

CRESITA

Newsletter 2017-18, Issue 3

DEPARTMENT OF CIVIL ENGINEERING

SECAB INSTITUTE OF ENGINEERING AND TECHNOLOGY,
NAURASPUR, BAGALKOT ROAD,
VIJAYAPUR - 586109

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VISION

To prepare Civil Engineers who are professionally competent and socially responsible

“ We shape our buildings, thereafter they shape us ”

-Winston Churchill

MISSION

We at Department of Civil Engineering are committed to achieve our vision by:

- Imparting academic excellence through outcome based education.
- Preparing students through skill oriented courses to excel in their profession with ethical values.
- Grooming students for higher studies and research culture.
- Strengthening relationship with stakeholders for continuous development.

From HOD's Desk

Civil engineering is arguably the oldest engineering discipline. It deals with the built environment and can be dated to the first time someone placed roof over his or her head or laid a tree trunk across a river to make it easier to get across. Civil engineering is the application of physical and scientific principles for solving the problems of society, and it is intricately linked to advances in understanding of physics and mathematics.

The built environment encompasses much of what defines modern civilisation. Buildings and bridges are often the first constructions that come to mind as they are the most conspicuous creations of structural engineering, one of civil engineering's major sub-disciplines. Roads, railroads, subway systems and airports are designed by transportation engineers, another category of civil engineering. And then there are the less visible creations of civil engineers. Every time you open a water faucet, you expect water to come out, without thinking that civil engineers made it possible. Similarly, not many people seem to worry about what happens to the water after it has served its purposes. The old civil engineering discipline of sanitary engineering has evolved into modern environmental engineering of such significance that most academic departments have changed their names to civil and environmental engineering.

Civil engineering is an exciting profession because at the end of the day you can see the results of your work, whether this is a completed bridge, a high-rise building, a subway station, or a hydroelectric dam.

Dr. Zia Abe Din Punekar

ARTIFICIAL INTELLIGENCE IN CIVIL ENGINEERING



Prof. A. A. Jahagirdar
Department of Civil Engineering
SECAB I. E. T. Vijayapur.

Artificial intelligence is a branch of computer science, involved in the research, design, and application of intelligent computer. Traditional methods for modeling and optimizing complex structure systems require huge amounts of computing resources, and artificial-intelligence-based solutions can often provide valuable alternatives for efficiently solving problems in the civil engineering. This paper summarizes recently developed methods and theories in the developing direction for applications of artificial intelligence in civil engineering, including evolutionary computation, neural networks, fuzzy systems, expert system, reasoning, classification, and learning, as well as others like chaos theory, cuckoo search, firefly algorithm, knowledge-based engineering, and simulated annealing. The paper provides an overview of the advances of artificial intelligence applied in civil engineering. Artificial intelligence is a science on the research and application of the law of the activities of human intelligence. It has been a far-reaching cross-frontier subject, after the 50 years' advancement.

Nowadays, this technology is applied in many fields such as expert system, knowledge base system, intelligent database system, and intelligent robot system. Expert system is the earliest and most extensive, the most active and most fruitful area, which was named as "the knowledge management and decision-making technology of the 21 century." In the field of civil engineering, many problems, especially in engineering design, construction management, and program decision-making, were influenced by many uncertainties which could be solved not only in need of mathematics, physics, and mechanics calculations but also depend on the experience of practitioners.

Self-diagnosis, multi-objective shape control, and reinforcement-learning processes were implemented within a control framework on an active tensegrity structure.

Among artificial intelligence-based computational techniques, adaptive neuro-fuzzy inference systems were particularly suitable for modelling complex systems with known input-output data sets. Such systems can be efficient in modelling nonlinear, complex, and ambiguous behaviour of cement-based materials undergoing single, dual, or multiple damage factors of different forms in civil engineering. Bassuoni and Nehdi developed neuro-fuzzy based prediction of the durability of self-consolidating concrete to various sodium sulphate exposure regimes. Prasad et al. presented an artificial neural network (ANN) to predict a 28-day compressive strength of a normal and high strength self-compacting concrete (SCC) and high performance concrete (HPC) with high volume fly ash. Lee et al. used an artificial intelligence technique of back-propagation neural networks to assess the slope failure. The numerical results demonstrate the effectiveness of artificial neural networks in the evaluation of slope failure potential. Shaheen et al. presented a proposed methodology for extracting the information from experts to develop the fuzzy expert system rules, and a tunneling case study was used to illustrate the features of the integrated system. Das et. al. described two artificial intelligence techniques for prediction of maximum dry density (MDD) and unconfined compressive strength (UCS) of cement stabilized soil. Forcael et. al. presented the results of a study that incorporates computer simulations in teaching linear scheduling concepts and techniques, in a civil engineering course "Construction Planning and Scheduling." To assess the effect of incorporating computer simulation in teaching linear scheduling, the students' evaluations and answers to the questionnaire were statistically compared. Krcaronemen and Kouba proposed a methodology for designing ontology-backed software applications that make the ontology possible to evolve while being exploited by one or more applications at the same time. The methodology relies on a contract between the ontology and the application that is formally expressed in terms of integrity constraints. In addition, a reference Java implementation of the methodology and the proof-of-concept application in the civil engineering domain was introduced.



Funded Projects of 2017-18

The department has always motivated the students and faculties with facilities like well equipped laboratories, active departmental library and research centre to take innovative and research oriented projects. The following projects were recognized and funded by KSCST.

Sl. No.	Title	Students	Guide	Funding agency
1	Treatment of sugar industry waste water using electro coagulation technique in monopolar and bipolar electrode systems.	Ameer Sohail M Alagur, Kashinath Shejule, Mahantesh Bise , Manjunath Bagoji.	Prof. Chetan Marol	KSCST
2	Study about properties of concrete by partially replacing cement with GGBS	Sudharani s, Yasmeen Mallewale, Najeerahamad Tenhali , Arunkumar Chavan	Mrs Supriya V K	KSCST
3	Treatment of textile effluents using titanium oxide nanoparticles	Mulla gausiyabanu, Akshata M. Honawad, Vijaylaxmi badiger, Manoj g manguli.	Prof. K Y Hugar	KSCST

“Strive for perfection in everything you do. Take the best that exists and make it better. When it does not exist, design it.”
- Sir Henry Royce

Ph.D. Registrations of 2017-18

Name	Research Guide	Research center
Prof. Niyaz dafedar	Dr. Zia Abe Deen Puneekar	Civil Engineering Research Centre, Secab Institute of Engineering and Technology, Vijayapur.

Research Colloquia



SECAB INSTITUTE OF ENGINEERING AND TECHNOLOGY



Nauraspur, Bagalkot Road, VIJAYPUR-586109

COLLOQUIUM ON **EARTHQUAKE ENGINEERING**

.....19th August 2017.....

Organised by,
CIVIL ENGINEERING DEPARTMENT

Resource Person
Dr. C.S. MANOHAR
IISc-Bangalore.

Venue : SIET Campus

Department of Civil Engineering organized a colloquium on "Earthquake Engineering" on 19th August 2017 in the seminar hall. The guest speaker was Dr. C. S. Manohar from IISc Bangalore. He covered the all topics from fundamentals of earthquake engineering to recent researches. Earthquake engineering was the new topic beyond syllabus for the students. And after his talk, he interacted with the faculties regarding research interests.





Department of Civil Engineering organized a colloquium on "Remote sensing and GIS" on 16th oct. 2017 in the seminar hall. The guest speaker was Dr. K. B. V. N. Phanindra who is presently working as assistant professor at IIT Hyderabad. After his talk, he involved in the interaction with the faculties regarding research interests.





Department of Civil & Mechanical Engineering jointly organized a colloquium on “Influence of Imperfection Sensitivity on Functionally Graded Sandwich Structures” on 27th November 2017. The resource person was Dr. Mohammad Talha who is the assistant professor at IIT Mandi.

Department of Civil & Mechanical Engineering jointly organized a FDP on GPU's Ignite artificial intelligence, Machine learning & deep learning” from 6th to 11th February 2018. The speakers were Mr. Manish Bali and Prof. Tabassum Ara.



SECAB INSTITUTE OF ENGINEERING & TECHNOLOGY, VIJAYPUR.
(Affiliated to Visvesvaraya Technological University, Belgaum)

**DEPARTMENT OF MECHANICAL & CIVIL ENGINEERING
ORGANIZING**

FACULTY DEVELOPMENT PROGRAMME

**On
“GPUs IGNITE ARTIFICIAL INTELLIGENCE,
MACHINE LEARNING & DEEP LEARNING”**

BY

**Mr. Manish Bali
Prof. Tabassum Ara**

**Venue: SECAB Institute of Engineering & Technology
Seminar Hall
Time: 10:00 am. to 05:00 pm**

From: 6th to 11th February 2018

Prof. Anil Dordamani

Mr. Debakrishna Chavhan

Dr. A. Prasanth



SECAB INSTITUTE OF ENGINEERING & TECHNOLOGY

(Approved by All India Council For Technical Education, New Delhi & Affiliated to Visvesvaraya Technological University, Belgaum)
Nauraspur, Bagaikot Road, Vijaypur -586109 Karnataka (INDIA) E-mail: secab_siet@secab.org Web: secab-siet.in Ph: 08332-276930, 277980. Fax: 277353.

**Short Term Training Course
On**

“Site Supervisor”

“The Road to Success is Always Under Construction”

5th to 7th APRIL 2018

**Organized By
Civil Engineering Department**



Speakers:

Prof. M. H. Kolhar Prof. S. S. Kulkarni Er. N. D. Ustad

Department of Civil Engineering organized a Student's STTP on “Site supervisor” from 5th to 7th April 2018. The speakers were Mr. M. H. Kolhar, Mr. S. S. Kulkarni and Er. N. D. Ustad. Field Practical session was also included in this STTP. The STTP was Coordinated by Mr. Abdussami Nadaf.



Department of Civil Engineering organized a Student's STTP on "Quantity surveying and Quality management" from 5th to 17th March 2018. The speakers were K. shrinivasa from NICMAR hyderabad, Mr. Mahesh Tendulkar. The STTP was Coordinated by Mr. Niyaz Dafedar.

Department of Civil Engineering organized a workshop on "Primavera & GIS – software application" from 22nd to 25th April 2018. The speakers were from Synergy school of business skills, Mr. Prasanna doddamani, project head, and Mr. Sujay gogi, technical leader.

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Department of Civil Engineering Organizes
WORKSHOP ON
Primavera & GIS
Hands on Approach
Software Application
22nd to 25th April 2018

Trainers
"Industrial Experts"

Prasanna Doddamani <small>Project Head, Synergy School of Business Skills</small>	Sujay Gogi <small>Technical Leader, Synergy School of Business Skills</small>
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Department of Civil Engineering Organizes
COLLOQUIUM ON
"Overview of Highway Engineering"
and
"Pavement Materials Present & Future Trends"
13th April 2018

Resource Persons:

Dr. Prem Swarup Reddy
 Professor
 Global Academy of Technology,
 Bengaluru.

Ms. Priyanka B. L.
 Asst. Professor
 MS Engineering College,
 Bengaluru.

Department of Civil Engineering organized a colloquium on "Overview of highway engineering & Pavement materials - Present & future trends" on 13th April 2018 in the seminar hall. The guest speakers were Dr. Prem swaroop reddy from GAT bengaluru & Ms. Priyanak B. L. from MS Engineering college Bengaluru.

CRESCITA

EXPLORIA

2K18

SECAB ASSOCIATION'S
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APPROVED BY AICTE NEW DELHI, AFFILIATED TO VTU BELAGAVI, KARNATAKA, INDIA.
NAURASPUR, BAGALKOT ROAD, VIJAYPUR-586109, KARNATAKA PH.08352-276930, FAX: 08352-277353

ORGANIZED BY DEPARTMENT OF
CIVIL ENGINEERING

EXPLORIA 2K18
 A THREE DAY NATIONAL LEVEL STUDENTS TECHNICAL FEST
 3RD, 4TH, 5TH MAY 2K18
 Showcase your Talent

				
TECHNICAL QUIZ Student Coordinators Sajid 7676388696 / Shabana	PAPER PRESENTATION Student Coordinators Ajaz 8660281914 / Sudarani	QUICK SURVEYING Student Coordinators Tajuddin 8867800981 / Pavan K. 8892943808	MODEL MAKING Student Coordinators Rehmat 890490334 / Amar 9742512987	PROJECT EXHIBITION / PRESENTATION Student Coordinators Ameerohall 7204686088 / Rakshita

**Reg. Fee 150/- Per Person
Per Event**

Registration Last Date **2nd May 2018** Free Accomodation

Attractive Prizes & Memento's

Exploria 2K18 – A 3 days National level students technical fest

Exploria 2K18 “A national level student’s technical fest” organized by civil engineering students and staff. A three days national level student’s technical fest provided a platform for sharing knowledge, skills in engineering and technology. Various events were organized during these two days which included paper presentation, model making, technical quiz, town planning, and quick surveying. Participants from various engineering colleges around Karnataka and Maharashtra actively participated and won the prizes. On 3rd May the inauguration function was presided by Shri S. A. Puneekar Honorable president SECAB association, Bijapur. On 5th, the valedictory function was scheduled.



GREEN MEADOWS WATER TREATMENT PLANT



Ms. Ruksar Galgali
6th semester

Modern water utilities face various challenges, including an ever-aging infrastructure, shifting workforce demographics, unreliable or changing water supply sources, evolving regulations, and rising customer expectations. By contrast, most drinking water providers typically rely on one water source and one treatment system. To provide the high-quality, potable drinking water that its customers expect, the LCU recently opened the new 14 mgd Green Meadows Water Treatment Plant (WTP) near Ft. Myers. The first-of-its-kind facility in southwest Florida, the Green Meadows WTP combines new and existing technology to treat water from three aquifers using the latest large-scale treatment technologies. The new facility replaces an aging lime softening plant that had operated for more than 35 years and reached the end of its useful life. The Green Meadows WTP includes a reverse-osmosis (RO) system to desalinate brackish well water from the Upper Floridan aquifer (UFA), as well as an innovative ion exchange system that uses cation and anion exchange to remove iron, hardness, and organics from freshwater pumped from the local surficial aquifer. In addition, the WTP blends the RO permeate with freshwater from a third source, the Sandstone aquifer. This blend then undergoes degasification, disinfection, and chemical addition. To facilitate additional operational flexibility, the WTP can direct Sandstone aquifer water back to the RO treatment system. Achieving this goal would require meeting the following key objectives;

- compliance with evolving regulatory and treatment requirements.
- creation of a facility that could be easily maintained and operated and that would have a long lifetime
- inclusion of an electrical system with Class 1 reliability-that is, two separate electrical systems that could power the facility independently in the event that one of the systems experienced a failure

Contd...

- creation of a sustainable, low-cost operating facility that met the LCU's finished water goals
- inclusion of equipment that would be standardized to reduce maintenance time and expenses



Paper Publications

Sl. No	Name of the Teacher(s)	TITLE of paper	Journal name	Vol. No.	Issue No.	Month & Year
1	Dr. Z S Puneekar	Comparative Study on Seismic Performance of Flat Slab and Conventional Slab	IJESC ISSN 2321 3361	7	9	Sep-2017
		Analysis & Design of Raft Foundation	(IJRET) ISSN – 2319- 1163	6	10	Oct-2017
2	Mr. M. H. Kolhar & Mrs. Anjum Alagur	Comparative Study on Seismic Performance of Flat Slab and Conventional Slab	IJESC ISSN 2321 3361	7	9	Sep-2017
		Analysis & Design of Raft Foundation	IJRET ISSN – 2319- 1163	6	10	Oct-2017
		Seismic analysis of RC structures using Friction Dampers	IJRASET , ISSN No - 2321-9653	5	12	Dec-2017

Paper Publications

Contd...

4	Mr. A A Jagirdar	Analysis nd design of RC Multi storey Hospital building (G+2) & Comparison Analysis with STAAD-Pro	IJSRD ISSN No - 2321- 0613	5	5	Aug-2017
5	Mr. Chetan Kumar Marol	Treatment of Dairy Industry Waste Water by Electro coagulation (EC) Technique Removal of BOD, COD, Turbidity & Colour	IJIRST ISSN No - 2349- 6010	4	1	June 2017
6.	Ms. Shameena K.	Seismic analysis of RC structures using Friction Dampers	IJRASET , ISSN No - 2321-9653	5	12	Dec-2017
7.	Mr. Sadiq Mujawar	Evaluation of water quality of kharun river stretch near Raipur city	(IRJET), ISSN – 2395-0056	4	9	Sep-2017



“The ideal engineer is a composite ... He is not a scientist, he is not a mathematician, he is not a sociologist or a writer; but he may use the knowledge and techniques of any or all of these disciplines in solving engineering problems.”

By Nathan W. Dougherty

Industrial Visit

Pre-final year students our department visited Almatti Dam site on 10/02/2018. Department of civil engineering conducts such visits every year to introduce the students the practical work environment and the field techniques in use. This program was coordinated by Mr. S. S. Kulkarni.



Contribution towards society

Traffic case study on 28/09/2017



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The students of Civil Engineering Department determined the traffic problems and negligence of rules and regulation by the Road users of Vijayapura City and created awareness about traffic rules and regulations among citizens.

Environmental Day celebration on June 5th 2017



On account of celebration of Environmental day on June 5th 2017, the department planted a number of trees and reminded the strong tie between people and trees encouraging the awareness and action towards protection of our environment.



For the second time, the Department of Civil Engineering has bagged Anchor Distinguished Department Award for the year 2017-18

POETRY

THINK IT, BUILD IT, MAKE IT

THE ENGINEER

by Stephanie Calmenson

Listen up and you will hear
Why I am called an engineer.

I solve. I build. I invent.
I'd say my time is very well spent.

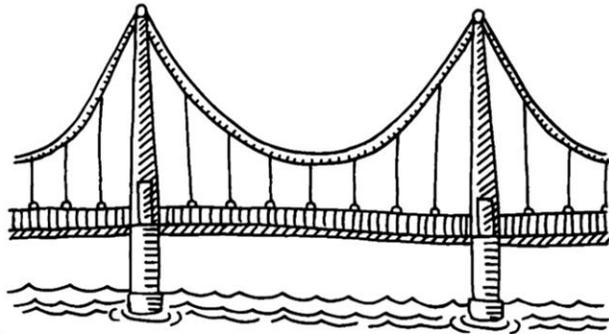
Want a bridge? I'll design it for you.
Want a new kind of wheel? I'll develop that, too.

I use computers. I use my brain.
I think and test till the answer is plain.

Want a robot, a rocket, an electronic device?
I'll take the assignment. I won't think twice.

I'll make running shoes that will send you soaring!
I'll develop a device that will keep you from snoring!

My life is all about invention.
Making the world work better is my intention.



PEO's

Program Educational Objectives

PEO 1: Students will develop abilities in the application of the necessary mathematical tools, scientific basics & fundamental knowledge of Civil Engineering.

PEO 2: Students will develop ability to practice as consulting Engineer in Civil Engineering domains such as infrastructure water resource and environment.

PEO 3: Students will develop an understanding of the multidisciplinary approach to relate Engineering issues to broader social and human context.

PEO 4: Students will be engaged in lifelong learning so as to have a successful career as Civil Engineer.

PSO's

Program Specific Outcomes

PSO 1: The graduates will have the ability to plan, analyze, design, execute and maintain cost effective civil engineering structures.

PSO 2: The graduates of civil engineering program will have the ability to conduct standardized field and laboratory tests related to civil engineering.

Contact at

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