

**Civil**  
Engineering

# Magazine

July-Dec 2024



# Tech and Trendz



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- Departmental events
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# DEPARTMENTAL EVENTS

## A Five-Day Workshop on “Revit Architecture”

Event Type	Training Program On Revit Architecture
Date / Duration	30.09.2024 to 05-10-2024
Resource Person	Mr.S.Prasanna Kumar ,M.D, Engineering CAD Training Centre Mr.K.Jagadesh, Trainer Engineering CAD Training Centre
Name of the Coordinator	Sri B.Narasimha Rao, Sr.Assistant Professor Sri. M.Karthik Kumar, Assistant Professor
Target Audience	B Tech Civil 4 <sup>th</sup> year students
Total no of Participants	66



## Workshop Highlights:

- ❖ **Day 1: Introduction to Revit and Basic Tools**
  - a) Overview of the Revit interface
  - b) Setting up projects and initial layouts
  - c) Understanding key tools and workflows
- ❖ **Day 2: Designing Building Models**
  - a) Walls, doors, and windows creation
  - b) Introduction to families and components
  - c) Working with floor plans, sections, and elevations
  - d) Best practices and tips for professional use





- ❖ **Day 3: Advanced Modelling Techniques**
  - a) Customizing walls, floors, and ceilings
  - b) Working with stairs, railings, and complex structures
  - c) Applying detail views and annotations
- ❖ **Day 4: Visualization and Rendering**
  - a) Applying materials and textures
  - b) Introduction to lighting and rendering techniques
  - c) Generating realistic visualizations of models
- ❖ **Day 5: Project-Based Learning**
  - a) Practical project work





Resource person Explain the about ground levelling with respected to grander



Certificate distribution by HoD and Resource person



# ACHIVEMENTS

## ATHLETICS

S.No	Name Of The Students	Reg No	Name Of The Sports	Venue	Secured Position
1.	S. HANUMA NAIK	22761A0133	100MTS	LBRCE	2nd
2.	S. HANUMA NAIK	22761A0133	LONG JUMP	LBRCE	2nd
3.	S. HANUMA NAIK	22761A0133	RELAY	LBRCE	2nd
4.	R. YENOSH	23761A0128	RELAY	LBRCE	2nd
5.	P. HARISH	21761A0130	RELAY	LBRCE	2nd
6.	G.V.V.DHARMAJI NAIK	24765A0107	RELAY	LBRCE	2nd



## KHO-KHO

S.No	Name Of The Students	Reg No	Name Of The Sports	Venue	Secured Position
1.	S. HANUMA NAIK	22761A0133	KHO-KHO	LBRCE	1st
2.	R. YENOSH	23761A0128	KHO-KHO	LBRCE	1st
3.	CH. CHANDRA MOULI	23765A0103	KHO-KHO	LBRCE	1st
4.	T. SRINIVAS REDDY	21761A0141	KHO-KHO	LBRCE	1st
5.	P. NARENDRA	22761A0131	KHO-KHO	LBRCE	1st
6.	P. HARI KRISHNA	22761A0129	KHO-KHO	LBRCE	1st
7.	P. RAVI TEJA	22765A0119	KHO-KHO	LBRCE	1st
8.	G. LEELADHAR NAIDU	23765A0109	KHO-KHO	LBRCE	1st
9.	SK. MUSTAFA	23761A0131	KHO-KHO	LBRCE	1st
10.	SK. MATHIN	23761A0130	KHO-KHO	LBRCE	1st



## ATHLETICS

### CENTRAL ZONE

S.No	Name Of The Students	Reg No	Name Of The Sports	Venue	Secured Position
1.	S. HANUMA NAIK	22761A0133	KHO-KHO	R.K COLLEGE, KETHANA KONDA	J.N.T.U.K SELECTION



# RESEARCH PUBLICATIONS

## List of International Journals Published By Faculty A.Y: (2024-25)

1. C. Rajamallu, Durga Chaitanya Kumar Jagarapu, M. Karthik Kumar, Arunchaitanya Sambangi, S. SaiCharan, Chiranjeevi Rahul Rollakanti and Shalin Prince, “Investigation of self- compacting concrete utilizing different supplementary pozzolanic materials for cement replacement”, ARPN Journal of Engineering and Applied Sciences, ISSN 1819-6608, Vol 19, Issue 13, July 2024, pp 815- 827. Published in Scopus Index Journal
2. Ramakrishna V, K.B. Chari, K. Pranati, “Impact of COVID-19 Pandemic on the Socio-economic Scenario of a Typical Rural Village of Andhra Pradesh, India”, Strad Research, ISSN 0039-2049, Vol 11, Issue 6, July 2024, pp 358-363. Published in Open Access Journal
3. J. Venkateswara Rao, K. Harish Kumar, N. Satish, “Compressive Strength Prediction of Fly Ash Geopolymer Concrete Using Support Vector and Random Forest Regression”, Journal of Physics, ISSN 12048, Vol 2779, Issue 2024, Aug 2024, pp 001-012. Published in Scopus Index Journal



4. S. T. P. V. T. A. Ajay , Durga Chaitanya Kumar Jagarapu, Chiranjeevi Rahul Rollakanti and B. Rama Krishna, “Investigating the Impact of GGBS and Fly Ash on pet Concrete RC Beams”, ARPAN Journal of Engineering and Applied Sciences, ISSN 1819-6608, Vol 19, Issue 24, December 2024, pp 1436-1446. Published in Scopus Index Journal
5. Japthi Sravani, Dr. R. Lavanya, Dr. Shrikant Sarjerao Bobade, Dr Pandu Kurre, K. Harish Kumar, Venkat Raman R, “Development of 3D concrete printing for Sustainable construction”, Cuest.fisioter, ISSN: 1135-8539, Vol 54, Issue 2, Feb 2025, pp 2802 – 2807. Published in Scopus Index Journal
6. Sridhar P., Anil K., Raju J.N.S.S. and Ramana K.V. “Land Use and Land Cover Classification using Support Vector Machine Technique: A Case Study of Kaddam Watershed”, Disaster Advances, 18 (6), June 2025, pp 1-6. Published in Scopus Index Journal
7. Construction Practices of Non-Engineered Structures in Different Countries”, International Journal of Scientific K. Harish Kumar, Dr. V Ramana Kollipara, T. Kavya Sri, P. Sadhika, K. V. Chaitanya Kumar, “A study on Research in Engineering and Management, ISSN: 2582-3930, Vol 9, Issue 3, March – 2025

# MUMBAI TRANS HARBOUR LINK – ATAL SETU

The **Mumbai Trans Harbour Link**, officially named as **Atal Bihari Vajpayee Sewri–Nhava Sheva Atal Setu** and colloquially known as **Atal Setu**, is a 21.8 km (13.5 mi) 6-lane grade separated expressway<sup>[9]</sup> bridge, which connects Mumbai with Navi Mumbai, its satellite city. It is the longest sea bridge in India, and the world's 12th longest sea bridge.<sup>[10][11]</sup> The bridge begins in Sewri, South Mumbai, crosses Thane Creek north of Elephanta Island, and terminates at Chirle near Nhava Sheva in Uran taluka, Navi Mumbai. The road is linked to the Mumbai–Pune Expressway in the east and to the Coastal Road in the west. The 6-lane highway is 27 meters in width, in addition to two emergency exit lanes,<sup>[12]</sup> two edge strips, parallel crash barriers and noise barriers on both sides.<sup>[13][14][15]</sup> The project costs a total of ₹17,843 crore (US\$2.1 billion).<sup>[6]</sup> The bridge has a capacity to handle 70,000 vehicles per day.<sup>[16]</sup> Construction on the bridge began in April 2018,<sup>[citation needed]</sup> and was inaugurated by Prime Minister Narendra Modi on 12 January 2024.



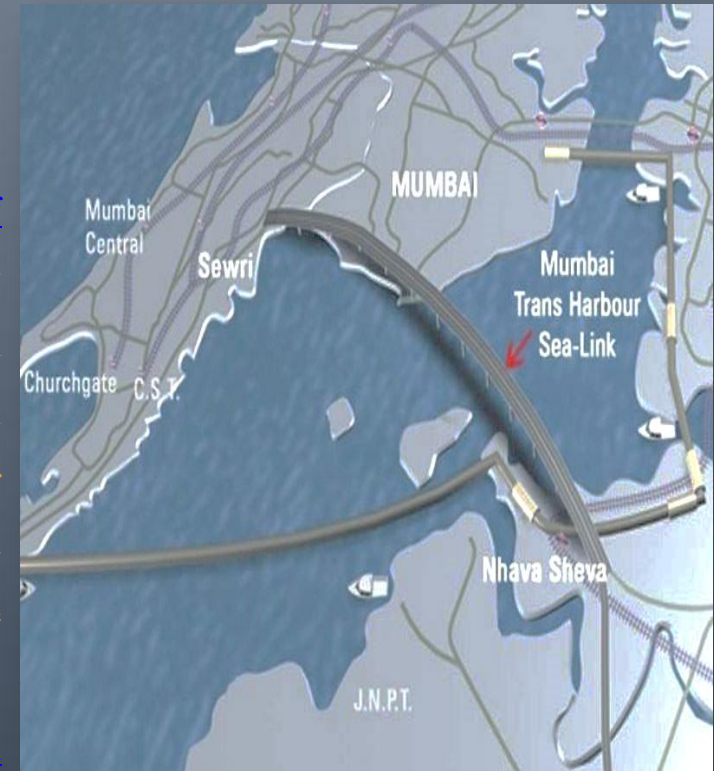


In the 1990s, keeping the future of the [Mumbai Metropolitan Region](#) in mind, the [Mumbai Metropolitan Region Development Authority](#) (MMRDA) began studies on how to decongest the rising traffic and congestion in [Mumbai](#), and accidents and mishaps as their direct consequences. There are currently six bridges connecting Mumbai and [Navi Mumbai](#) across the [Thane Creek](#), but, they are too narrow and outdated to handle future traffic. As a result, all of them are constrained and are carrying traffic beyond their limits, also increasing the commute time between the two cities. So, the MMRDA planned to build a comprehensive link between the two cities so to handle more traffic and make travel more easier, faster, safer and hassle-free. The proposal was sent to the [Government of Maharashtra](#) for consideration in 2012. In 2015, the project was approved by the [Government of India](#) and the [Ministry of Road Transport and Highways](#) (MoRTH). Hence, the [foundation stone](#) for the construction of the project was laid by [Prime Minister Narendra Modi](#) on 24 December 2016. Initially, it was expected to be completed by 2021.<sup>[18]</sup> Then, the MMRDA awarded contracts for the project in November 2017, and construction began in April 2018, which was scheduled to be completed within 4.5 years, by 2022.<sup>[6]</sup> However, the construction was delayed by around 8 months due to the [COVID-19 pandemic](#), and was expected to be completed by August 2023, then again by December 2023. The construction was finally completed in December 2023, and was inaugurated by Prime Minister Narendra Modi on 12 January 2024.



## PLANNING

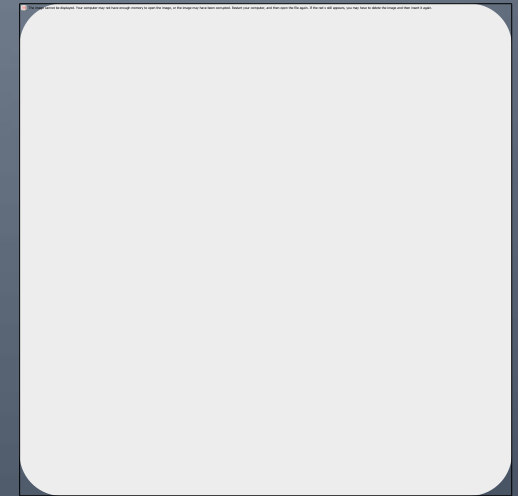
Transportation and traffic planning for [Greater Bombay](#) (now [Mumbai](#)) was commissioned for [Wilbur Smith and Associates](#) (WSA) (now [CDM Smith](#)) in mid-1962. The firm's report, based on extensive studies conducted over 18 months, was handed over to the [Ministry of Road Transport and Highways](#) (MoRTH) on 19 December 1963. Among other projects, the report proposed the construction of a sea link, known as the Uran Bridge, to connect Mumbai with the mainland near the town of [Uran](#). However, WSA was unsure of the link's feasibility. Citing poor traffic expectations in Uran even in 1981, WSA's report advised a more detailed study of this connection and recommended waiting until the Trans-[Thane](#) area would develop further and more community services would be extended to Uran."<sup>[20]</sup> In 1973, the [Vashi Bridge](#) linking [Mankhurd](#) in Mumbai with [Vashi](#) in [Navi Mumbai](#) was opened.



# FAMOUS ENGINEER

## Vishal Garg

**Vishal Garg** is an Indian researcher<sup>[1]</sup> working mainly in building energy efficiency and Cool Roofs.<sup>[2]</sup> Garg is University Chair Professor and Dean Academics at Plaksha University. Previously he was Professor and Head of the Center for IT in Building Science at the International Institute of Information Technology, Hyderabad. He is the recipient of the inaugural Dr. Arthur H. Rosenfeld Urban Cooling Achievement Award.<sup>[3]</sup> He is actively involved in supporting the formulation of national-level policies and standards and implementation of building energy codes in India,<sup>[4][5]</sup> and was made a Fellow of IBPSA in 2019.<sup>[6]</sup>



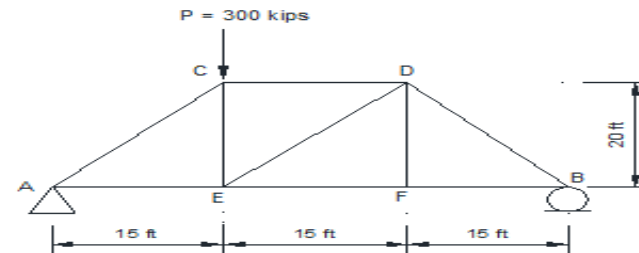


Garg was born in Jodhpur and raised in Jaipur. He attended [M.B.M. Engineering College](#), Jodhpur of the J.N. Vyas University where he received his Bachelor of Engineering in 1995. He pursued his Ph.D. at [IIT Delhi](#), in the [Center for Energy Studies](#), under the guidance of Prof. [N. K. Bansal](#), which he successfully defended in 2000. He joined the International Institute of Information Technology, Hyderabad as Assistant Professor & Founding Head of Center for IT in Building Science in March 2000. He has worked on several large international projects in the area of building energy efficiency.

- Fellow, [International Building Performance Simulation Association](#), 2019.<sup>[9]</sup>
- Dr. Arthur H Rosenfeld Urban Cooling Achievement Award, 2018.<sup>[citation needed]</sup>
- Fellow, [Indian Green Building Council](#), 2016.<sup>[10]</sup>
- Life Fellow, Indian Society of Lighting Engineers, 2013

# TRICK ZONE

1. A truss system is simply supported over a 45 ft span as shown in the figure below.

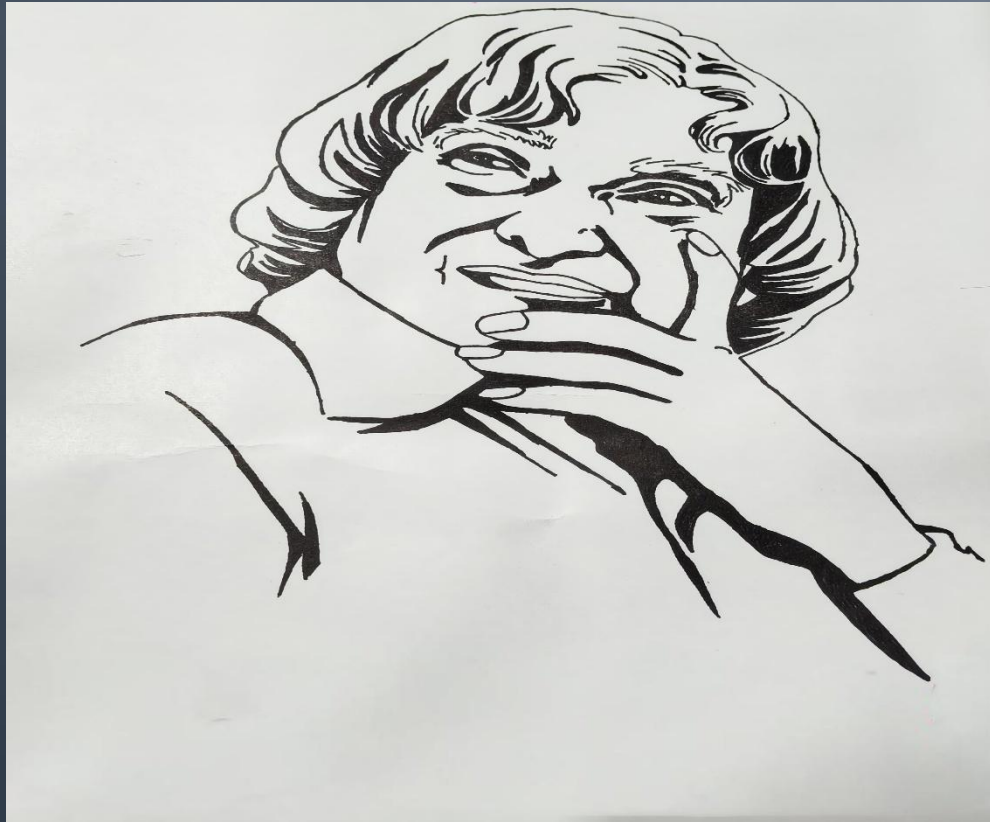


The modulus of elasticity for all members is 30,000 ksi and the cross sectional area of all members is 10 in<sup>2</sup>. Determine the axial force occurred in member BD and solve for the elongation of member BD due to this axial force.

- a) 125 kips (tension); 0.125 in
- b) 125 kips (compression); 0.125 in
- c) 175 kips (tension); 0.175 in
- d) 175 kips (compression); 0.175 in



# ARTS



ART BY  
SK. NAZIYA ,24765A0115