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EDUCATION

Program	Institution	Year of Completion
Ph.D. in Civil Engineering (Structural Engineering)	Indian Institute of Technology Madras, Chennai	2020
M.Tech. in Civil Engineering (Structural Engineering)	Indian Institute of Technology Madras, Chennai	2013
B.E. in Civil Engineering	College of Engineering Guindy, Anna University, Chennai	2011
HSC (XII)	Government Higher Sec. School, Perambalur	2007
SSLC (X)	Government High School, Keelaperambalur, Perambalur	2005

PUBLICATIONS – JOURNALS

INTERNATIONAL JOURNAL PAPERS

1. Sagadevan R. and Rao B. N. (09/2020). “Flexural Behaviour of Reinforced Concrete Biaxial Voided Square Slabs.” *ACI Structural Journal*, 117(5), pp: 1-12.
2. Sagadevan R. and Rao B. N. (03/2020). “Experimental and Analytical Investigation of Structural Performance of Vertical Concrete Formworks.” *Asian Journal of Civil Engineering*, 21, pp: 281–292. <https://doi.org/10.1007/s42107-019-00191-5>
3. Sagadevan R. and Rao B. N. (01/2020). “Experimental and Analytical Study on Structural Performance of Polyurethane Foam-Filled Built-up Galvanized Iron Members.” *Thin-Walled Structures*, 146, 106446. <https://doi.org/10.1016/j.tws.2019.106446>
4. Sagadevan R. and Rao B. N. (09/2019). “Effect of Void Former Shapes on One-way Flexural Behaviour of Biaxial Hollow Slabs.” *International Journal of Advanced Structural Engineering*, 11(3), pp: 297-307. <https://doi.org/10.1007/s40091-019-0231-7>
5. Sagadevan R. and Rao, B. N. (08/2019). “Experimental and Analytical Investigation of Punching Shear Capacity of Biaxial Voided Slabs.” *Structures*, 20, pp: 340-352. <https://doi.org/10.1016/j.istruc.2019.03.013>

NATIONAL JOURNAL PAPERS

6. Sagadevan R. and Rao B. N. (03/2020). “Effect of Reinforcement Orientation on Ultimate Flexural Capacity of Solid and Biaxial Voided Reinforced Concrete Slabs.” *The Indian Concrete Journal*. 94(3), pp. 23-30.
7. Sagadevan R. and Rao B. N. (10/2019). “Investigations on One-way Flexural Behaviour of Biaxial Voided Slab with Cuboid Shape Void Formers.” *Journal of Structural Engineering (Madras)*, 64(4), pp: 287-297.
8. Sagadevan R. and Rao B. N. (09/2019). “Prediction of Punching Shear Capacity of Biaxial Voided Slab.” *Journal of Structural Engineering and Management*, 6(2), pp: 24-33.
9. Sagadevan R. and Rao B. N. (05/2019). “Evaluation of One-Way Flexural Behaviour of Biaxial Voided Slab.” *The Indian Concrete Journal*, 93(5), pp: 7-16.

PUBLICATIONS – CONFERENCE

BOOK CHAPTERS / PROCEEDINGS

1. Sagadevan R and Rao B N. (10/2020). “Experimental and Analytical Investigations on Two-way Flexural Capacity of Biaxial Voided Slab”, *Advances in Structural Technologies*, Select Proceedings of CoAST 2019, Lecture Notes in Civil Engineering, Vol. 81. Springer, Singapore.
2. Sagadevan R and Rao B N. (10/2020). “Experimental Study on the Flexural and Shear Behaviour of Precast Pre-stressed Hollow Core Slab”. *ICSECM 2019*, Proceedings of the 10th International Conference on Structural Engineering and Construction Management, Lecture Notes in Civil Engineering, Vol. 94. Springer, Singapore.
3. Sagadevan R and Nageswara Rao B. (01/2019). “Numerical Study on Flexural Capacity of Biaxial Hollow Slab”, *Recent Advances in Structural Engineering*, Vol. 1, Select Proceedings of SEC 2016, Lecture Notes in Civil Engineering, Vol. 11. Springer, Singapore, pp: 97-105. https://doi.org/10.1007/978-981-13-0362-3_8
4. Sagadevan R and Rao B N. (12/2014). “Numerical Study on Punching Shear Capacity of Biaxial Hollow Slabs”, *Proceedings of the 5th International Congress on Computational Mechanics and Simulation*, Research Publishing Services, Singapore, pp: 1881-1890. doi: 10.3850/978-981-09-1139-3_217

PAPERS PRESENTED

5. Sagadevan R and Nageswara Rao B. (12/2017). “Analytical Studies on Flexural Capacity of Biaxial Hollow Slab”, *International Conference on Composite Materials and Structures*, Hyderabad, India.
6. Sagadevan R. and Rao. B. N. (07/2013). “Analysis, Modelling and Optimization of Laminated Glass.” *Indian Conference on Applied Mechanics*, Chennai, India.

THESIS PROJECTS

Studies on Structural Behaviour of Biaxial Voided Slab under Flexure and Punching Shear **Ph.D.**

Voided slab renders up to 50% of reduction in self-weight in comparison with conventional solid slab. However, the reduction in concrete cross section area leads to reduction in flexural stiffness and shear capacity. In this study, the effect of voids on the structural behaviour of biaxial void slab under one-way & two-way flexure and punching shear is investigated by experimentally. Guidelines were developed to design and analysis the same.

Analysis, Modelling and Optimization of Laminated Glass **M.Tech.**

Applications of load – bearing glass (laminated) beams is frequently present and rapidly developing in buildings. So we need to model, analyse and optimize the laminated glass interlayer and reinforcing materials with various support conditions.

Role of Peri-Urban Areas Development for Sustainable Planning of Chennai City **B.E.**

For sustainable development of Chennai city it is imperative to plan the peri-urban areas of Chennai in systematic manner. Hence it is very important to plan the peri-urban area development to meet the transport demand and to facilitate better livelihood to lead a good quality of life.

TEACHING ASSISTANCE EXPERIENCE

- Teaching assistance for the following course in IIT Madras
 - Basic Reinforced Concrete Design
 - Basic Structural Steel Design
 - Experimental Techniques (Laboratory Course)
- Assistance for the Head of the Laboratory, Structural Engineering Laboratory, IIT Madras
 - Preparation laboratory structural and non-structural drawings and design reports
 - Estimation of materials for procurement and disposal
 - Laboratory maintenance and safety

PREVIOUS EMPLOYMENT

Experience: 1 Year & 3 Months

Post-Doctoral Research Assistant, Department of Civil Engineering, IIT Madras, Chennai.

Industrial based Research Projects

- Experimental study on flexural behaviour of prestressed precast one-way voided slab
- Experimental investigation on CICABLOC structural wall
- Experimental and analytical studies on the performance of vertical concrete formworks
- Strength and serviceability assessment of pre-engineered buildings
- Strength and condition assessment of steel communication towers
- Vibration measurement and condition assessment of buildings with machineries

PROFESSIONAL EXPERIENCE

Consulting Engineering Services (India) Pvt. Ltd., Chennai (Summer Training) 6 Weeks

- Planning, Conceptual Drawing and Feasibility Report to link grade separator at Mahalingapuram – North Usman Road & South Usman Road into a single grade separator or extending South Usman grade Separator up to Anna Salai.
- Brief exposure on design of ROB (Road over Bridge) and RUB (Road under Bridge).

Rajparis Civil Constructions Ltd., Chennai (Practical Training) 4 Weeks

- Training in Project Management in project (Rajparis Harmony) at Medavakkam, Chennai
- Training in Project Management in project (Residential Building) at Perungudi, Chennai

Neyveli Lignite Corporation Ltd., Neyveli (In-plant Training) 2 Weeks

- Training in Thermal Power Station – II, Neyveli (Strengthening of Cooling Tower Columns)

AREAS OF INTEREST

- Concrete (Reinforced & Prestressed) Members & Structures
- Steel and Composite Members & Structures
- Post Fire Performance of Concrete Members & Structures

POSITIONS OF RESPONSIBILITY

- Student Member of Departmental Consultative Committee, Department of Civil Engineering, IIT Madras during 2012-13.
- Committee Member of National Service Scheme during 2008-09.

AWARDS & RECOGNITIONS

- Received **Best Session Paper Award** for the paper entitled “Experimental and Analytical Investigations on Two-way Flexural Capacity of Biaxial Voided Slab” in the National Conference on Advances in Structural Technologies (CoAST 2019) held at Silchar, Assam, India during February 1-3, 2019.
- Received **Best National Service Scheme (NSS) Volunteer Award** in 2007-08.

SOFT SKILLS

Commercial Technical Software:

STAAD Pro, ETABS, SAP 2000, DIANA and SJ Mepla