Opened	1915



P.PRAVEENKUMAR
Third Year

Pamban Road and Rail Bridge

In 1988, a road bridge was also constructed parallel to the rail bridge. This road bridge is also known as Indira Gandhi Road Bridge. It stands on the Palk Strait and between the shores of Mandapam (a place on the Indian mainland) and Pamban (one of the fishermen town in Rameswaram island).

INTERNAL FACULTY DEVELOPMENT PROGRAM

Faculty members are an institution's most important resource because they teach students knowledge and skills. The Civil Engineering department agreed to conduct an internal faculty development programme because of the importance of collegial support and the significance of peers as role models for sharing information and ideas. It took place during the even semester's vacation season.



Faculty Development Program PERI Institute of Technology has organized various events like workshops, guest lectures, seminars and symposia for creating awareness to the students and faculty members towards the present job availability, entrepreneurship & higher education avenues.

DEPARTMENT OF CIVIL ENGINEERING

Among other technical subjects, all of the faculty members gave presentations on structural analysis, quantity estimation, construction techniques, equipment, and procedures, structural dynamics, and earthquake engineering. They were graded on their knowledge of the subject, technical skills, and presentation skills. It was also a chance for me to provide constructive criticism and suggestions to my coworkers.

SPORTS ACHIEVEMENT



**"The only way to prove you are a good sport is to lose."
- Ernie Banks.**

A person experiences a good quality of breathing because of Sports. Sport is certainly an excellent tool to build self confidence. Playing Sports increases confidence to talk properly. A sport certainly improves the skills of communicating with others. Now a day sports and games are taken to be a good career option. Outdoor games like cricket Volley Ball etc. Stimulates the sense of coordination, team spirit etc. So, the sports committee of our college put on efforts to develop the students with the help of sports events.

MENTORING

"TELL ME AND I FORGET, TEACH ME AND I MAY REMEMBER, INVOLVE ME AND I LEARN."



Mentors consult with their students and provide advice on academics and extracurricular activities. They also provide assistance with big collection, career advice, and personal issues. During the summer and final tasks, the mentors serve as guides for the students.

CIVIL TECH QUIZ COVID T20



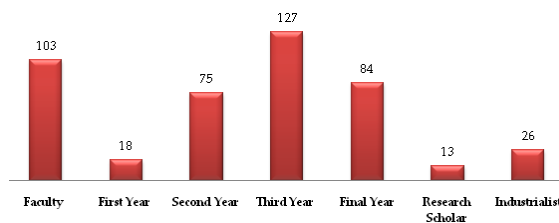
PERI Institute of Technology organized the National Level Civil Tech Quiz on “COVID - T20” for the Department of Civil Engineering on 03.06.2020 (Wednesday) in online mode. Quiz competitions are always interesting and informative, which provide excitement among the students and also make them aware of current trends.

The event consists of 20 core subjects, and 5 aptitude questions for students, faculty and research scholars were conducted to motivate and evaluate their technical skills. Around 440 + participants from various institutes and industries have participated. It was a very informative and knowledge enriching competition for the participants. PERI Education encourages such positive competitions and hopes to bring out the best in all its students through such competitive events while ensuring that the students learn through all possible ways- not just through books and classroom teaching.

Event Report:

- Date of Event - 03.06.2020 (Wednesday)
- Time Organized - 08.00 a.m. to 08.00 p.m.
- Mode of Event - Online mode
- No of Participated - 447 No's
- Organization Participated - 150 + No's

Participants Designation



“Learning gives Creativity, Creativity leads to thinking, Thinking provides knowledge, Knowledge makes us Great.”

PROFESSIONAL DAY

CIVIL DEPARTMENT



Dress code is something that you find everywhere from school to college and even at the workplace. The idea of professional dressing is to some degree related to any industry. Good conduct for a power, for example, is likely not quite the same as that of a retail location director. We frame initial impressions and general judgments about individuals by the way they dress. The way in which a person dress depicts or conveys a message.



RESEARCH SCHOLAR



Our Faculties Ms. E. Ezhilarasi (in the area of “Material Science”) at Anna University registered for Doctor of Philosophy on the academic year 2018 – 2019. Based on their research we are planning to acquire many funded projects and to improve the students knowledge

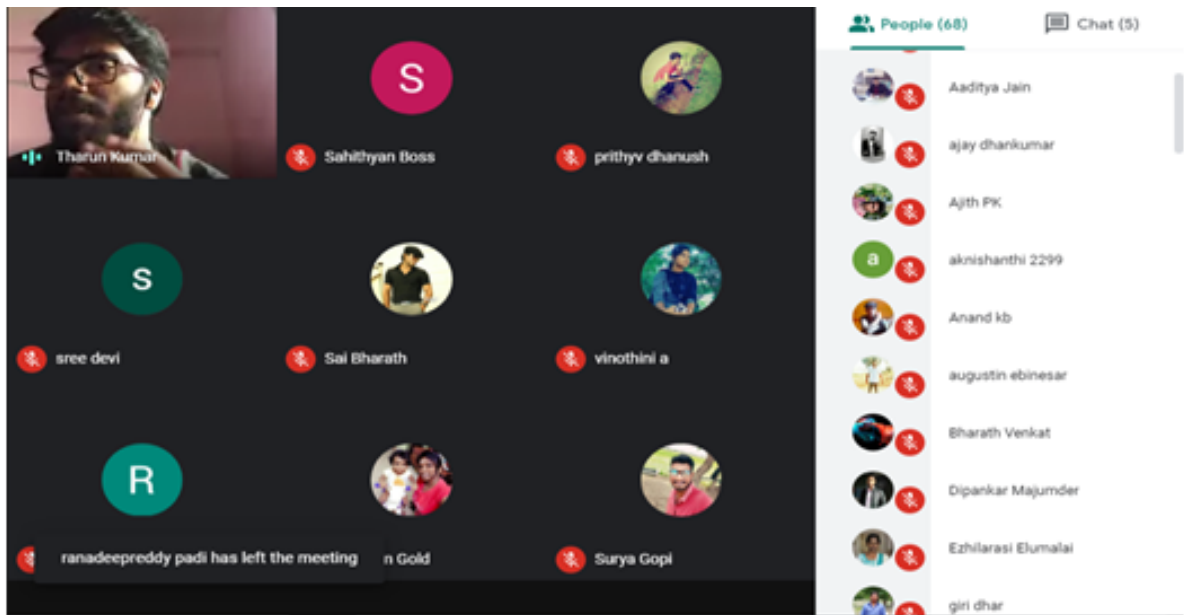
ALUMNI CONNECT T20

An Alumni Connect T20 for the department of Civil Engineering in online video conferencing

On 08.06.2020 (Monday) PERI Institute of Technology organized an Alumni Connect T20 for the department of Civil Engineering in online video conferencing. Er. Tharun Kumar, Assistant Purchase Officer, Quarries CQM. U.A.E was invited to the Event as Special Speaker.

The hosts of the event, Mr. Syed Abuthagir Asst. Prof invited the dignitaries and participants to the event and Ms. S. Sathiya Priya, Student Counselor, introduced the Alumni to the participants. Around 80 + participants from the various institution have attended the event. Our Alumni shared his Experience in PERI Education and about his career for a time period of one-hour presentation. His lecture was truly a good experience for our participants and a remarkable commemoration. There was an interactive thought sharing session for other alumni following the presentation and the event came to an end with the proposal of the vote of thanks by Mr. Jaswanth Nagaraj, student coordinator.

All the suggestions were recorded for the improvement of the upcoming event



On 13.06.2020 (Saturday) PERI Institute of Technology organized the Alumni Talk T20 for the Department of Civil Engineering in online video conferencing. Er.S.Rajuvel, Junior CADD Designer, Rebar Design & Detail Pvt. LTD, Chennai was invited to the Event as Special Speaker.

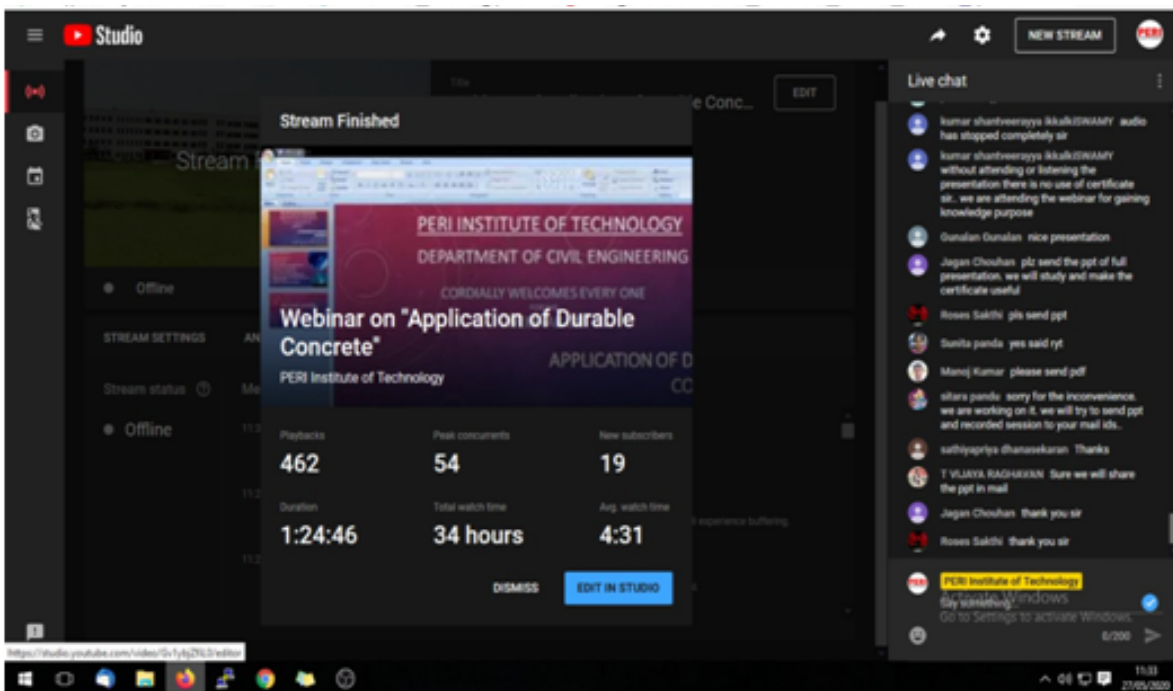
The hosts of the event, Mr. Syed Abuthagir Asst. Prof invited the dignitaries and participants to our Event and Mr. K. Tamizharasan, Student Counselor, introduced the Alumnus to the participants. Around 100 + participants from the various institutions were attended the event. For a one-hour talk, our Alumnus shared his background in PERI Education and his career. His lecture was truly a good experience and a remarkable memorial for our participants. There was an interactive thought sharing session for other alumni's following the presentation and the event came to an end with the proposal of the vote of thanks by Mr. K. Praveen, student coordinator. All the suggestions were recorded for the improvement of the upcoming event.

ONLINE WEBINAR

CIVIL DEPARTMENT

Online webinar on Classroom to Construction site “A Practical Approach” was organized on June 5th, 2020 by the Department of Civil Engineering, PERI Institute of Technology. Er. P. VIGNESWARADURAI, Director & Chief Officer, JP Construction & Consultant, Tamilnadu were invited as Chief Guest for the seminar. Mr. Syed Abuthagir Asst. Prof organized the event and Ms. E. Ezhilarasi, Asst. Prof. welcomed the gathering. She gave a warm welcome to the honorable Chief Guest and the participants.

Around 310 + participants from various institutions and industries have attended the event. The resource person gave a one and half an hour presentation on the introduction of the behavior of structural elements with practical examples, its significance, and their applications. His lecture was really a valuable gift to our participants. There was an interactive question and answer session following the presentation and the event came to an end with the proposal of the vote of thanks by Mr. D. Praveen, student coordinator. All the suggestions were recorded for the improvement of the upcoming event.



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STUDENTS PLACED

We congratulate our student those who have placed in our campus interview for the academic year 2020 – 2021. Three different rounds were conducted for around 25 students and the names of the students those who have placed are listed below:



AJEETH



DHANRAJ



PREVEEN



SATHYAPRIYA

JOURNAL PUBLICATIONS

- Mr. Magesh - DESIGN OF AUTOMATED CIRCULAR PEDESTRIAN CROSSING AT A ROAD INTERSECTION, ICIRCC'20, ISBN - 978-81-937313-2-13
- M. Hari Sathish Kumar - SOLAR PANEL ROADS FOR FOOT PATH, ICIRCC'20, ISBN - 978-81-937313-2-14
- C. Lavanya - AN EXPERIMENTAL STUDY ON CONCRETE PARTIALLY REPLACEMENT OF CEMENT BY ZEOLITE, ICIRCC'20, ISBN - 978-81-937313-2-15
- G. Karthika - EXPERIMENTAL INVESTIGATION ON PARTIAL REPLACEMENT OF CEMENT WITH ALKALI ACTIVATED GLASS POWDER, ICIRCC'20, ISBN - 978-81-937313-2-16
- N. Thangam - TREATMENT OF LEACHATE WATER USING PHOTOCATALYST (TiO₂) UNDER UV LIGHT, ICIRCC'20, ISBN - 978-81-937313-2-17

JOURNAL PUBLICATIONS

- S. Sathapriya, A Shruthi, A. Shwetha, M. Hari Sathish kumar - BEHAVIOUR OF BASALT FIBRE IN HIGH STRENGTH CONCRETE, ICIRCC'20, ISBN - 978-81-937313-2-18
- K. Ajeeth kumar, Antony Balan, Manikandan, Vijay mohan, G. Karthika - REPLACEMENT OF COURSE AND FINE AGGREGATE BY WASTE CERAMIC TILES AND CERAMIC POWDER IN CONCRETE, ICIRCC'20, ISBN - 978-81-937313-2-19
- Allampathi Bhaskar, D.Ajith Kumar, J.M.Jervin Rebaairo, G. Santhosh Kumar, G.Karthika - REPLACEMENT OF COARSE AND FINE AGGREGATE BY PALM KERNEL SHELL AND CERAMIC POWDER IN CONCRETE, ICIRCC'20, ISBN - 978-81-937313-2-20
- M. Hari Sathish Kuamr, Boojarajan, Dhanraj, Tamizharasan, Vasanth - REPLACEMENT OF DESIGN OF S-SHAPED GRADE SEPARATOR INTERSECTION, ICIRCC'20, ISBN - 978-81-937313-2-21
- Jashwanth Nagarajan, J. Preveen, S. Mohammed Yasin , K. Pravin, N. Thangam - H2 PRODUCTION FROM SULFIDE WASTESTREAM, ICIRCC'20, ISBN - 978-81-937313-2-22
- P. Balamurugan, P. Damodharan, S. Masimali, P. Sakthivel, MS. Thangam. N - THE PHOTOCATALYTIC ACTIVITY OF PDCR 2O3/CDSA LONG WITH BATCH PROCESS WITH PASSIVE MIXING, ICIRCC'20, ISBN - 978-81-937313-2-23



EXCELLENCE

TOPPERS 2021



SATHYAPRIYA



TAMILARASAN



JASWANTH



PRASANTH



SURENDRA KUMAR



PRAVEEN



USHA NANDINI



BHANU CHANDRA



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Sarath Kumar

DEPARTMENT OF CIVIL ENGINEERING