



## SIVAGURU VISWANATHAN

Research Scholar in Civil Engineering

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### Personal details

Father's Name: Viswanathan K

Gender : Male

Date of Birth : 03.06.1991

Age : 30 years

Communicable Language

: Tamil , British English

### **Educational Chronology:**

- Schoolings (2008) at Tamil Nadu state(TN), India
- Under-graduation (2012): *Bachelor of Engineering* in Civil Engineering from University College of Engineering, Tindivanam, affiliated to Anna University, TN, India
- Post-graduation (2014) : *Master of Engineering* in Structural Engineering from Government College of Technology, Coimbatore, affiliated to Anna University, TN, India
- Doctor of Philosophy (2021) : *Doctorate* in Structural Engineering from Indian Institute of Technology Madras, TN, India

### **Academic credentials:**

- University rank holder during under graduation
- Gold medal in under graduation at institute level
- Silver medal in post-graduation at institute level

### **Academic projects:**

Under-graduation project:

- *“Design of Sewage Treatment Plant by Activated Sludge Process for Kallakurichi Town”*

This was a team work project wherein an environmental and structural design of the sewage treatment plant was done for the 50,000 population dwelling Kallakurichi township in Tamilnadu state, India. Project dealt with the study of sewage treatments process (Activated Sludge Process) and reinforced concrete design of various structures involved in the treatment plant.

- *“Analysis and Design of Highway Bridge”*

Project was executed for the structural design of highway river bridge across river Thenpennai on national highway NH16 conforming to the Indian standards. This study exposed the vastness of the infrastructure demand of the nation and the technicalities involved in the structural design of the bridge.

Post-graduation project:

- *“Analytical and Experimental Study on Shear Behaviour in Prefabricated Reinforced Concrete Beams”*

This was an experimental project wherein the prefabricated reinforced cage concrete beams was studied for its shear behaviour followed by the analytical and numerical study as well.

Ph. D research work:

- *“Shear wall behaviour with and without openings”*

The behaviour of Shear wall with and without opening is studied using experimental, analytical and numerical approach as well. The seismic response is significantly affected by the size of openings and their location in the wall. The information on behaviour of RC squat shear walls with openings is very limited. This study would deal with the load path, crack pattern and failure modes of the RC squat shear wall with window and door openings.

Engineering software  
proficiency

ANSYS, STAAD Pro, ETABS

**List of Publications On The Basis Of This Research Work**

**1. Paper(s) Published in Refereed Journal(s)**

- a) G. Appa Rao, and V. Sivaguru (2020), “Prediction of Shear Strength of Reinforced Concrete Squat Shear Walls-Comparative Studies”, *Journal of Structural Engineering*, Vol. 47, No. 4, pp. 1-25.
- b) Sivaguru V and Appa Rao G (2021), “Strength and Behaviour of RC Squat Shear Walls With Openings Under Cyclic Loading”, *ACI Structural Journal*, Vol. 118, No. 5, pp. 235-250.

**2. Paper(s) Published in Conference Proceeding(s) as Full Paper**

- a) Sivaguru, V., and Appa Rao, G. (2016), “Shear Strength of RC Squat Shear Walls – A Review”, *Proceedings of Structural Engineering Convention (SEC-2016)*, Dec 21-23, pp. 130 – 135.
- b) Sivaguru, V., and Appa Rao, G. (2018), “Numerical study on effect of steel fibres on the shear strength of reinforced concrete squat shear walls with opening”, *Proc. of the 12th fib International PhD Symposium in Civil Engineering, Prague, Czech Republic, 2018, August 29-31*, pp. 781-789.
- c) Sivaguru, V., and Appa Rao, G. (2019), “Behaviour of reinforced concrete squat shear walls with utility openings”, *Proc. of 10<sup>th</sup> International Conference on Fracture Mechanics of Concrete and Concrete Structures (FraMCoS – X), Bayonne, France, , June 24 – 26.*