

Research Profile



Dr. Sumant Khanderao Kulkarni

Associate Professor (Civil Engineering)

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Ph.D. (Civil Engg)

SPPU, Pune in 2015

M.E.(Civil Structure), Government College Of Engineering, Aurangabad in 2007

B.E. (Civil Engineering), Jawaharlal Nehru Engineering College, Aurangabad 2005

Experience: 16 years (**Research Experience – 18 Years**)

Linkedin: <https://www.linkedin.com/in/sumant-kulkarni-4863a31a9/>

Research Statement:

I take pride in being precise, rigorous, careful and conscientious in all that I do. My research work on IS:456-2000 (PhD-Civil Engineering), analytical skills, my penchant for being systematic and the ease with which I can do math in my head are extremely useful qualities to have in an engineer, and they are qualities that I think would make me a valuable researcher.

My primary research goals are directed toward understanding the basis for material properties of reinforced cement concrete beams and columns in multi-storeyed buildings. As a Ph.D. Student at Savitribai Phule Pune University with Dr. Mukund R. Shiyekar and Dr. Sandip M. Shiyekar, I have proposed an empirical equation for modulus of elasticity of RCC beams and columns with the application of this powerful tool in multi-storeyed buildings. My future research plans are aimed at determining the effect of confinement on tension stiffening of RCC beams under flexure. My ultimate aim is to determine the effect of compression steel especially in case of beams to understand modulus of elasticity subjected to lateral forces such as earthquake or wind.

Research Interest:

Reinforced Cement Concrete, Steel Structures, Finite Element Analysis

International/ National Journal: 40, Total Publications – 45,

International/National Conferences: 05 Scopus – 3, Springer – 2

Google Scholar Citations: 34 Google Scholar h-index: 4

Scopus Documents: 4 Scopus Citation: 10

Research Grants

Co-Investigator: BCUD, Pune University, Rs. 1, 75,000 (Completed)

PhD Adjudicator:

Examiner for Ph.D Student thesis at State Universities like SGBAU

Copyrights:

1. "Analysis of Portal Frame using Conventional and Modified Material Property of RCC", Registration No. L-116472/2022 **received on 29.06.2022.**
2. "Seismic Analysis of Multi-Storied Residential Building without Shear Wall", Registration L-120019/2022 **received on 22/12/2022.**
3. "Prototype Model of Steel Portico", Registration L-120019/2022 **received on 19/12/2022.**
4. "Effect of Staggered Column on Punching Shear in Flat Slab", Diary No. 25126/2022-CO/L. **Registered, Certificate to be received.**

Invited Talks \ Research events Attended:

1. Delivered a lecture on ANSYS Tutorials for Faculty Development Programme on Finite Element Analysis at Sinhgad College of Engineering, Pune (India) in December 2013.
2. Invited as a **Resource Person** for guest lecture on "Introduction of IS:800-2007 based on Limit State Method" in Sinhgad Academy of Engineering, Pune (India).
3. Invited as a Judge for University Level Project competition "Avishkar 2017" conducted by VIIT, Pune (India)
4. Presided as **Session Chair** for the technical session on Structural Engineering at 6th International Conference on "Smart materials for Sustainable Construction in Civil Engineering" (ICSMSCE-2022), held during 08th and 09th July 2022.
5. Delivered a keynote lecture on "Research Methodology and Interpretation of Results" during Five Days **Faculty Development Programme on Research Awareness and Research Ethics**, held between 18th to 22nd July 2022.

Project Guidance

Under Graduate Students –30

Post Graduate Students – 45

PhD- 02 (Under progress)

Services and Memberships

ORCID ID: <https://orcid.org/0000-0002-7162-7156>

Editorial Board:

Indian Journal of STEAM (ISSN: 2582-8509)

Reviewer Profile Journals

1. Journal of The Institution of Engineers – India (Series A) (**Springer Journal**)
2. Forensic Engineering (Proceedings of the ICE)

Research Events organized:

1. Conducted a **short-term training programme** on ANSYS software in Sinhgad College of Engineering, Pune (India) dated 20 August to 17 September 2011 for M.E. (Structure) Students. (**Role – Coordinator**)
2. Conducted **Two Day State Level Workshop** from 04 to 05 June 2017 on Application of Finite Element Methods in Structural Engineering at Flora Institute of Technology, Pune (India). (Sponsored by Savitribai Phule Pune University, Pune, India) (**Role – Convener**)
3. Conducted **Civil-PGCON 2017** from 13 to 14 June 2017 at Flora Institute of Technology, Pune (India) at University Level (Savitribai Phule Pune University, Pune, India). (**Role – Convener**)
4. Conducted **Two Day National Level Workshop** from 01/03/2019 to 02/03/2019 on Applications of Structural Audit in Civil Engineering at D. Y. Patil Institute of Engineering & Technology, Ambi, Pune (India) (Sponsored by Savitribai Phule Pune University, Pune, India) (**Role – Convener**)

5. Conducted **International Conference** on Insights in Mechanical and Civil Engineering (ICIMCE) 2019 from 26 to 27 April 2019 (**Role – Convener**)

Consultancy Work:

1. Licensed Structural Consultant since January 2017 approved by Pune Municipal Corporation, Maharashtra, India (License Number 675B).
2. Provided Structural Stability Certificates for Residential Buildings, Industrial Buildings, Hoarding Structures in and around Pune City, Maharashtra, India (**Rs. 10000/-**)
3. Supervised RCC slab work of two floors at Flora Institute of Technology, Pune, India from October 2016 to December 2016.
4. Provided Structural Stability Certificate for Parksons Packaging Chakan Plant Pune India in March 2018 (**Rs. 25000/-**)
5. Provided Structural Steel Design for Steel Portico of a school building at Kopergaon, Maharashtra, India, in April 2018 (**Rs. 15000/-**)

Awards and Recognition:

1. YouTube Channel- **Genius Structures (Monetized)**
<https://www.youtube.com/channel/UCCh8Aen5Nvyk7RwSGVBv03A>
Current Subscribers- 1903 and Watch Time- >5310 Hrs.
Total Videos- 127, Total views> 52600
2. I have been shortlisted by **AICTE** as a reviewer for Technical Book in English language for "**Introduction to Civil Engineering**" course as per the AICTE syllabus.
3. Shortlisted by **AICTE** as a reviewer for Translation of Technical Book from English to Marathi language for "**Concrete Technology & Testing of Concrete**" course as per the AICTE syllabus.
4. Received **Global Eminent Researcher Award 2022** from VIJ Trust Thiruvengadanagar, Thiruninravur, Tamil Nadu, India

Professional Affiliation :

1. Life Member - IndACM- Indian Association for Computational Mechanics
2. International Association of Engineers (IAENG),USA
3. Life member of IASE- Indian Association for Structural Engineers
4. Associate Member of the IRED -Institute of Research Engineers and Doctors (UACEE)