



**NARASARAOPETA**  
**ENGINEERING COLLEGE**

(AUTONOMOUS)

# **TECHNICAL MAGAZINE** **STAPATHI**



**JANUARY TO JUNE 2019**

*Department of*

**CIVIL ENGINEERING**

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# Department of Civil Engineering

Dreamt it We Built it!

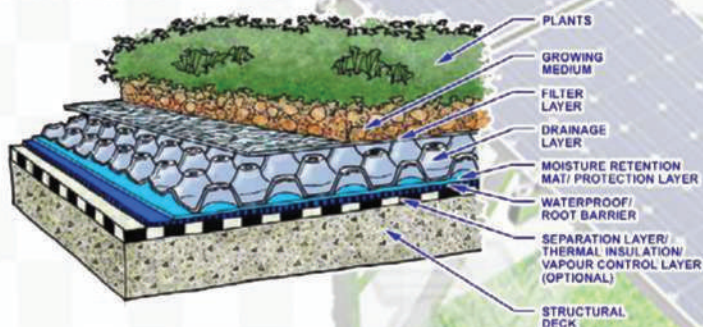
## Vision

- To achieve excellence with high technical competencies empowered with research based challenges in the field of civil engineering to promote the knowledge and skills of students to effectively and efficiently participate in outcome based sustainable development.

## Mission

- To shape infrastructure development for the purpose of promoting innovative logical thinking among students so as to provide civil engineering solutions to 21st century needs of problems and challenges in the society.
- To impart academic knowledge and skills so that the students could assess, state and solve general and complex civil engineering problems.
- To provide a hub of research and consultancy services to the needs of social development in general and regional development in particular.

## New Trends in Technology: Green Roof Systems:



The Environmental Protection Agency defines a green roof as a "vegetative layer grown on a rooftop." Today, green roof systems have become popular all over the world, not only for their beauty, but also for the benefits they provide toward environmental sustainability. Germany is currently leading the world in green roof technologies, and they have implemented green roofing systems on approximately 10% of German homes since the technology emerged in the early 1970s. Civil engineers are responsible for ensuring that the green roof's supportive infrastructure—for instance, a comprehensive watering system—is engineered to consistently deliver an appropriate amount of resources, and the roof itself must be designed to effectively provide working improvements to environmental sustainability. However, civil engineers still face some obstacles when planning the installation and maintenance of green roof systems, like high costs and harsh climates, but innovations in modern engineering techniques for green roofing systems have allowed the industry to consistently offer the following environmental benefits to urban communities:

**Enhanced Urban Biodiversity:** Green roofs accommodate new flora, which may act as new habitats for different species of plants and animals.  
**Cooling of Buildings:** The vegetation on the roof acts as thermal insulation, storing excess heat and decreasing peak temperatures within the building. This means less energy must be consumed to heat the building, resulting in decreased energy costs and lower pollutant emissions.

**Reduced Runoff Quantity:** On average, green roofs retain 40-60% of total rainfall. Storing this rainwater as it falls has been shown to result in runoff reduction of 34% between September and February, and 67% between March and August. By reducing runoff, civil engineers that design green roof systems can limit strain on sewage systems and mitigate the costs of roof damage.

**Pollution Control:** Green roofs are composed of plants that absorb nitrogen, lead, zinc, and airborne pollutants like carbon dioxide. This absorption also reduces the negative effects of acid rain by raising the pH values of acid rainwater before it becomes runoff water.

## Faculty Focus

Dr. G.Babu Rao published a paper entitled "Defluoridation of water with Environmental waste materials" in International Journal of Civil Engineering and Technology, v. 10, issue 01, p.2446-2452. (Scopus Index Journal).

D.Nagaraju has published a research paper entitled, "preparation of base map for NEC campus & geotagging of electrical poles by using total station & GPS", in International Research Journal of Engineering and Technology (IRJET) Volume 6, Issue 4, April 2019 S.NO:250

K.N.Lakshmaiah has published a paper entitled "An experimental study on partial replacement of perlite and GGBS with cement in ternary blended concrete" in IJARIT, vol. 5, issue 2, March 2019.

K.N.Lakshmaiah has published a paper entitled "An experimental study on mechanical and durability properties of blended concrete with M30 grade" in IJIRSET, Vol.8, Issue 6, June 2019.

V.Ramanjaneyulu published a paper entitled "A Pilot Strength Studies on Granite Powder and Silica Fume Based Concrete" in International Journal of Innovative Technology and Exploring Engineering, Volume 8, Issue 7, May 2019, ISSN: 2278-3075. (Scopus Index Journal).

Babu Gudipudi, M. Srinivasa Rao, K. Dinesh Kumar has published a paper entitled "Application of Water Quality Index (WQI) for Assessment of Groundwater Quality in Narasaraopet Mandal of Guntur District, Andhra Pradesh, India" in International Journal Of Engineering Research & Technology, v. 8, issue 6, p. 880-883, 2019.

K. V. Pratap has published entitled "Comparative response spectrum and time history analysis of G+ 17 RC Frame on Zone III in India" in IJSR, v.8, issue 6, June 2019.

M. Srinivasa Rao has published a paper entitled "Study on mechanical and durability properties of ternary bended hybrid fibre polymer concrete with M30 grade" in IJSR, v.8, issue 6, June 2019.

V. Ramanjaneyulu published a paper entitled "Influence of Br-Mk blend on Micro structure, workability an mechanical properties of concrete" in International Journal of Innovative Technology and Exploring Engineering, Volume 8, Issue 8, June 2019, ISSN: 2278-3075. (Scopus Index Journal).

## Conferences/ Seminars/ Workshops attended:

Dr. G. Babu Rao, M. Srinivasa Rao, K, V. Pratap and D. Naga Raju has actively participated in 3day workshop on Industry 4.0 organised by the Department of Mechanical Engineering from 23rd to 25th January, 2019.

Dr. G. Babu Rao has attended a national workshop on "Geospatial Technology for Development of Andhra Pradesh" organised by Department of Geology, Acharya Nagarjuna University in association with A.P. Space Applications Centre on 20th February, 2019.

K. Dinesh Kumar, V. Ramanjaneyulu and V. Lakshmi, has actively participated in a one Day Workshop on "Moodle Learning Management System" held at the Narasaraopeta Engineering College, Guntur Narasaraopet on 15th March, 2019, organized by the Teaching Learning Centre (ICT) at IIT Bombay, funded by the Pandit Madan Mohn Malaviya National Mission on Teachers and Teaching (PMMMNMIT), MHRD, Govt. of India.

Dr. G. Babu Rao has participated in a Two Day National Seminar on "Geospatial Technology for Environmental Sustainability at Indian Scenario" organized by Department of Civil Engineering, Kallam Harinadhareddy Institute of Technology on 12th & 13th March, 2019



V.Ramanjaneyulu has participated in an International Conference on "Smart Materials and Techniques for Sustainable Development (SMTS-2019)" organized by Department of Civil Engineering held at Dr.N.G.P. Institute of Technology, Coimbatore on April 4&5, 2019.

Dr. T. G. Vasista, Dr. G. Babu Rao, T. VedaBharathi, P. Ganesh and R. Deepla Naik has actively participated in a one Day Workshop on "Python" held at the Narasaraopeta Engineering College, Guntur Narasaraopet on 22 June, 2019, organized by the Teaching Learning Centre (ICT) at IIT Bombay in association with Narasaraopeta Engineering College.

Dr. G. Babu Rao became a Member in i-Explore International Research Journal Consortium (No. 14344).

Dr. G. Babu Rao became a Reviewer member in Advances in Science, Technology and Engineering Systems Journal (ASTESJ)

Dr. G. Babu Rao became a Life Member in Indian Society of Remote Sensing (No. L-5247).

Dr. G.Babu Rao became a Fellow member in the Society of Innovative Educationalist & Scientific Research Professional (No. LM17181902).

Dr. G. Babu Rao became a Member in International Association of Engineers (No.231468)

Dr. G. Babu Rao became an Editorial Board Member in Editorial Board Member in Journal of Civil, Construction and Environmental Engineering.

Dr. G. Babu Rao became an Editorial Board Member in International Journal of Civil Engineering and Technology (IJCIET) and Journal of Civil Engineering and Technology (JCET) journals.

Dr. G. Babu Rao became a Reviewer in Common Ground Research Networks, Champaign, USA.

K.V. Pratap became a Member of IRDP group of Journals {IRDP/M/044/2019}.

K.V. Pratap became an Annual member of DKIRF from 30/06/2019 to 29/06/2020.

K.V. Pratap has participated in 2nd International Conference on Recent Trends in Arts, Science, Engineering & Technology (ICRTASET-2019), held on 30th June 2019, at Dhanalakshmi Srinivasan Hotel, Perambalur, Tamilnadu.

K.V. Pratap became an Editorial Board Member for DKIRF Journals. Faculty Achievements/ Awards:

Dr. G. Babu Rao has received prestigious "Best Young Scientist Award" from ITSR Foundation, 2019, on 31st March, 2019 in Jaipur, Rajasthan, India.

K.V. Pratap received "Best Young Faculty Award" from the DK International Research Foundation faculty awards 2019 on 30-06-2019, at Dhanalakshmi Srinivasan Hotel, Perambalur, Tamilnadu.

**Student Focus**

A.Manoj Sai Kumar, A.Gopi Krishna, B.Siva Krishna,K.Venakata Pavan Kalyan, K.Eswar Reddy, M.Siva Reddy, N.Srinivasa Rao, A. Lakshmi Rishitha and Sk.Mastan Vali of Ist B. Tech participated on "Fundamentals of Python and Implementation of Numerical Methods" organised by NEC in association with Computer Society of India on 8th and 9th February, 2019.

K. Bala Jyothi, O.P. Pratyusha and Sk.Asif of IV B.Tech has attended a national workshop on "Geospatial Technology for Development of Andhra Pradesh" organised by Department of Geology, Acharya Nagarjuna University in association with A.P. Space Applications Centre on 20th February, 2019.

U.Arun Kumar, G.Neelima, D.Apuroopa and P.Vamsee Krishna of IV B.Tech as participated in Two day National Level workshop organised by Department of Civil Engineering on ETABS held on 15th and 16th February, 2019.



Gunna Ramya (14471A0118) of IV B. Tech Civil has received meritorious Prathibha Award from Government of Andhra Pradesh.

A one week training programme for B. Tech II and III year students was organized by the Department of Civil Engineering from 21st to 26th January on AUTOCAD in association with the Andhra Pradesh State Skill Development Corporation at NEC Campus.

**Important Activities held in the Department**



Civil Engineering Department has organized a one day workshop on "Importance of Groundwater in the present society" on 8.1.2019 at Civil Engineering Department for III and IV B. Tech students.

All the faculty members from the Department as participated a short term faculty Development programme on "Sustainable Environmental Management" in association with NITTTT-Chandigarh from 28th January to 1st February 2019. Dr.G.Babu Rao and S. Kanakambara Rao acted as local coordinators for the programme.



Department has organized GATE training classes for II B. Tech students by inviting Mr. Adari Sandeep M. Tech- Structural Engineering, GATE Trainer on 18-3-2019 and 19-3-2019.

Dr. T. G. Vasista, Dr. G. Babu Rao, M. Srinivasa Rao, K. N. Lakshmaiah, K. Dinesh Kumar, V. Ramanjaneyulu, V. Lakshmi, D. Naga Raju, R. Deepla Naik, T. Veda Bharathi, K. N. Sravya, K. Pratyusha, K.V. Pratap and K.Venkatesh actively participated in short term course on Outcome based Curriculum organized by NITTTT-Chandigarh in association with NIT, Narasaraopet from 24-5-19 to 29-5-19.



**ఎన్ఈసీ అధ్యాపకుడికి బెస్ట్ యంగ్ సైంటిస్ట్ అవార్డు**

నవనాథుడు రూరల్, ఏప్రిల్ 4 : ఎన్ఈసీలో పనిచేస్తున్న డాక్టర్ గుడిపాటి బాబారావుకు జరిగిన ట్రూత్ అండ్ డిజిటిల్ అండ్ సైంటిఫిక్ రీసెర్చ్ ఫౌండేషన్ వారు బెస్ట్ యంగ్ సైంటిస్ట్ అవార్డును అందజేశారు. ప్రస్తుతం ఎన్ఈసీలో పనిచేస్తున్న గురువారు తెలిపారు. రాష్ట్రంలోని కైఫూర్లో మార్చి 31న ఫౌండేషన్ ఈ అవార్డును అందజేసినట్లు వివరించారు. బాబారావును ఈ కార్యక్రమం ముగిసిన తర్వాత కేరళకు రావడం, కైఫూర్లో మొదటి సారి, కార్యక్రమం ముగిసిన తర్వాత, సివిల్ విభాగం వారి కార్యకలాపం, సిద్ధుని తదితరాలు ఆసనం చేశారు.

ఆంధ్రజ్యోతి Fri, 05 April 2019  
<https://epaper.andhrasrjyothy.com/c/38247949>

Dr. G. Babu Rao has received the prestigious International Award "Academic Non Circuit Faculty" from South Indian ASDF Award (SIAA) 2019, on 6th April, 2019 at Republic of Hyderabad, Telagana, India.

Doredla Nagaraju had completed a MBA Degree with specialization on investment from ICFAI University, Sikkim on 03/01/2019.





### Recent Technology:

**Building Information Modeling (BIM) Software:** It is a software or process that begins with the creation of an intelligent 3D model and enables document management, coordination and simulation during the entire lifecycle of a project (plan, design, build, operation and maintenance). It is used to design and document building and infrastructure designs. Every detail of a building is modeled in BIM. The model can be used for analysis to explore design options and to create visualizations that help stakeholders understand what the building will look like before it's built. The model is then used to generate the design documentation for construction. According to the United Nations, by 2050 the world's population will be 10 billion. The global architecture, engineering and construction (AEC) industry is responsible for delivering the social and economic spaces for the global population, and for helping maintain and restore the buildings and infrastructure already in use. The industry must look to smarter, more efficient ways to design and build not just as a means to keep up with global demand but to help create spaces that are smarter and more resilient too. BIM not only allows design and construction teams to work more efficiently, but it allows them to capture the data they create during the process to benefit operations and maintenance activities. BIM data can also inform planning and resourcing on the project, city or country level. This is why BIM mandates are increasing across the globe.

### Academic Toppers

The following students stood in 1st, 2nd and 3rd positions in the end semester exams held in April-2019 in 1st, 2nd, 3rd and 4th years respectively.



**I.HASHMITHA**  
18471A0115  
RANK - 1  
SGPA: 9.13



**P.SAISANDEEP**  
18471A0130  
RANK: 2  
SGPA: 8.79



**A.G.KRISHNA**  
18471A0103  
RANK: 2  
SGPA: 8.79



**A.M.REDDY**  
18471A0101  
RANK: 3  
SGPA: 8.58



**P.S.V.SIVA**  
17471A0162  
RANK:1  
SGPA: 8.83



**A.DEENA**  
18475A0117  
RANK:2  
SGPA: 8.61



**B.MAHOMMAD**  
18475A0119  
RAFI RANK: 3  
SGPA: 8.57



**SK.M.LALU**  
16471A0123  
RANK: 1  
SGPA: 8.91



**K.NAGARAJU**  
17475A0126  
RANK: 1  
SGPA: 8.91



**D.K.K.REDDY**  
16471A0111  
RANK: 2  
SGPA: 8.77



**K.S.N.M.RAO**  
7475A0129  
RANK: 3  
SGPA: 8.64



**J.JAYA VANI**  
15471A0111  
RANK: 1  
84.33%



**K.T.JANI**  
15471A0112  
RANK : 2  
83.33%



**N.ASHOK**  
15471A0149  
RANK : 2  
83.33%



**U.ARUN KUMAR**  
15471A0184  
RANK : 3  
82.88%

### Alumni Voice



I feel fortunate to be a student of Narasaraopeta Engineering College as it helped me to both on personal and professional front. It inculcated a lot of intra and interpersonal skills which helped me in all round development. Teaching by the senior faculty and the field exposure in my college life has helped me a lot in securing a good job. Personal care towards me by the faculty members has helped me in qualifying the competitive exams at national level. Thank the management of the college for providing necessary materials and books in the library to face the competitive world.

— M. RAVI TEJA, Batch (2010-2013), Junior Engineer, General Reserve Engineering Force (Border Roads Organization), Ministry of Defence.

### Student's Voice



I acknowledge that my knowledge has been enriched due to my association with our department. Knowledge transformation programs (guest lecture, workshops) conducted to the students is really helped to face global competition. The encouragement by the college management made me to qualify for campus interviews.

-----M.Sahithi,  
Regd. No. 15471A0117, IV B. Tech