

# APPLIED MECHANICS MAGAZINE ABHIYANTRI

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## Major Events

SAHYOG'23- Industry-Academia meet

## Achievements

National Champions–  
INS DAG, Build with Speed  
Gold medals

## Faculty achievements

2      Granted      Patents,  
Publications      in      reputed  
journals

## Internal Revenue Generation

IRG      from      testing      and  
consultancy services.

# L. D. COLLEGE OF ENGINEERING, AHMEDABAD

## APPLIED MECHANICS DEPARTMENT

### VISION

To mould the students into professionals abreast with latest skills, Innovative Research Orientation to enhance the Knowledge of Faculty Members and Academic Infrastructure to Excellence, and to serve the Society with Novel Technology.

### MISSION

1. To combine quality education with career focused learning and the application of knowledge.
2. To provide ambience of research and innovation.
3. To provide the best resources along with expertise of faculty.
4. To inculcate professional ethics and instill the sense of responsibility towards the society.
5. To create opportunities for industry-academia collaboration in order to explore the new avenues in the field of civil engineering.

## Message from Head of Department



It gives us immense pleasure to present the second issue of our in-house departmental magazine, ***Abhiyantriki*** – a publication by the Department of Applied Mechanics. The department publishes the magazine to keep its stakeholders up to date on all relevant information. The department believes that through this magazine, each student who enters the Civil Engineering Department of the L. D. College of Engineering can use this magazine to get acquainted with the department, faculty members, the wide range of activities we conduct, and the accomplishments of their peers. This annual edition also provides a valuable opportunity to reconnect with our distinguished alumni and industry partners, further strengthening industry-academia collaboration.

Students are encouraged to participate in a variety of technical and cultural events, earning a place in this annual edition. We hope this platform motivates both students and faculty members to strive for excellence and showcase their talents.

We warmly invite all faculty members and students to contribute to *Abhiyantriki* through their meaningful achievements and authentic activities – whether professional, academic, curricular, or extracurricular. We also welcome your suggestions and recommendations, so we may continue to improve and deliver even more enriching editions in the years ahead.

## ABOUT THE DEPARTMENT

The Department of Applied Mechanics is a vital offshoot of Civil Engineering Program at L. D. College of Engineering. Applied Mechanics department has a distinguished and technically well-versed faculty imbued with a sense of commitment and sincerity.

The Department of Applied Mechanics is a vital offshoot of Civil Engineering Program at L. D. College of Engineering. Applied Mechanics department has a distinguished and technically well-versed faculty imbued with a sense of commitment and sincerity. As the HOD of the department it is a matter of immense pride to bring to you the multifaceted activities and achievements of the department. We are a department of 17 faculty members, 3 of these holding Doctorates, 7 of these are pursuing Doctorate of Philosophy and the rest have a Master's Degree.

The department boasts of 2 Post graduate courses in Structural Engineering and Geo-tech, and UG program with electives in Structural Analysis and Geo-tech.

During this term, the department successfully organized "**SAHYOG 2023**: An Industry-Academia Meet. This time SAHYOG was held on the Engineers' day. Prominent industry leaders from top government and private institutions graced the occasion and celebrated the theme ""ready to make difference and empower Civil Engineers to create positive change".

Applied mechanics students brought honors to the department on 18.8.2023 by being declared as **National Winners in Students category for "Urban Category" selection in the "Ultra-Tech India Next Edition 5, Build with Speed Competition**. Aditya Pal was conferred with **Gold Medal by GICEA** for his excellent academic performance in the subject of ROS.

## MEET YOUR FACULTY

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Research Interest: Structures



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Research Interest: Design of concrete & Steel structures, Concrete technology

Name: Prof. U. K. Patel

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Name: Prof. (Dr.) M. V. Shah

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Research Interest: Design of Reinforced Concrete and Steel Structures



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Research Interest: Concrete technology, Conditional Assessment and repairs & strengthening of Concrete structures, Design of reinforced concrete structures



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Research Interest: Structural Analysis, Design of R.C.C. Structures, Design of Steel structures.





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Research Interest: Concrete Technology, Design of R.C. & Steel

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Research Interest: Ocean engineering, Earthquake Engineering, Bridge Engineering, Special Concrete, Structural Health Assessment

## Major Events & Activities

### Technical workshop/ Events

#### # Expert Lectures

- A technical workshop on "Indian Standard writing competition" was organized under the aegis of BIS Standards club on 21st July'23 in Room No 626. A session by Shri Ajay Chandel Deputy Director, BIS, Ahmedabad) for taken on "Compilation of the BIS standard. The session was arranged specially for all the newly admitted students of B.E. Civil Engineering.

The session was followed by writing competition where in students were divided into separate groups and were asked to draft "Standard" for different items allocated to them. The entries were then evaluated and the Winners were announced and felicitated. All the first year students participated whole heartedly in the event.



The poster for the "Standard Writing Competition" under the aegis of BIS - Standards Club, held on 21st July, 2023 (Friday) at 10:30 IST. It features logos of the Applied Mechanics Department, L.D. College of Engineering, Ahmedabad, and the BIS Standards Club. The event was organized by the Applied Mechanics Department. The poster lists the following roles and names:

Patron	Convener	Expert
Dr. Rajul K Gajjar Principal, LDCE, Ahmedabad Member Secretary, ACPC Academic Advisor, GTU	Major Dr. C S Sanghvi Professor & Head Applied Mechanics Department LDCE, Ahmedabad	Shri Ajay Chandel Deputy Director Bureau of Indian Standards Ahmedabad
Coordinators		
Prof. A. J. Shah Assistant Professor Applied Mechanics Department LDCE, Ahmedabad	Prof. A. G. Hansora Assistant Professor Applied Mechanics Department LDCE, Ahmedabad	Prof. K. A. Parmar Assistant Professor Applied Mechanics Department LDCE, Ahmedabad

Venue: Visvesvaraya Hall, Room No. 626, Applied Mechanics Department




Two photographs showing the event. The top photo shows a large group of students and faculty members posing for a group photo. The bottom photo shows students seated in a hall, participating in the competition.

- An interactive and brainstorming session entitled “Meet the professionals” was organized by department on 14.7.23. Industry stalwarts like Mr.Mehul Shah (Structural Consultant, AMI Engineers, A’bad),Mr.Parth Thaker (Head of Design, Fuji Silver Tech Concrete Pvt. Ltd.), Mr.Rakesh Shah (Managing Partner, S3M Design Consultants LLP), Mr.Utsav Shah (Director, DUCON Consultants), Mr.Vatsal Patel (Technical Consultant, GUJRERA), Mr.Gaurang Shan and Mrs. Rupal Shah (Structural Consultant, GMS Design & Engineering Services LLP), were invited to deliberate on the title and content of the Minor degree course planned to be proposed by department for the academic year 2023-24.
- An interactive and brainstorming session entitled “Meet the professionals” was organized by department on 19.8.23. The purpose of this Industry academia talk was to motivate and enlighten the PG students of different areas that can be explored for dissertation work. The Structural engineering experts/ consultants having vast experience from various reputed organizations were invited for the talk. The panel included Mr.Mehul Shah, Mr.Hardik Bhatt, Mr. Tarang Sheth, Mrs.Rupal Shah and Mr.Jigar Rana.



## # ATAL FDP

- One-week ATAL FDP entitled “Ocean and Coastal Engineering” was conducted from 12th to 17th February 2024. The FDP was sponsored by AICTE Training and Learning Academy (ATAL) and co-sponsored by Polyene General Industries Chennai. The expert speakers from premier Institutes of India and Thailand have delivered their lectures on the emerging field of Ocean and Coastal Engineering. About 60 participants from different government organizations participated in this offline training. This program was focused in improving the capacity building process in the emerging field of Ocean and Coastal Engineering.

The training was successfully planned and executed by Prof. Yogesh J. Chauhan under the guideship of Major Dr. C. S. Sanghvi.



## # Technical Day

### ❖ World Water Day - 2024

L. D. College of Engineering and The Institution of Engineers (India), Gujarat State Centre, Indian Plumbing Association (IPA), Ahmedabad jointly organized the celebration of “World Water Day -2024” with theme “Water for Peace” on 22.3.2024. Shri Vivek Kapadia (Ex-Secretary, GoG) was the Chief Guest.



The speakers for the day were Shri Minesh Shah (Chairman, IPA) and Shri Tejas Joshi (Managing Director, Space Elements). The host of the event were Er. (Dr)Niraj Shah from IEI, GSC and Principal Sir Dr.Nilay Bhuptani from LDCE. The event was coordinated by Prof. Dr. C. S. Sanghvi (HOD), Prof. Dr. Gopal Tank and Prof. Bansal R. Patel from Applied Mechanics Department. All the participants and dignitaries also took a pledge on that day to save water.

### ❖ Dr. R. C. Sonpal Memorial Lecture Series

A webinar in form of an Expert talk on “**Foundation of Tall Structures**” was organized by department on 12th Sept’23 under the aegis of Dr.R.C.Sonpal Memorial Lecture Series under aegis of IGS Ahmedabad Student Chapter, sponsored by M.K.Soil testing Laboratory Ahmedabad.

The expert talk was delivered by Mr.Jaydeep Wagh – Managing Director GEOCON International Pvt. Ltd. 122 participants had attended the session. Expert had discussed recent design practices of tall structures

Patron	Convener	Moderator	Coordinators
Major Prof. Dr. C.S. Sanghvi Principal LDCE, AHMEDABAD	Dr.G.M. Tank HOD,AMD LDCE, AHMEDABAD	Prof. P.J. Mahesh Assoc. Prof., AMD LDCE, AHMEDABAD	Dr. M.V. Shah Prof. S.R. Sanghvi Asst. Prof., AMD LDCE, AHMEDABAD

followed by civil engineers. And also disseminate information regarding challenges faced while designing and execution of tall structures foundation.

## # STUDENT'S CHAPTER

## Bureau of Indian Standards (BIS)

A technical workshop on “Standard writing competition” was organized under the aegis of BIS Standards club on 11.10.2023 in Room No 626 on the occasion of Manak Mahotsav. A session on BIS activities and Compilation of Standards was delivered by Shri Ajay Chandel (Deputy Director, BIS, Ahmedabad).



## # INDUSTRIAL VISITS

### Visit to Bullet Train site on 25.4.24



### Visit to Precast Manufacturing plant on 16.9.23





**Applied Mechanics Department**  
**LD College of Engineering, Ahmedabad**  
**Quiz Competition & Exposure Visit**  
to  
**Precast Manufacturing Plant,**  
**PSP Projects Limited (Precast Division)**  
**Mankol, Sanand**

Under the aegis of the  
**"Bureau of Indian Standards (BIS) - Standards Club"**

Date & Time: 16<sup>th</sup> September, 2023; Saturday 9.00 a.m Onwards

**Objectives of the Technical Tour**

- Apprise the students of the manufacturing of Precast Concrete Construction.
- Develop an understanding of the process of batching, curing, stacking & transportation of pre-cast elements
- Enable better understanding of Quality control in plants

**Coordinators:**  
Prof. Priti J. Mehta (Associate Professor, Applied Mechanics Dept. LDCE)  
Prof. Ashwin G. Hansora & Prof. Poonam I. Modi  
(Assistant Professor, Applied Mechanics Dept. LDCE)

### Visit to sites of Tall Buildings 21.3.2024



### Visit to GIDM on 20.4.24



## # SAHYOG'23

Industry-Academia collaboration event entitled "SAHYOG" was organized by department on 15<sup>th</sup> Sep'23 that also marks the "Engineer's Day". The event was graced by lustrous alumni who shared their life experiences and also motivated the students to pursue Civil engineering with full dedication and focus on fundamental knowledge.



The main agenda of the event with the theme "ready to make difference and empower Civil Engineers to create positive change" and motive to have an interaction between the alumni and the students and faculty members.

The event was executed in the august presence of alumni: Shri Ashish Sorathia – Director, Saksham Consultants, Shri Prasham Vora – Director, P.Vora Consultants, Shri Shreyansh Doshi – Director, Swetraj Groups, Shri Priyansh Rami – AE, SSNNL, Shri Rajdeep Nayak – TDD, AMC AE, SSNNL, Shri Parth Shah & Shri Arpit Patel – Design Engineer, Systra, Miss.Rima Shah – Technical Engineer, Vishwas Laboratory. The entire program was coordinated by Prof.Mayur G. Vanza.

## Our Students – Our Pride

### # National Champions

Shruti Tripathi, Aditya Pal and Keyur Rajpopat, of pass-out Batch of 2022 were declared National Winners in Students category for “Urban Category” selection in the “Ultra-Tech India Next Edition 5, Build with Speed Competition” declared on 18th Augut’23.

The students were conferred with Trophy, certificate and prize money of 1Lac. on 18th Augut’23. The students were mentored by Prof.Poonam.I.Modi.



### # National level Quiz Competition

Pratiksha Saraswat and Yash Mistry won 2nd Prize at National level Quiz Competition ‘GEOVISLESHANA 2023’ Organized by Indian Geotechnical Society, New Delhi. Winners received cash prize of Rs.7500/- and Certificate of appreciation through the hands of Dr Anil Joseph, Honourable National President of Indian Geotechnical Society at IIT Roorkee. Quiz was mentored by Dr Manish V Shah of Applied Mechanics Department.

### # Gold Medal

Aamirah Shaikh was conferred with Shri Jashubhai B. Shah GICEA Gold Medal for excellence in academic performance in B.E.(CIVIL)(GIRLS).



## # Aced the technical competition - INSDAG

Institute of Steel Development and Growth (INSDAG, Kolkata) organizes prestigious NATIONAL LEVEL DESIGN COMPETITION FOR STUDENTS every year. This year (2023-24) competition demanded every team to design "Steel Intensive Trade Fair Centre".

In the final round of this competition our two teams stood on **first and second runner up and claimed a wining prize of INR 30000/- and 20000/- respectively**. First Runner up Team (2-B) Gohil Aniket & Gohel Harshal (PG Structural Engineering) Second Runner up Team (3-A) Farzan Khambhatta & Umang Prajapati

## Faculty Achievements

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- Prof. Dr. M. V. Shah along with Dr. Atindra D. Shukla and Karan B. Shah (passed out student of Batch 2019) were granted a Patent entitled "Hybrid clay for capturing CO<sub>2</sub> on 19.12.2023 for a tenure of 20 years.
- Prof. C.D. Patel along with Pal Aditya Anilkumar , Surya A. Panchal Monit R. Pal, Venica R. Maclean were granted a Patent entitled "A handy portable bar bending tool for construction sites" on 21<sup>st</sup> May 2024.
- Dr.Manish V Shah received 'Certificate of Appreciation' for mentoring undergraduate students of Civil Engineering for 'GEOVISLESHANA 2023' from the hands of Dr Anil Joseph, Honourable National President of Indian Geotechnical Society at IIT Roorkee on 16<sup>th</sup> Dec 2023.
- Prof. Chintan D. Patel delivered a session on "Mentoring of Civil Engineers: Various upcoming Recruitment Exams in Government of Gujarat" conducted by Gujarat Institute of Civil Engineers and Architects (GICEA), Ahmedabad on 19th August 2023.
- Prof. Yogesh J. Chauhan reviewed research articles for International Journals of Steel Structures, Springer, the official journal of the Korean Society of Steel Construction (KSSC), Web of Science and Scopus Indexed Q2 Journal.
- Prof. Yogesh J. Chauhan Reviewed 3 research articles for International Journals of Steel Structures, Springer, the official journal of the Korean Society of Steel Construction (KSSC), Web of Science and Scopus Indexed Q2 Journal.

## Professional Development

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- Prof. Poonam I. Modi successfully completed 2 weeks of Industrial training from 24.6.24 to 6.7.24 in SCC Infrastructure Pvt. Ltd. Ahmedabad.
- Prof. Yogesh J. Chauhan successfully completed 2 weeks of Industrial training from 24.6.24 to 6.7.24 in NCC Infrastructure Pvt. Ltd. Ahmedabad.

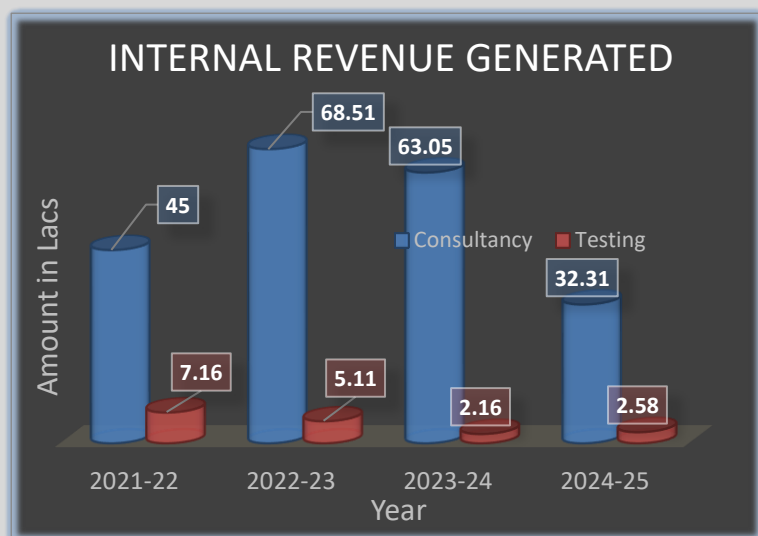
## # Paper Publications

- Prof. Dr. M. V. Shah and Prof. S.R.Singh published research paper entitled “Development of State of Art Test Setup to measure Thermal Conductivity of Soils Infused with Treated and Un-treated Natural Microorganisms” in Journal of Environmental Quality Management (Wiley).
- Prof. Dr. M. V. Shah published research paper entitled “A systematic review on composition, effect and remediation methods of petroleum hydrocarbon contaminated waste drilling mud” in Journal of Advances in Bioresearch (Special Issue-1)
- Prof. Dr. M. V. Shah published research paper entitled “Evaluation of natural foliation effect on deformation characteristic and shear strength parameters of Chamoli (Uttarakhand) rock using a Triaxial system” in Proceedings of the ISRM 15th International Congress on Rock Mechanics and Rock Engineering & 72nd Geomechanics Colloquium – Challenges in Rock Mechanics and Rock Engineering, Schubert, W. & Kluckner, A. (eds), Salzburg, Austria.
- Prof. A. G. Hansora published research paper entitled “Flexibility Matrix and Stiffness Matrix of 3D Curved Beam with Varying Curvature and Varying Cross-Sectional Area using Finite Displacement Transfer Method” in Journal of Computational Applied Mechanics (Scopus and Web of Science Indexed).
- Prof. Poonam I. Modi published a research paper entitled “Development of novel un-fired masonry unit manufactured using silica-rich sandstone mining and cutting waste” in Journal of building Engineering (Elsevier) (Scopus, Science Citation Expanded Indexed).
- Prof. Poonam I. Modi published a research paper entitled “Critical review on substitution of natural ingredients with the dimensional stone cutting waste in making of building products” in ITEGAM-JETIA, Journal of Engineering and Technology for Industrial Applications; ISSN 2447-0228, Scopus indexed.

- Prof. Yogesh J. Chauhan published a research paper entitled “Feasibility Study of Offshore Triceratops Supported Floating Offshore Wind Turbine” in Journal of The Institution of Engineers (India): Series A, Springer; ISSN Electronic 2250-2157, ISSN Print 2250-2149 Scopus indexed (Q2).

## Internal Revenue Generation (IRG)

- The faculty members of the department are constantly involved in carrying out a number of Testing and Consultancy works throughout the year with a large clientele base. The revenue worth Rs 65.21 lacs and Rs.34.89 lacs was accrued from testing and consultancy works in the financial year 2023-24 and 2024-25.



## CHIEF PATRON



CHIEF PATRON  
MAJOR DR. C. S. SANGHVI  
HEAD  
APPLIED MECHANICS DEPT  
LDCE, AHMEDABAD

## CONVENER



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PROF. DR. G. M. TANK  
PROFESSOR  
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National Rank 3rd in Innovation by Ministry of Education, Government of India

