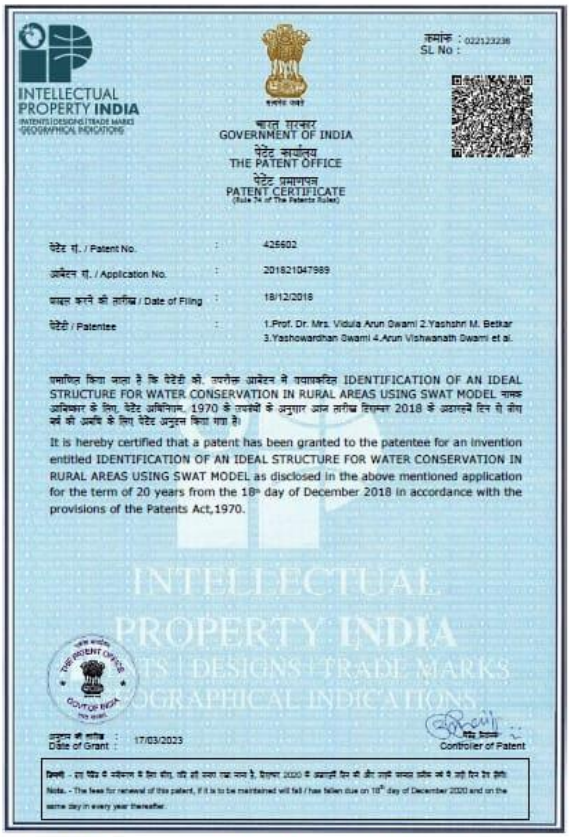
Innovation by faculty in Product Development, Research Laboratory, Instruction Materials, Working Models/ Charts/ Monograms

Dr V.A. Swami has granted an Identification of an Ideal structure for water Conservation in rural areas using the Swat model.

The present invention provides a process and system for creating a drainage network useful for 5 delineations. The process includes the steps of providing land use land cover map, soil map, slope map and weather data as input using a transmitting unit (202) on which the processing is done through the SWAT model; receiving output using a receiving unit (204) in the form of surface runoff, PET (Potential Evapotranspiration), Evapotranspiration, Percolation, Groundwater flow, Soil Moisture, Water Yield and Sediment Yield; comparing estimated runoff 10 and sediment yield using a comparator (206) from each sub-watershed with measured values; evaluating using a processing unit (208), the effect of LU/LC, soil, and topographic characteristics; defining multiple HRUs by a controlling unit (210) within a sub-basin by ignoring land uses less than 2% of the sub-basin and ignoring soil types in a sub-basin covering less than 5% of the sub-basin; and creating a predefined HRUs for sub-basins.



INTELLECTUAL PROPERTY INDIA
PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

क्रमांक : 022123236
SL No :

भारत सरकार
GOVERNMENT OF INDIA
पेटेंट कार्यालय
THE PATENT OFFICE
पेटेंट प्रमाणपत्र
PATENT CERTIFICATE
(Rule 74 of The Patents Rules)

पेटेंट सं. / Patent No.	:	426602
आवेदन सं. / Application No.	:	201821047989
दायर करने की तारीख / Date of Filing	:	18/12/2018
पेटेंटी / Patentee	:	1.Prof. Dr. Mrs. Vidula Arun Swami 2.Yashshri M. Betkar 3.Yashowardhan Swami 4.Arun Vishwanath Swami et al.

प्रमाणित किया जाता है कि पेटेंटी को, उपरोक्त आवेदन में उपाबद्धित IDENTIFICATION OF AN IDEAL STRUCTURE FOR WATER CONSERVATION IN RURAL AREAS USING SWAT MODEL नामक आविष्कार के लिए, पेटेंट अधिनियम, 1970 के उपबंधों के अनुसार आज तारीख दिसम्बर 2018 के अठारहवें दिन से बीस वर्ष की अवधि के लिए पेटेंट अनुदत्त किया गया है।

It is hereby certified that a patent has been granted to the patentee for an invention entitled IDENTIFICATION OF AN IDEAL STRUCTURE FOR WATER CONSERVATION IN RURAL AREAS USING SWAT MODEL as disclosed in the above mentioned application for the term of 20 years from the 18th day of December 2018 in accordance with the provisions of the Patents Act, 1970.

अनुदत्त की तारीख / Date of Grant : 17/03/2023

Controller of Patent

Note.- The fees for renewal of this patent, if it is to be maintained will fall / has fallen due on 18th day of December 2020 and on the same day in every year thereafter.

INTELLECTUAL PROPERTY INDIA
PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

GOVERNMENT OF INDIA

Controller General of Patents,Designs and Trademarks
Department of Industrial Policy and Promotion
Ministry of Commerce and Industry

Application Details	
APPLICATION NUMBER	201821047989
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	18/12/2018
APPLICANT NAME	1 . Prof. Dr. Mrs. Vidula Arun Swami 2 . Yashshri M. Betkar 3 . Yashowardhan Swami 4 . Arun Vishwanath Swami 5 . Dr. Suryakant Babanrao Patil
TITLE OF INVENTION	IDENTIFICATION OF AN IDEAL STRUCTURE FOR WATER CONSERVATION IN RURAL AREAS USING SWAT MODEL
FIELD OF INVENTION	AGRICULTURE ENGINEERING
E-MAIL (As Per Record)	contact@psp-ipassociates.com
ADDITIONAL-EMAIL (As Per Record)	contact@psp-ipassociates.com
E-MAIL (UPDATED Online)	
PRIORITY DATE	NA
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	03/05/2019

Application Status	
APPLICATION STATUS	Application Published

Mr Sanjay Lipare has developed a Pipe Testing Machine for PVC Pressure Pipe as per the codal provision for research and consultancy work in the

Mr Sandip G. Sawant has developed Cyclic Loading Equipment for Testing of RCC Beam which was being used for his own research and further can be used for consultancy and student projects.

Unnat Maharashtra Abhiyan (UMA) Cell.

In 2016, the Department of Civil Engineering undertook the work of establishing the Unnant Maharashtra Abhiyan (UMA) Cell in the Institute. The UMA Cell is continuously working in collaboration with government agencies in the Field of Development sector such as Rural Drinking Water Supply, Lake Conservation Systems, Waste Water Management Systems etc.

Under this Programme, UMA Cell was given the opportunity to access and conduct a technical Audit of the ongoing rural water supply scheme in Kolhapur district. In order to conduct a technical Audit of the scheme UMA cell has Developed its own working model and methodology. The working model was validated by CEO Zilla Parid and the Executive engineer of the Rural Water Supply Department.

The UMA Cell has conducted a technical Audit of 10 ongoing water supply schemes by using self-developed working model. Finally, the report of third-party assessment was submitted to the CEO Zilla-Parishad Kolhapur.

UMA Presentation Link
https://docs.google.com/presentation/d/1OXVk46TA-StYu0Hh5vz7uKAurBwhY2MM/edit?usp=drive_link&ouid=104723551042421660770&rtpof=true&sd=true

Work done through UMA Cell

1. Training workshops for Students, Professionals and Government officials.
2. Third-party Audit of Rural Water Supply Schemes.
3. Design of Sustainable Wastewater Treatment Plant
4. Auditing of Lake Conservation Work.

MOU between KIT and ZP Kolhapur

Memorandum of Understanding
Between
Zila Parishad, KOLHAPUR
And
KOLHAPUR INSTITUTE OF TECHNOLOGY'S
COLLEGE OF ENGINEERING
(AUTONOMOUS), KOLHAPUR

MEMORANDUM OF UNDERSTANDING

Software Training for RWSD officials, ZP Kolhapur

- Intr
- Basics of design and optimization of **BRANCHED PIPED WATER SUPPLY NETWORKS**
- Hands-on with **JALTANTRA** interface
- Application to **REAL-LIFE WATER SUPPLY NETWORK**

GIS training workshop for students, academicians and professionals

Third Party Audit (GoM, GR)

ग्रामीण पाणीपुरवठा योजनांचे त्रयस्थ तांत्रिक परीक्षणाकरिता - उन्नत महाराष्ट्र अभियानांतर्गत उच्च व तंत्र शिक्षण विभागाने मान्यता दिलेल्या संस्थांचा समावेश करण्याबाबत तसेच निवड समिती स्थापन करण्याबाबत.

महाराष्ट्र शासन
पाणी पुरवठा व स्वच्छता विभाग
शासन निर्णय क्रमांकः ग्रापाधो-२०१८/प्र.क्र.१७३/पापु-०७
सातवा मजला, गोकुळदास तेजपाल रुग्णालय इमारत संकुल,
मंत्रालय, मुंबई-४०० ००१
तारीख - १४ जुलै २०२०

शासन निर्णय :

उन्नत महाराष्ट्र अभियान अंतर्गत राज्यातील पाणी पुरवठा व स्वच्छता विभागासाठी आवश्यक असणाऱ्या विविध योजनांतर्गत ग्रामीण पाणीपुरवठा योजनांचे त्रयस्थ तांत्रिक परीक्षण करण्यासाठी (उच्च व तंत्रशिक्षण विभागाच्या उपरोक्त संदर्भ क्र. ५ येथील शासन निर्णयात नमूद केल्यानुसार) संस्थांचा समावेश करण्यास शासन मान्यता देण्यात येत आहे.

अ.क्र.	संस्थेचे नाव	दर्जा	जिल्हा
१.	घरडा इन्स्टिट्यूट ऑफ टेक्नॉलॉजी, खेड, रत्नागिरी.	A	रत्नागिरी
२.	महाराष्ट्र इन्स्टिट्यूट ऑफ टेक्नॉलॉजी, औरंगाबाद.	A	औरंगाबाद
३.	प्रा. राम मेघे इन्स्टिट्यूट ऑफ टेक्नॉलॉजी अँड रिसर्च, बडनेरा, अमरावती.	A	अमरावती
४.	राजारामबापू इन्स्टिट्यूट ऑफ टेक्नॉलॉजी, इस्लामपूर, सांगली.	A	सांगली
५.	अमृतवाहिनी कॉलेज ऑफ इंजीनियरिंग, संगमनेर, अहमदनगर.	A	अहमदनगर
६.	शासकीय अभियांत्रिकी महाविद्यालय, औरंगाबाद.	B	औरंगाबाद
७	कोल्हापूर इन्स्टिट्यूट ऑफ टेक्नॉलॉजी, कोल्हापूर.	B	कोल्हापूर
८	बापूसाहेब शिवाजीराव देवरे कॉलेज ऑफ इंजिनिअरिंग, धुळे.	B	धुळे

Third Party Audit of Lake Conservation Work







Assessment of Soil Erosion Problem in Wade Village

Study Outcomes:

a. Salinity ingress and its features, including the point which may be defended.

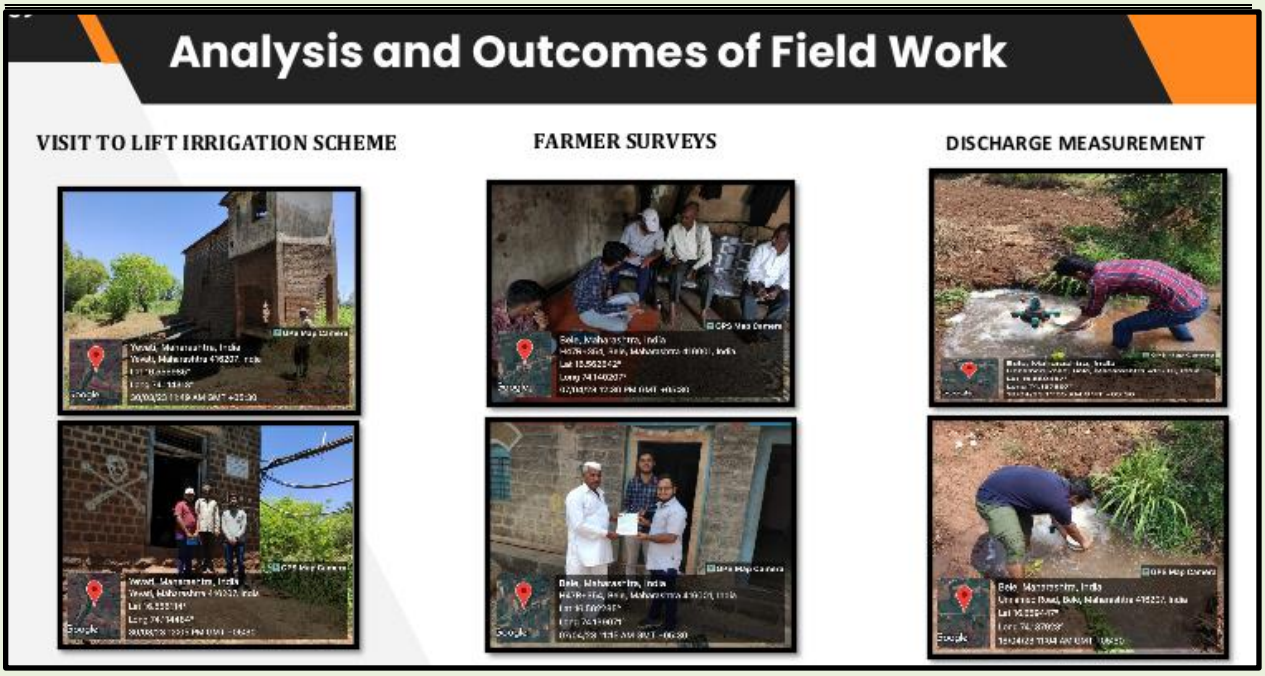
b. Actual stream-level documentation of sediments and their typology, extent and quantities - behind bunds and in free flow

c. Recording of farm inundation and also whether bunds helped or not.

d. drinking water situation for people and livestock and its security.






Analysis and Outcomes of Field Work
VISIT TO LIFT IRRIGATION SCHEME
FARMER SURVEYS
DISCHARGE MEASUREMENT

IIRO- IIRS Distance Outreach Center

COLLEGE OF ENGINEERING KOLHAPUR
An Autonomous Institute
"A"Grade by NAAC with CGPA 3.12

ISRO–IIRS Distance Outreach Centre at Dept of Civil Engineering K.I.T's College of Engineering

(Coordinator – Prof. S. S. Varur-Department of Civil Engg.)

INDIAN INSTITUTE OF REMOTE SENSING
Indian Space Research Organisation

- K.I.T'S COLLEGE of Engineering is the First Engineering College in Kolhapur District to tie up with the Central Government ISRO Institute in the Year June 2016
- Throughout the year 12 to 15 workshops are conducted by eminent scientist of ISRO-IIRS through Outreach at our institute in online mode.
- K.I.Ts College has been conducting the outreach workshops every year with participants ranging from students & faculties of all disciplines, research scholars, and persons from industry as well.


INAUGRATION OF KIT's Centre of ISRO-IIRS outreach on Nov 2016-Chief GUEST- CITY ENGNEER SHRI. NETRADEEP SARNOBAT.



OFFLINE mode Session Pre- Covid 19 at KIT's outreach Centre - "Geoweb portal and Services" July 2016.


OFFLINE mode Session Pre- Covid 19 at KIT's outreach Centre - "RS,GIS & Carbon forestry -March 2017

- Online mode of workshop by ISRO-IIRS started in March 2019 till date on youtube channel & their own e-portal E-class
- Every year around 150 to 200 participants attend and avail of the workshops free of cost and are awarded certificates based on an objective examination at the end of the workshops.
- Every Year User meet is conducted at ISRO-IIRS Dehradun where 2 -4 participants are sponsored to attend the meet for Capacity Building.

INDIAN INSTITUTE OF REMOTE SENSING
Indian Space Research Organisation
Department of Space, Govt. of India

E-CLASS
ELECTRONIC COLLABORATIVE LEARNING AND KNOWLEDGE SHARING SYSTEM

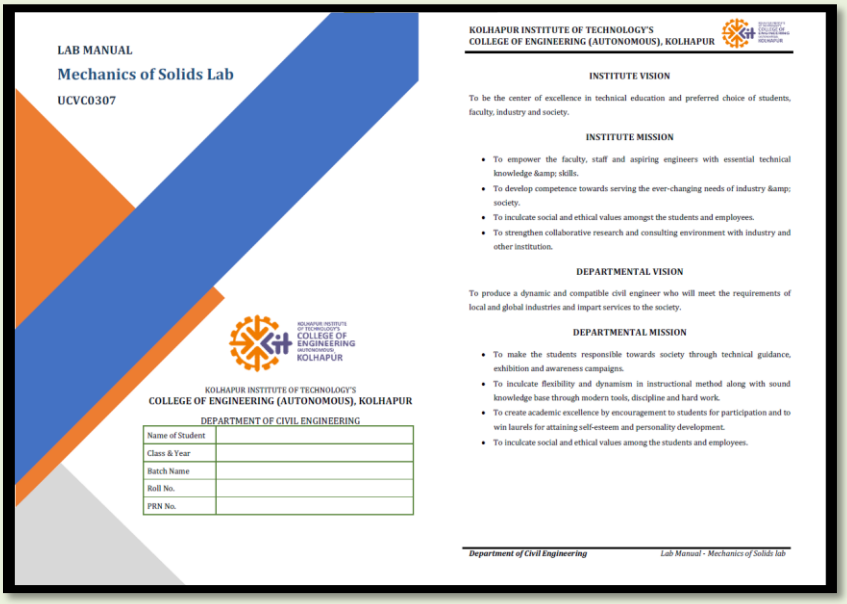
Indian Geotechnical Society (IGS) Student Chapter

The Department of Civil Engineering of Kolhapur Institute of Technology's College of Engineering, Kolhapur has inaugurated an Indian Geotechnical Society (IGS) Student Chapter on 15th September 2022. The scope of Geotechnical Engineering expanded significantly in the last 30 years; whereas the syllabus is restricted to traditional practices and as a result, many students are not exposed to the wide coverage of current trends and exciting professional and research opportunities in the geotechnical engineering field. There is a need to motivate students to gain exposure to careers and opportunities in this area and also develop leadership skills among students which will help them in their career.

Looking towards this broad perspective, we have opened an Indian Geotechnical Society (IGS) student chapter in our Civil Engineering department in the academic year 2022-23. A handful of student members rejoined as a member and different activities were conducted under this chapter. Many activities are also planned for upcoming semesters.

Lab Manuals are developed by faculty.

1. Engineering Mechanics Lab
2. Engineering Hydraulics Lab
3. Professional Practices
4. Mechanics of Solids Lab
5. Concrete Technology Lab



LAB MANUAL

Mechanics of Solids Lab

UCVC0307

KOLHAPUR INSTITUTE OF TECHNOLOGY'S
COLLEGE OF ENGINEERING (AUTONOMOUS), KOLHAPUR
DEPARTMENT OF CIVIL ENGINEERING

Name of Student	
Class & Year	
Batch Name	
Roll No.	
PRN No.	

KOLHAPUR INSTITUTE OF TECHNOLOGY'S
COLLEGE OF ENGINEERING (AUTONOMOUS), KOLHAPUR

INSTITUTE VISION

To be the center of excellence in technical education and preferred choice of students, faculty, industry and society.

INSTITUTE MISSION

- To empower the faculty, staff and aspiring engineers with essential technical knowledge & skills.
- To develop competence towards serving the ever-changing needs of industry & society.
- To inculcate social and ethical values amongst the students and employees.
- To strengthen collaborative research and consulting environment with industry and other institution.

DEPARTMENTAL VISION

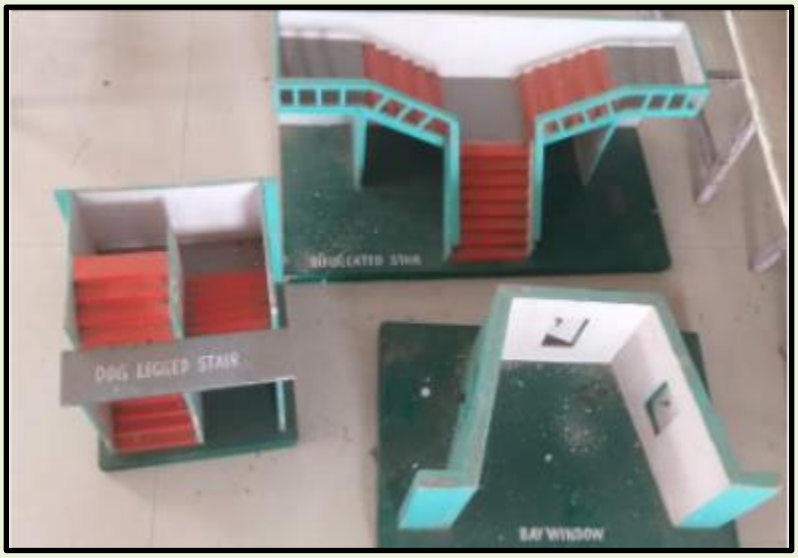
To produce a dynamic and compatible civil engineer who will meet the requirements of local and global industries and impart services to the society.

DEPARTMENTAL MISSION

- To make the students responsible towards society through technical guidance, exhibition and awareness campaigns.
- To inculcate flexibility and dynamism in instructional method along with sound knowledge base through modern tools, discipline and hard work.
- To create academic excellence by encouragement to students for participation and to win laurels for attaining self-esteem and personality development.
- To inculcate social and ethical values among the students and employees.

Department of Civil Engineering *Lab Manual - Mechanics of Solids lab*

Physical Models and Charts are available and used for Demonstration



B10. Education Software available from Bentley, Autodesk Products and Quantum GIS, Etabs which have been used by faculties for research work and for developing software models in their related domains.

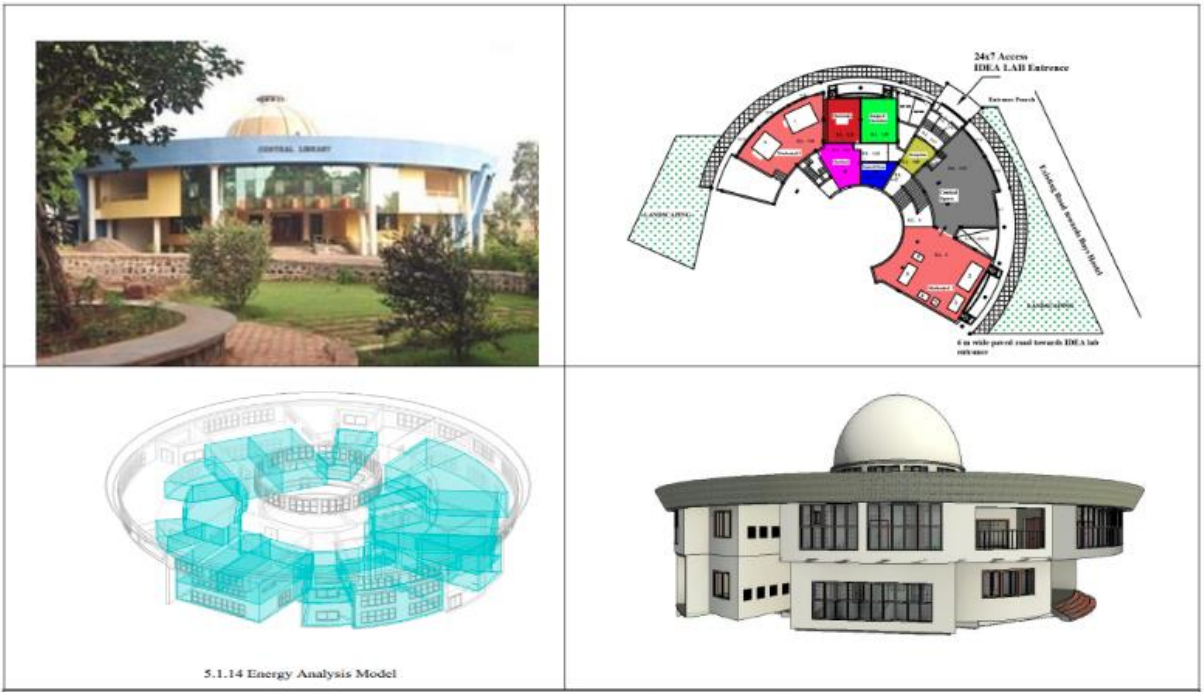
Currently, Software used to create simulation models in domain of

1. Energy Analysis
2. Structural Analysis
3. Water Distribution Network.

1.Energy Analysis

PROJECT TITLE: FEASIBILITY ANALYSIS OF EXISTING INSTITUTIONAL BUILDING FOR GREEN BUILDING CERTIFICATION

Software Used: Autodesk Revit & CAD



Project Students: 1.Sidhant Patil 2. Atharv Jagdale 3.Tejas Oswal 4. Atharv Kulkarni 5. Yashaswini Patil (Year 2021-22)

Project Guide: Dr. Rohan Nalawade, Associate Professor, Department of Civil Engineering

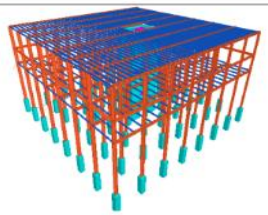
2. Structural Analysis

PROJECT TITLE: STRUCTURAL DESIGN OF COOLING TOWER USING PULTRUDED FIBER REINFORCED POLYMER SECTIONS AND STEEL SECTION - A COMPARATIVE STUDY USING STAAD.PRO

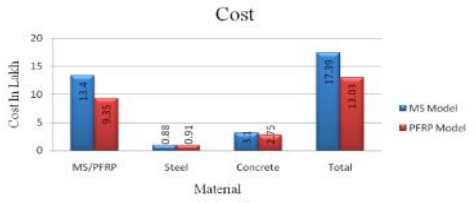
Software Used: Autodesk Staad.Pro

PFRP Cooling Tower

PFRP Sections



Staad.Pro Model



Results

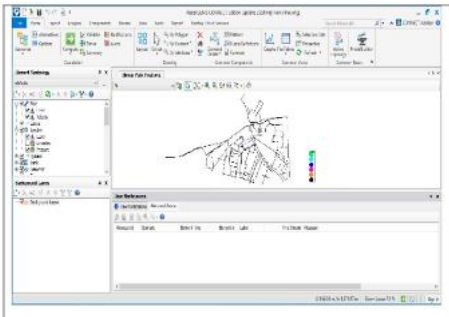
Project Students: 1.Sandeep Chaure 2.Mayuri Gaikwad 3.Shailesh Kagde 4. Dipti Patil 5.Pratik Shirguppe (Year 2021-22)

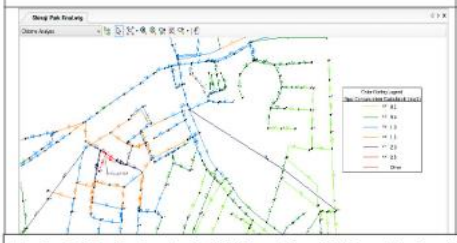
Project Guide: Mr. Abhijit Patil, Assistant Professor, Department of Civil Engineering

3.Water Distribution Network

PROJECT TITLE: TRACKING OF WATER QUALITY ANALYSIS THROUGH WATER DISTRIBUTION NETWORK

Software Used: Bentley Watergems





Chlorine conc. v/s time

Project Students: 1. Ballal Shrutika 2. Desai Rohan 3. Gurav Akanksha 4. Ajgaonkar Sahil (Year 2019-20)

Project Guide: Dr. Rohan Nalawade, Associate Professor, Department of Civil Engineering

Dr Karjinni have developed Bump Integrator have developed a Wheel bump Integrator

Bump Integrator also known as rough meter or Automatic Road Unevenness Recorder gives quantitative integrated evaluation of surface irregularities on a digital counter I LCD screen. It comprises of a single wheeled trailer, with a pneumatic tyre mounted on a chassis, on which an integrating device is fitted. The machine has a panel board fitted with two I four sets of digital counters for accounting the unevenness index value. The operating speed of the machine is 32±0.5 km/hr. The machine is towed by a vehicle, usually a jeep.