



P.S.R. ENGINEERING COLLEGE

An Autonomous Institution (Approved by AICTE & Affiliated to Anna University, Chennai)
Accredited by NAAC and listed under 12(B) of the UGC Act, 1956.

An ISO 9001:2008 Certified Institution
Sivakasi - 626140, Tamilnadu, India.

CIVIL ENGINEERING

NEWS LETTER

Nov 2017

VOLUME 8 ISSUE 1

DEPARTMENT OF CIVIL ENGINEERING

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FACULTY ACTIVITIES**JOURNALS**

1. Josephine Kelvina Florence, S., Renji, **K., Subramanian, K.**, “Modal Density Of Honeycomb Sandwich Composite Cylindrical Shells Considering Transverse Shear Deformation” *International journal of Acoustics and Vibration, Vol.23, No.1, 2017.*
2. **Kumar, P.**, Sudalaimani, K., Shanmugasundaram, M., “An Investigation on Self-Compacting Concrete Using Ultrafine Natural Steatite Powder as Replacement to Cement” *Advances in Material Science and Engineering - Volume 2017, Article ID 8949041, 1-8 PP, August 2017.*

CONFERENCES

1. Kiruthika, M., **Mahendran, K., Shahul Hamed, M.**, “Experimental Investigation Of Animal Bone Powder Replacing Cement In Concrete” *International Conference on Innovations in Science, Technology and Management Towards Sustainability (ISTMTS-2017)*
2. **Lakshmi Narayanan, S., Shahul Hamed, M.**, “Experimental Investigation On Concrete by using M-Sand and Quarry Dust as Fine Aggregate” *International Conference on Innovations in Science, Technology and Management Towards Sustainability (ISTMTS-2017)*
3. Kiruthika, M., **Mahendran, K., Shahul Hamed, M.**, “Experimental Study on Behavior of Reactive Powder Concrete Recron 3s Fibers” *International Conference on Innovations in Science, Technology and Management Towards Sustainability (ISTMTS-2017)*
4. Venkatraj, P., **Shahul Hamed, M.**, “Experimental Investigation On Cellular Foam Concrete Folded Panel” *International Conference on Innovations in Science, Technology and Management Towards Sustainability (ISTMTS-2017)*
5. **Karthik Ragunath, S., Shahul Hamed, M.**, “Identification And Assessment Of Delay Factors In MultiStorey Construction Projects” *International Conference on Innovations in Science, Technology and Management Towards Sustainability (ISTMTS-2017)*

6. Sankara Pitchai Raj, G., **Shahul Hammed, M.**, “Experinmental Investigation Of Cellular Lightweight Concrete” *International Conference on Innovations in Science, Technology and Management Towards Sustainability (ISTMTS-2017)*
7. Kaliraj, C., **Shahul Hammed, M.**, “Experinmental Investigation Of Foam Concrete Wall Panel” *International Conference on Innovations in Science, Technology and Management Towards Sustainability (ISTMTS-2017)*
8. Dhanalakshmi, A., **Shahul Hammed, M.**, “Review On Strength Properties Of Self Compacting Concrete By Using Fly Ash And Basalt Fibers” *International Conference on Innovations in Science, Technology and Management Towards Sustainability (ISTMTS-2017)*
9. **Arunraja, L., Shahul Hammed, M.**, “Experimental Study On Mechanical Properties Of Recron Fiber Reinforced Self Compacting Concrete” *International Conference on Innovations in Science, Technology and Management Towards Sustainability (ISTMTS-2017)*
10. Lakshmi Narayanan, S., **Shahul Hammed, M.**, “Experimental Investigation On Concrete By Using M.Sand And Quarry Dust As Fine Aggregate” *International Conference on Innovations in Science, Technology and Management Towards Sustainability (ISTMTS-2017)*
11. Uma Maheswari, K., **Dharmar, S.**, “Modelling And Analytical Studies Of Berthing Structures” *International Conference on Innovations in Science, Technology and Management Towards Sustainability (ISTMTS-2017)*
12. Venkateshwari, N., **Dharmar, S.**, “Experimental Study On Behaviour Of Geopolymer Ferrocement Box Beam” *International Conference on Innovations in Science, Technology and Management Towards Sustainability (ISTMTS-2017)*
13. Saranpriya, G., **Dharmar, S.**, “Experimental Study On Bubble Deck Slab Using Geopolymer Concrete” *International Conference on Innovations in Science, Technology and Management Towards Sustainability (ISTMTS-2017)*
14. Janarthanan, R., **Kumar, P.**, “Effective Utilization Of Ceramic Waste As A Raw Material In Concrete” *International Conference on Innovations in Science, Technology and Management Towards Sustainability (ISTMTS-2017)*

15. Saravanaselvan, G., **Kumar, P.**, “Experimental Study On Concrete In Compression Using Coconut Shell And Glass Sand” *International Conference on Innovations in Science, Technology and Management Towards Sustainability (ISTMTS-2017)*
16. Kalaiselvan, V., **Arunraja, L.**, “Study Of Self Compacting Concrete Using Reactive Powder” *International Conference on Innovations in Science, Technology and Management Towards Sustainability (ISTMTS-2017)*
17. Suresh Kannan, S., **Arunraja, L.**, “Study On Flexure Behaviour Of Self Compacting Concrete By Partially Replacing Fine Aggregate With Ferrorock” *International Conference on Innovations in Science, Technology and Management Towards Sustainability (ISTMTS-2017)*
18. Sathesh Kanna, A., **Dhanalakshmi, A.**, “Experimental Investigation On Self Curing Concrete Using Pre-Soaked Light Weight Aggregate” *International Conference on Innovations in Science, Technology and Management Towards Sustainability (ISTMTS-2017)*
19. **Ashok Manikandan, S.**, “Enterprise Resource Planning Success Factors Model: A Structural Equation Modelling” *International Conference on Innovations in Science, Technology and Management Towards Sustainability (ISTMTS-2017)*
20. Saranpriya, G., **Nivethitha, D.**, “Reduction Of Fluoride In Drinking Water Using Azadirachta Indica (Neem Leaves)” *International Conference on Innovations in Science, Technology and Management Towards Sustainability (ISTMTS-2017)*
21. **Saranya, N., Ranjitha, K.**, “Review On Membrane Bioreactor Technology In Sewage Treatment” *International Conference on Innovations in Science, Technology and Management Towards Sustainability (ISTMTS-2017)*
22. Vijaya Sutha, G., **Leema Margret, A.**, “Experimental Study On Self Compacting Concrete With Partial Replacement Of Cement By Flyash” *International Conference on Innovations in Science, Technology and Management Towards Sustainability (ISTMTS-2017)*
23. **Leema Margret, A.**, “Analytical Investigation On Concrete Filled Elliptical Steel Tubular Column” *International Conference on Innovations in Science, Technology and Management Towards Sustainability (ISTMTS-2017)*

24. Manjammaldevi, M., **Dhanalakshmi, A.**, “Experimental Study On Light Transmitting Concrete” *International Conference on Innovations in Science, Technology and Management Towards Sustainability (ISTMTS-2017)*
25. Shenbaga Nachiyar @ Jeyashree, D., **Dhanalakshmi, A.**, “Experimental Study On Behaviour Of Concrete By Partial Replacement Of Cement With Glass Powder And Fine Aggregate With Quarry Dust” *International Conference on Innovations in Science, Technology and Management Towards Sustainability (ISTMTS-2017)*
26. Gokulakrishnan, M., **Dhanalakshmi, A.**, “Analytical study on Geopolymer concrete slab” *International Conference on Innovations in Science, Technology and Management Towards Sustainability (ISTMTS-2017)*.

DEPARTMENT ACTIVITIES

EVENTS

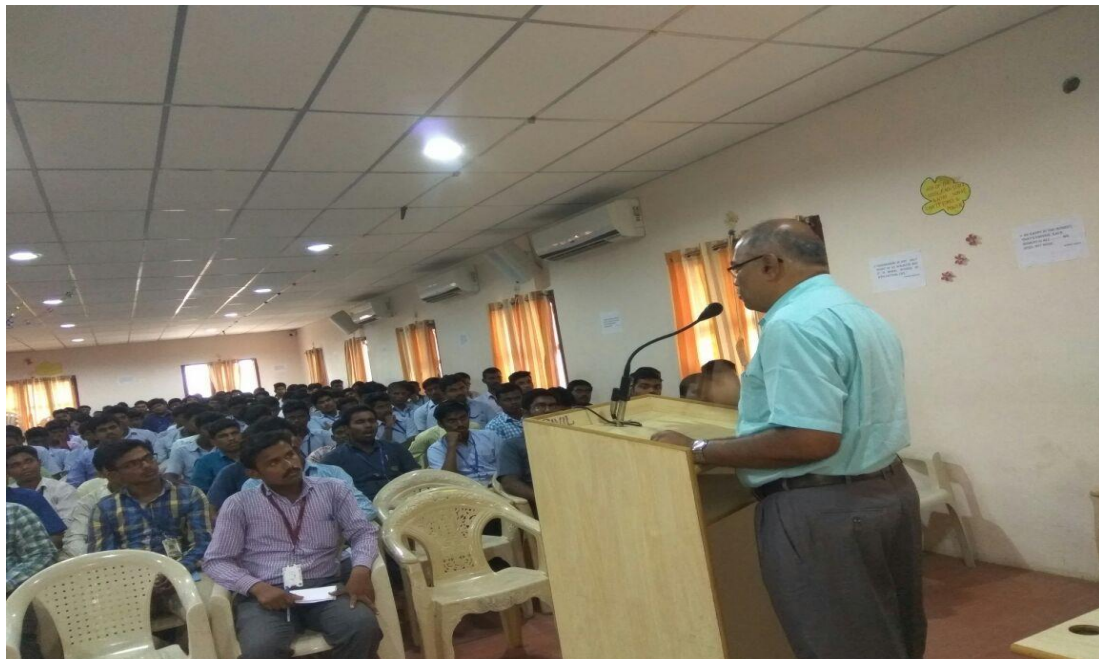
International Conference on EMERGING TRENDS IN ENGINEERING AND MANAGEMENT FOR SUSTAINABLE DEVELOPMENT 10th November 2017 Jointly Organized By Department of Civil Engineering & Computer Science and Engineering, P. S. R. Engineering College, Sivakasi.



One day Workshop on ETABS and MSP on 23.08.2017. The Resource Person of this function is Mr. R. Sudharsan, Senior Engineer business support service CADD Center Training Service Pvt, Ltd, Chennai.



Seminar on Career Guidance and Opportunities in Indian Army for Civil Engineering Graduates on 10.08.2017. Our Honorable Chief Guest, Ex. Karthigairajan Chief Engineer (Refd) MES delivered wonderful words to participants.



One day workshop on analysis and design of building structures on 07.07.2017. Our Honorable Chief Guest, Dr. S. Nagan, Associate Professor, Department of Civil Engineering, Thiyagaraja College of Engineering, Madurai.



One day workshop on emerging trends in building information modelling software on 28.06.2017. Our Honorable resource person, Mr. R. Sudharsan, Senior Engineer, business support service, CADD centre training service private limited, Chennai.



One day workshop on Primavera on 21.06.2017. Our Honorable resource person, Mr. Alagar Devan, Trainer, CADD Master 5C, Madurai.



One day workshop on fire safety awareness programme on 13.07.2017. Our Honorable Chief Guest, Mr. M. Manikandan, Asst. District Fire Officer, Sivakasi.



STUDENT ACTIVITIES**EVENTS PARTICIPATED****CONFERENCES**

Sl. No	Name of the Student	Paper Title	Place	Date
1.	Kiruthika. M	Experimental Investigation of Animal Bone Powder Replacing Cement in Concrete	Paper presentation at P.S.R. Engineering College	7.10.2017 to 8.10.2017
2.	Kaliraj . C	Experimental Investigation of Foam Concrete Wall Panel	Paper presentation at P.S.R. Engineering College	7.10.2017 to 8.10.2017
3.	Pradeepan. N	Corrosion Study on high strength self-compacting concrete	Paper presentation at P.S.R. Engineering College	7.10.2017 to 8.10.2017
4.	S.Raja nivetha	RESJLENCEJ17	QUIZ Competition on Symposium at Department of Mechanical Engineering, P.S.R. Engineering College.	22.09.2017

SPORTS

Sl. No	Name of The Student	Title	Place	Date
1.	S.Mathan kumar	Zonal Tournaments	Anna university sports board, Chennai.	1.09.2017 to 2.09.2017
2.	A.Aravinthan	Zonal Tournaments	Anna university sports board, Chennai.	1.09.2017 to 2.09.2017
3.	S.Gajendrakumar	Zonal Tournaments	Anna university sports board, Chennai.	1.09.2017 to 2.09.2017

NPTEL Courses Attended

S.No.	Name of the Students	Name of the Course	No. of Weeks
1	G. Saranpriya	Hydration, Porosity and Strength of Cementitious Materials	8
2	S. Nithya Subhasree	Introduction to Remote Sensing	4
3	Selva sakthi	Introduction to Remote sensing	4
4	M . Dineshkumar	Introduction to Remote sensing	
5	Chitra	Introduction to Remote sensing	4
6	P. Esakkiraj	Introduction to Remote sensing	4
7	K. Jeyarani	Life Cycle Assessment	8
8	G. Dhinesh Babu	Earth Sciences for civil Engineering – Part 2	4

INPLANT TRAINING

S.No.	Name of the Students	Name of the organization
1.	N. Susindran	URC CONSTRUCTIONS (P) LTD
2.	P.Venkatraj	PSN EDUCATIONAL & CHARITABLE TRUST
3.	R.Janarthanan	I CAD BUILDING DESIGNERS
4.	C.Kaliraj	JOHNSLYPREM CONSTRUCTION PVT LTD
5.	G.Sankara Pitchai Raj	VETHAS CONSTRUCTION
6.	S.Bharathi	HCL - IT PARK MADURAI
7.	S.Shanmugasundari	PWD,SRIVILLIPUTHUR
8.	G.Saravanaselvan	DHAVICH DESIGN AND BUILD PVT LTD
9.	N.Venkateshwari	PWD,SRIVILLIPUTHUR
10.	A.Sathesh Kanna	TAHDCO, THIRUNELVELI
11.	G.Saranpriya	SRI RAJA RAJEESWARI

INDUSTRIAL VISIT

Name of the Industry	Year/ sem	Date	No of Students	Date & Staff Accompanied
Vaigai Dam and Sewage Treatment Plant, Theni	III / V	20.07.2018	86	Mr.S.Vijayabaskar Mr.S.Karthik Ragunath Mr.LakshmiNarayanan Ms.A.Dhanalakshmi Mrs. Saranya
Geo Structural (P) Ltd, Cochin.	IV / VII	20.07.2018	52	Mr.K.Mahendran Mr.R.ManojGuru Ms.V.Archana
Srinivasan Associates Pvt Ltd, Coimbatore	IV / VII / I	20.07.2018	53	Mr.L.ArunRaja Mrs.O.Sheebarose
Thoothukudi Harbour	II / IV	03.08.2018	85	Mr.G.Baskar Singh Mr.Venkatasubramanian Mrs.A.Dhanalakshmi Ms.A.Dhanalakshmi



Thoothukudi Harbour on 03.08.2018

Student Article

Total Stations: the Surveyor's Workhorse

A total station is an angle measuring device, also known as a theodolite, integrated with an electronic distance measurement (EDM) unit. The integration provides the ability to measure horizontal and vertical angles as well as slope distances using the same device at the same time, which benefits the surveyor in terms of portability, convenience and speed. For many decades, and up until the 1960s, theodolites were the major surveying instruments for collecting geodata referenced in an Earth-fixed coordinate system. Without careful precautions, the chains and tapes produced inaccurate results. An important innovation that made distance measurements less cumbersome was Electronic Distance Measurement (EDM). Developed around 1940, EDM became commercially available in the 1960s. EDM units employ electromagnetic (EM) energy for measuring the slope distance to a target point. Two principles are in use: phase shift and pulse – also called ‘time of flight’ – measurements. The EM energy may be emitted as infrared carrier signals, generated by a small solid-state emitter within the instrument’s optical path and modulated as sine waves. The phase of the returning signal is compared to the phase of the emitted signal. This can be done with a precision at the millimetre level.. The other method uses laser pulses. The travel time of the pulse to and fro (Δt) is measured and, by multiplying that by the speed of light (c) and dividing the result by two, the distance (d) can be accurately calculated.

Reflectorless EDM:

Reflectorless EDM has become standard in surveying. Today, up to 1km can be bridged without using a prism. This ability of EDMs eliminates the need to access the target. The range depends on the strength of the emitted signal and the reflectivity and geometry of the target. Inaccessible objects or targets located at dangerous sites can thus be mapped easily. The detection of returns from bare surfaces, i.e. using no prisms, requires laser pulses with a high energy level, typically in the range of 1 to 20 watts. In contrast, most phase-based EDMs using prisms emit signals at a level of a few milliwatts. Since the signal may reflect upon any surface present in the line of sight, blunders may easily occur.

Internal Processing and Storage:

If the total station is equipped with an inbuilt microprocessor the initial observations – horizontal and vertical directions and slope distance – can be further processed to angles, horizontal distances and x,y,z coordinates of the target point in a preferred Earth-related reference system. If it is equipped with sensors which measure atmospheric temperatures and pressures the processor can calculate corrections to the initial measurements. The data collected is stored in an inbuilt electronic notebook which usually has sufficient capacity to store the data points collected during an entire working day. Once uploaded to a processing computer or server, the data can be deleted from the notebook so it is ready for re-use.

Imaging and Laser:

Digital cameras have also been mounted into the telescope, coaxial with the optics and the EDM. The snapshots allow the site to be documented and notes to be written using a digital pencil on the total station's screen. As the image is stored together with the coordinates of both station and target points, orthoimagery can be created. Imaging also enables tracking of the prism and its recapture if it becomes lost due to objects passing through the line of sight. A proven method to increase the accuracy is measuring the same target many times and averaging the values. Using software based on computer vision research, the same feature can be automatically detected in a series of images gained during repetition measurements

Concluding Remarks:

The broad range of different types of total stations may appear dazzling if you intend to renew your equipment. Which one should you select? The latest and most sophisticated one? There are so many functionalities to choose from. Which brand should it be? As usual, the more functionalities a tool has or the more sophisticated it is, the higher the price. Before making your purchase decision, it is wise to make a list of the types of surveys to be conducted and the accuracy required. It will often become apparent that a simple device will meet your needs, or even that a ten-year-old second-hand device is good enough for staking out enumeration boundaries for census purposes in a developing country. And one thing is for sure: no matter how advanced a device may be, if it is not in the hands of a skilled person the output will be garbage.

- N. SUSINDRAN

IV CIVIL

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