# Mahalaxmi S. Sunagar

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# **Carrier Objective**

Seeking a challenging and responsible position in a reputed organization at National and International level, so that I can display my technical abilities and knowledge to contribute for the growth of the organization simultaneously helping me to fulfil my carrier objectives and widen my knowledge and skill sets.

### **Professional Work Experience**

Assistant Professor – February 2025 to till date

Department of Civil Engineering, P.D.A. College of Engineering, Kalaburagi, India

### Research Associate – July 2024 to December 2024

Faculty of Civil and water resources Engineering, Structural Engineering, Bahir Dar Institute of Technology, Bahir Dar University, Bahir Dar, Ethiopia

Assistant Professor – February 2024 to April 2024

Department of Civil Engineering, P.D.A. College of Engineering, Kalaburagi, India

### Trainee Structural Engineer – July 2023 to December 2023

Abhiram Engineering and Constructions, Bangalore, India

# **Education Qualifications**

### M.Tech. in Structural Engineering - VTU [2021-2023]

The National Institute of Engineering, Mysuru, Karnataka, India

Affiliated to Visveswaraya Technological University (VTU): 7.61 CGPA

### B.E in Civil Engineering – VTU [2017 – 2021]

### Rajiv Gandhi Institute of Technology, Bengaluru, Karnataka, India

Visvesvaraya Technological University (VTU): 7.53 CGPA

# II PUC: Pre-University Education Board [2017]

HKES Sree Veerendra Patil Pu College Bengaluru, Karnataka, India II PUC Science [PCMB]: 66.91%

# SSLC – Karnataka Secondary Education Examination Board [2015]

Kenneth George English School Bengaluru (ICSE Syllabus): 62.5%

# **Academic Projects**

### PG Structural Engineering [KSCST Funded Project]: 2023

# "Study on the Effect of Damage Location and Severity on Dynamic Behavior of Steel Framed Structure":

The objective of the project work is to find the effect of damage location and severity on dynamic behavior of multi-storey steel frame structures. The damage is introduced at various levels in beams and columns. Analysis is carried out using ETABS. From this study it is concluded that introduction of damage will change the dynamic behavior of the steel structure and dynamic behavior is influenced by damage severity where the damage is introduced at all stories.

### UG Civil Engineering: 2021

### "A Study of Concrete by using Crimped Steel Fiber"

Crimped Steel Fiber are low carbon, cold drawn steel wire fibers designed to provide concrete with temperature and shrinkage crack control, enhanced flexural reinforcement, improved shear strength and increase the crack resistance of concrete. In this study, crimped steel fibers are added to improve the strength and durability in concrete.

# Internships

### PG Structural Engineering: 8 weeks

### "Analysis and Design of RC Structures"

As a part of 3<sup>rd</sup> semester PG Structural Engineering program, 8 weeks of internship has undergone at Yashas Consultancy, Mysuru. I got an opportunity to work with the design team and actively involved in the analysis, design and detailing of RC, Steel and composite structures. During internship, visited sites to know different stages of construction and implementation of structural design details on site.

### **UG Civil Engineering: 2 weeks**

### "Construction of Conventional Hall"

During the internship program, practical knowledge has been gained by supervising the various construction activities such as excavation, placement of column footing reinforcement and construction of retaining wall. This helped me to gain practical experience of the theoretical knowledge learnt during UG Program.

### **Technical Skills**

- 1. ETABS / STAAD Pro. V8i
- 2. NISA CIVIL 19.0
- 3. MATLAB R2022a
- 4. AUTO CAAD 2024

### Journal Publications, Book Chapters and Conferences

### A. Journal Publications

- Agdew Amsalu, Naveen Bhari Onkareswara, Mahalaxmi Siddanna Sunagar, Wasihun Moges, Yeneneh Abuhay (2024). "Combined Effect of Blast and Impact Load on External RC Beam-Column Joint and Strengthening with CFRP" KSCE Journal of Civil Engineering. (To be Communicated)
- 2. Mahalaxmi S. Sunagar, Naveen B.O., Jayanth k., Wasihun Moges (2024). "Dynamic

Analysis of Multi – Storeyed Steel Framed Structure Subjected to Different Damage Scenarios" **Australian Journal of Civil Engineering Technical Journal**. (Submission ID: 245012168 - Under Review)

 Vadiraj Rao N.R., Naveen B.O., Akshatha K.K., Mahalaxmi S. Sunagar (2023).
"Microstructural Analysis of Recycled Aggregate Concrete Subjected to Sustained Elevated Temperature". Indian Concrete Journal

### B. Book Chapters

- Naveenkumar D.T., Naveen Bhari Onkareswara, Mahalaxmi S. Sunagar, Mamatha Priyadarshini K.S. (2025). "Flexural Studies on Concrete Beams with Areca Fiber and Lightweight Aggregates Reinforced with Bamboo". Springer Nature, Singapore, Technologies for Sustainable Building Infrastructure. https://doi.org/10.1007/978-981-97-4844-0\_29.
- Mahalaxmi S. Sunagar, B.O. Naveen, Jayanth K. (2024). "Dynamic Analysis of Steel Framed Structure Under Different Damage Scenario. Sustainable Materials, Structures and IoT, Taylor and Francis Book Chapter ISBN 9781032980423, 326 Pages, February 14, 2025 by CRC Press. https://doi.org/10.1007/978-981-97-4844-0\_29.
- Sunagar, M.S., Naveen, B.O., Gagana, P. (2024). Analysis and Design of Steel Skywalk Bridge. In: Sreekeshava, K.S., Kolathayar, S., Vinod Chandra Menon, N. (eds) Recent Advances in Structural Engineering. IACESD 2023. Lecture Notes in Civil Engineering, vol 455. Springer, Singapore. https://doi.org/10.1007/978-981-99-9502-8\_10.
- Mahalaxmi S. Sunagar, Jayanth K., Naveen B.O., (2023). "Study on effect of damage location and severity on dynamic behaviour of multistorey steel framed structure" Emerging trends in Engineering and Technology- Industry 4.0 (ETETI – 2023). Taylor and Francis Book Chapter ISBN 9781032586472, 342 Pages, 2024 by CRC Press.

### C. SCOPUS Indexed Conferences Proceedings

- Mahalaxmi S. Sunagar, Naveen B.O., (2024). "Analysis and Design of Steel Skywalk Bridge" International Conference on Technological Advancements in Civil and Mechanical Engineering (ICTACME) – 2024. International Conference, at KMEA Engineering College in Association with University Teknologi MARA, Shah Alam, Malaysia during February 22-23, 2024.
- 2. Mahalaxmi S. Sunagar, Naveen B.O., Gagana P. (2023). "Analysis and Design of Steel

Skywalk Bridge" Interdisciplinary Approaches in Civil Engineering for Sustainable **Development (IACESD-2023).** International Conference, at Jyothi Institute of Technology organized by department of Civil Engineering, Bangalore during July 7<sup>th</sup> and 8<sup>th</sup>, 2023.

- Mahalaxmi S. Sunagar, Jayanth K., Naveen B.O., (2023). "Study on effect of damage location and severity on dynamic behaviour of multistorey steel framed structure" Emerging trends in Engineering and Technology- Industry 4.0 (ETETI – 2023). International Conference, at Indira Gandhi Institute of Technology, Sarang, May 6<sup>th</sup> and 7<sup>th</sup>, 2023.
- Mahalaxmi S. Sunagar, Naveen B.O., Jayanth K. (2023). "Dynamic analysis of steel framed structure under different damage scenarios" Sustainable Infrastructure: Innovation, Opportunities and Challenges (SIIOC – 2023). International Conference, at National Institute of Technology Karnataka, Surathkal, April 20th and 21st, 2023.
- Vadiraj Rao N.R., Naveen B.O., Akshatha K.K., Mahalaxmi S. Sunagar (2023). "Microstructural Analysis of Recycled Aggregate Concrete Subjected to Sustained Elevated Temperature" Climate Resilient Construction and Building Materials (ICCRCBM-2023). International Conference, at National Institute of Technology Karnataka, Surathkal during March 3<sup>rd</sup> -5<sup>th</sup>, 2023

### Training, Seminar and Workshops

- 1. Participated in *Live Technical Webinar* in "Designing RCC Structures with ETABS" conducted by SSC on 15<sup>th</sup> December 2024.
- Participated and completed successfully 8 days FDP on "Advancements in FRP Composites for Structural Applications" organized by Sasi Institute of Technology and Engineering Tadepalligudem, AP in association with Indian Geotechnical Society Guntur chapter from 22/11/2023 to 14/12/2023
- Participated in three days refresher course on Structural Engineering program entitled "Structural Engineering for Civil Engineers" organized by department of Civil Engineering, The National Institute of Engineering, Mysuru which held during 20<sup>th</sup> July to 22<sup>th</sup> July 2023.

- Participated in the two-day national seminar recent advances in the Civil Engineering on "Innovative Infra in Civil Engineering" held at MBCT, auditorium, Mysuru on 3<sup>rd</sup> and 4<sup>th</sup> February 2023.
- Participated in the national seminar on "Geotechnics for Infrastructure Development" Organized by the department Civil Engineering, NIE Mysuru and Indian Geotechnical society, Bangalore chapter on 5<sup>th</sup> September 2022.
- Participated in "DESIGN SAFE 2022" A one day colloquium on "PRE- ENGINEERED STEEL BUILDINGS" at Sri Jayachamarajendra College of Engineering, JSS Science & Technology University, Mysuru on 23<sup>rd</sup> April, 2022.
- Training in diploma in Computer application for three months from 3<sup>rd</sup> October 2021 to 2<sup>nd</sup> January 2022.

# Accomplishments

- 1. Handled analysis and design of G+3 residential buildings, and acquired skill set in implementing ETABS ver. 19.0.0 and STAAD Pro. Connect Edition V22.
- Present five technical papers in reputed international conferences and Journal. All conference proceedings are Scopus indexed and published in Springer Book Chapter, Taylor and Francis and ICJ, 2023 - 2024.
- 3. External Funding (6,000/-) for M.Tech. major Project work to conduct experimental investigation from *Karnataka State Council for Science and Technology (KSCST), 2023.*
- Secured Highest grade 'S' (topper) in the Course Fire Resistance of Structure in 2<sup>nd</sup> Semester, M.Tech Structural Engineering, 2022.
- Outstanding support as student volunteer in the national seminar on "Geotechnics for Infrastructure Development" Organized by the department Civil Engineering, NIE Mysuru and Indian Geotechnical society, Bangalore chapter on 5<sup>th</sup> September 2022.

- 6. Assisted in consultancy works by designing the reinforced concrete structural elements using NISA CIVIL VER 19.0, ETABS, STAAD Pro.
- 7. Participated in combined annual training camp as SD/SW/JD/JW held at Al-Ameen residential school, malur road Hoskote, Bengaluru rural from 25th July 2016 to 3rd August 2016.

### Declaration

I, here by declare that the information furnished above is correct to the best of my knowledge and personal beliefs.

Place: Kalaburagi 06-04-2025 Date:

*Mahalaymi* (MAHALAXMI S. SUNAGAR)