

Faculty Profile



Brief Profile

Somanath M Basutkar graduated in Civil Engineering from SMVCE (formerly S. L. N College of Engineering), Raichur in 2007, M.Tech in Structural Engineering from R.V. College of Engineering, Bengaluru. PhD from Visvesvaraya Technological University Belgaum in 2019 in the area of structural masonry. During 2011 to 2015 he worked as full time research assistant for VTU and HUDCO funded projects. Currently, working as Assistant Professor at Civil Engineering Department, R.V. College of Engineering. His research interests are Structural Masonry, Alternative Building materials (mortars for thin joint masonry, arches, natural fiber based ferrocement), Low carbon and energy efficient approaches for recycling, strengthening techniques of RC structures. He has published more than 48 papers in various National and International Journals, Conferences and book chapters.

Personal Information

- **Name:** Dr Somanath M Basutkar
- **Designation:** Assistant Professor
- **Department:** Civil Engineering
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- **Phone:** 9972234987
- **Google Scholar -**
<https://scholar.google.com/citations?user=I-JgTc0AAAAJ&hl=en/>
- **ResearchGate-** https://www.researchgate.net/profile/S-M-Basutkar?ev=hdr_xprf/
- **LinkedIn:** NA
- **ORCID:** <https://orcid.org/0000-0002-0616-2364>

Domain of Expertise -

Structural Engineering,

Construction materials

Research Focus

- **Primary Area:**
 - Masonry Structures,
 - Sustainable building materials and technologies
- **Allied Areas:**
 - o Alternate Cements
 - o Alternate aggregates

Academic Qualifications

- **Ph.D.:** [Civil Engineering Sciences], [VTU, Belgaum], [2019]
(INFLUENCE OF JOINT THICKNESS AND SLENDERNESS ON THE STRENGTH OF BRICK MASONRY)
- **M.Sc./M.Tech:** [Structural Engineering], [VTU, Belgaum], [2009]
- **B.E./B.Tech:** [Civil Engineering], [VTU, Belgaum], [2007]

Professional Experience

Experience			
S.No	Institute/College/Industry	Job Title	Duration (From- To)
1.	Ballari Institute of Technology & Management (BITM), Bellary	Assistant Professor	September 2009 – May 2011
2.	R V College of Engineering, Bengaluru	Research Assistant	June 2011 – April 2012
3.		Project Assistant	May 2012 – February 2015
4.		Assistant Professor	February 2015 – Till date

Publications & Patents

Journal Publications

1. Mohd Imran Ahmed, Namratha Bharadwaj, Ashwin M. Joshi, S.M. Basutkar, and Ajay Nagaraj, [Influence of gradation on fresh stabilised adobe mixes](#), International Journal of Masonry Research and Innovation 2025 10:1, 33-57
2. Arun Kumar, H. R., Renukadevi, M. V., Basutkar, S. M., & Vijaya, S. (2024). Experimental studies on strength and workability of mineral admixture modified cement-based fibre-reinforced self-compacting concrete. *International Journal of Sustainable Engineering*, 17(1), 1008–1019. <https://doi.org/10.1080/19397038.2024.2420626>

3. Anil, H., Ravindra, R. & Basutkar, S.M. Studies on Alternate Material for Parabolic Roofing Panel. *J. Inst. Eng. India Ser. A* **105**, 809–817 (2024).
<https://doi.org/10.1007/s40030-024-00790-9>
4. Prashanth, K., Lohith, N.R., Vikas M & S. M. Basutkar. Properties of fiber incorporated concrete blocks manufactured using recycled aggregates. *Low-carbon Mater. Green Constr.* **2**, 3 (2024). <https://doi.org/10.1007/s44242-024-00034-w>
5. Sankannavar, S.A., Ravindra, R. & Basutkar, S.M. Flexural strength of concrete slabs reinforced with bamboo of different knots spacing. *Asian J Civ Eng* **25**, 3495–3506 (2024).
<https://doi.org/10.1007/s42107-024-00992-3>
6. Madhavi K, Renukadevi M V, Jagadish K S, S.M. Basutkar, Studies on shear strength and stiffness of brick masonry walls, *Materials Today: Proceedings*, 2023, ISSN 2214-7853,
<https://doi.org/10.1016/j.matpr.2023.03.682>.
7. B Jeevitha, Kancharla, M., S. M. Basutkar and M V Renukadevi (2022) “Studies on Strength of Hollow concrete Block Masonry Externally Bonded with Textile Reinforced Mortar Composites”, *Electronic Journal of Structural Engineering*, 22(2), pp. 9–18.
<https://doi.org/10.56748/ejse.223102>
8. A C Manasa, S M Basutkar, K Madhavi, M. S Amalkar, M.V. Renuka Devi and K. S. Jagadish, Compressive Strength of Brick Masonry Confined with Glass Fibre Reinforced Polymer, 2022 *ECS Trans.* **107** 19279, DOI 10.1149/10701.19279ecst.
9. Shridhar, S.T., Amalkar, M.S., Ihtesham, M. S. M. Basutkar & M. V. Renukadevi . The implication of using filtered sand in mortar and concrete. *J Build Rehabil* **7**, 39 (2022).
<https://doi.org/10.1007/s41024-022-00175-0>
10. Amalkar, M.S., Renukadevi, M.V., Jagadish, K.S. and Somanath. M. Basutkar. Effect of slenderness and eccentricity on the strength of concrete block masonry: An experimental investigation. *SN Appl. Sci.* **2**, 1046 (2020). <https://doi.org/10.1007/s42452-020-2829-6>
11. Bhavani., Hiremath, N. S., Renukadevi, M. V., & Basutkar, S. M. (2021). Sensitivity Analysis for Numerical Simulation of Masonry Wall using Fem Software. *i-manager's Journal on Civil Engineering*, 11(3), 51-57. <https://doi.org/10.26634/jce.11.3.18331>
12. Sawar, S. A., Arunkumar, D. S., Archana, M. R., Anjaneyappa, V., and Basutkar, S. M. (2021). Studies on Cement Treated Granular Mixes using Various Recycled Aggregates. *i-manager's Journal on Civil Engineering*, 11(2), 32-46. <https://doi.org/10.26634/jce.11.2.18256>
13. Divesh M Agarwal, S.M. Basutkar, K. Madhavi, M.V. Renuka Devi, K.S. Jagadish, Influence of surface reinforcement on the strength of brick masonry wall, *Materials Today: Proceedings*, Volume 46, Part 10, 2021, Pages 5112-5117, ISSN 2214-7853,
<https://doi.org/10.1016/j.matpr.2020.10.500>.
14. K. Madhavi, G.N. Vinay, M.V. Renuka Devi, S.M. Basutkar, Shear behavior of brick masonry strengthened with jute fiber reinforced composite, *Materials Today: Proceedings*, Volume 46, Part 10, 2021, Pages 4746-4751, ISSN 2214-7853,
<https://doi.org/10.1016/j.matpr.2020.10.307>.
15. Salman Khaleel, K. Madhavi, S.M. Basutkar, Mechanical characteristics of brick masonry using natural fiber composites, *Materials Today: Proceedings*, Volume 46, Part 10, 2021, Pages 4817-4824, ISSN 2214-7853, <https://doi.org/10.1016/j.matpr.2020.10.319>.
16. Sai Rahul D, Sai Vikas Reddy, Tarun N, S.M. Basutkar, Ravikiran S. Wali, M.V. Renukadevi, Influence of brick waste and brick waste fines as fine aggregate on the properties of paver blocks – Preliminary investigation, *Materials Today: Proceedings*, Volume 43, Part 2, 2021, Pages 1496-1502, ISSN 2214-7853,
<https://doi.org/10.1016/j.matpr.2020.09.312>.
17. Jawalgi, A.S., Renukadevi, M.V., Jagadish, K.S. S. M. Basutkar. Composite T-beam Roof: An Alternate Affordable Roofing System. *J. Inst. Eng. India Ser. A* **101**, 259–264 (2020).
<https://doi.org/10.1007/s40030-020-00435-7>

18. Joshi, A.M., Basutkar, S.M., Ahmed, M.I. Mangala Keshava, Raghunath Seshagiri Rao & S. Jagadish Kaup. Performance of stabilized adobe blocks prepared using construction and demolition waste. *J Build Rehabil* **4**, 13 (2019).
<https://doi.org/10.1007/s41024-019-0052-x>
19. P. Srujhana, Rohit J. Menon, S. M. Basutkar, M. V. Renuka Devi; Demolished brick masonry as a replacement of river sand in cement and cement lime mortar. *AIP Conf. Proc.* 27 November 2018; 2039 (1): 020049. <https://doi.org/10.1063/1.5079008>
20. S.M.Basutkar, M.V.Renukadevi, K.S.Jagadish, Use of Cementitious Pastes for Thin Joint, Sandless, Brick Masonry, Bulletin of ACCE(I) January - March 2016.

Conference Papers

1. Namratha Bharadwaj, Md. Imran Ahmed, S M Basutkar, Ashwin M Joshi, M V Renukadevi, Embodied Energy and Carbon in Construction and Demolition waste-based Masonry Products, April 2024, International Conference on Energy and Sustainability (ICES - 2024), A'SHARQIYAH University, Oman, Muscat
2. Madhavi.K,M.V.Renukadevi,K.S.Jagadish,S M Basutkar,"Studies on strength and stiffness of brick masonry walls in ICCMS2022 organized by NIT Calicut.
3. Chandana K. Murthy, Madhavi. K and S M Basutkar, Influence of Fines Content on Strength of Structural Mortar with GGBS and Recycled Brick Waste, International Conference on New Horizons in Civil Engineering Innovative Civil Engineering Materials and Systems, Manipal Academy of Higher Education (MAHE) Dec 12-14 2024.
4. Anushree A G, Renukadevi M V and S M Basutkar, Influence of brick waste grade on physical and mechanical behaviour of mortars, International Conference on New Horizons in Civil Engineering Innovative Civil Engineering Materials and Systems Manipal Academy of Higher Education (MAHE), Dec 12-14 2024.
5. Ahmed, Md Imran and K, Natraj and Basutkar, S M and Renukadevi, M V and K, Madhavi and Amalkar, M S and Joshi, Ashwin M, "Influence of Clay and Moisture Content on Characteristics of Stabilized Mud Blocks Made with Sandy Soil," 2024 8th International Conference on Computational System and Information Technology for Sustainable Solutions (CSITSS), Bengaluru, India, 2024, pp. 1-6, doi: 10.1109/CSITSS64042.2024.10816765.
6. Arun Kumar H R, S Vijaya, M.V. Renukadevi, S M Basutkar, Performance of Self-Compacting Concrete using Ternary Blended Fibro for Fibers with Fly Ash, Metakaolin and GGBS, International Conference on "Emerging Research in Civil, Aeronautical & Mechanical Engineering" (ERCAM-2023), September 22 - 23, 2023, Nitte Meenakshi Institute of Technology, Yelahanka, Bengaluru-560064
7. S M Basutkar, Shirguppe Akash, Prabhanjana, Rajath Kowshik K., M V Renuka Devi, Studies on Mortars using Fines Controlled Brick Masonry Waste as Fine Aggregate, International Conference on "Emerging Research in Civil, Aeronautical & Mechanical Engineering" (ERCAM-2023), September 22 - 23, 2023, Nitte Meenakshi Institute of Technology, Yelahanka, Bengaluru-560064
8. K Harsha, H P Vageesh, H Eramma, S M Basutkar, Load Carrying Capacities Of I Shaped Reinforced SCC Columns Made with Alternative Materials, International Conference on "Emerging Research in Civil, Aeronautical & Mechanical Engineering" (ERCAM-2023), September 22 - 23, 2023, Nitte Meenakshi Institute of Technology, Yelahanka, Bengaluru-560064.
9. NR Lohith, Kumar Prashanth, K Harsha, SM Basutkar, Suitability of Combined C&D Waste In Production of Stabilized Mud Blocks, International Conference on "Emerging Research in Civil, Aeronautical & Mechanical Engineering" (ERCAM-2023), September 22 - 23, 2023, Nitte Meenakshi Institute of Technology, Yelahanka, Bengaluru-560064.
10. Bhumika M R, Madhavi K, S M Basutkar, Estimation of Brick Masonry Compressive Strength Utilizing Machine Learning Approaches, International Conference on

“Emerging Research in Civil, Aeronautical & Mechanical Engineering” (ERCAM-2023), September 22 – 23, 2023, Nitte Meenakshi Institute of Technology, Yelahanka, Bengaluru-560064.

11. Ahmed, M.I., Harsha, B., Joshi, A.M., Bharadwaj, N., Basutkar, S.M. (2024). Development of Thin Joint Masonry Using Recycled Mortar for Sustainability. Interdisciplinary Approaches in Civil Engineering for Sustainable Development (IACESD – 2023), Jyothi Institute of Technology, Bengaluru, India, July 2023.
12. Ahmed, M., Nishchay, D.D., Joshi, A.M., Basutkar, S.M., Bharadwaj, N. (2024). Utilization of Unused Old Cement in Construction Materials. Interdisciplinary Approaches in Civil Engineering for Sustainable Development (IACESD – 2023), Jyothi Institute of Technology, Bengaluru, India, July 2023
13. Anand Kumar, B.G., Basutkar, S.M., Renukadevi, M.V., Mendi, V., Venugopal, G. (2024). Use of Reclaimed Foundry Sand (RFS) as Fine Aggregate in Mortars and Concrete. Interdisciplinary Approaches in Civil Engineering for Sustainable Development (IACESD – 2023), Jyothi Institute of Technology, Bengaluru, India, July 2023
14. P. Srujhana, Rohit J. Menon, S. M. Basutkar, M. V. Renuka Devi; Demolished brick masonry as a replacement of river sand in cement and cement lime mortar. International Conference on Sustainable Engineering and Technology (ICONSET 2018)
15. Manjunath Amalkar, S M Basutkar, M. V. Renukadevi, K.S.Jagadish, Behavior of Hollow Concrete Block Masonry Prisms under Compression, 10th IMC10th International Masonry ConferenceG. Milani, A. Taliencio and S. Garrity (eds.) Milan, Italy, July 9-11, 2018
16. Ashwin M Joshi, S M Basutkar, Mangala Keshava, S Raghunathand K S Jagadish, Performance of Masonry units prepared using Construction and Demolition waste as fine aggregates, 10th IMC10th International Masonry ConferenceG. Milani, A. Taliencio and S. Garrity (eds.) Milan, Italy, July 9-11, 2018
17. D Vinay, Manjunath Amalkar, S M Basutkar, M. V. Renukadevi, Pre-Cast Beam and Panel Roofing System, CSCI 2014 © ASCE India Section, I.I.T Hyderabad, October 2014
18. Manjunath Amalkar, S M Basutkar, M. V. Renukadevi, K.S.Jagadish, Effective Utilization of Demolished Brick Masonry in Building Products, 9th International Masonry Conference (9 IMC), Guimaraes, Portugal, 2014.
19. John.L, Manjunath Amalkar, S M Basutkar, M. V. Renukadevi, Effective Utilization of Granite Fines in Building Products, Sustainable Innovative Techniques in Civil and Environmental Engineering” (SITCEE - 2013), JNU, New Delhi
20. Virabhadra, PawanKumar , Santhosh, Basavaraj , S.Manjunath, Somanath.M. Basutkar, M.V.Renukadevi, Studies on Hollow Concrete Block Masonry, Sustainable Innovative Techniques in Civil and Environmental Engineering” (SITCEE - 2013), JNU, New Delhi
21. Shridhar S.T, S.Manjunath, Somanath.M. Basutkar, M.V.Renukadevi, Effect of soil utilization in the manufacture of building blocks, National Conference on Multifunctional Engineering materials (NCMEM), R.V.College of Engineering, Bangalore December 2013

Books/Book Chapters

1. S M Basutkar, Ashwin M Joshi, Md Imran Ahmed, Namratha Bharadwaj, M V Renukadevi, Mortars for Thin Joint Masonry Utilising Recycled Materials for Sustainability and Circularity, Civil Engineering Innovations for Sustainable Communities with Net Zero Targets, 1st Edition, 2024, CRC Press, Pages 14, eBook ISBN 9781032686899.
2. Kumar H R Arun, S Vijaya, M.V. Renukadevi, Somanath M Basutkar, Performance evaluation of flyash and metakaolin with and without Fibrofor fiber reinforced SCC, M Bunde, M., Nair, R., & Somvanshi, P. (Eds.). (2024). Recent Advances in Green

Technologies and Sustainable Development (1st ed.). CRC Press.

<https://doi.org/10.1201/9781003450917>

3. Ahmed, M.I., Harsha, B., Joshi, A.M., Bharadwaj, N., Basutkar, S.M. (2024). Development of Thin Joint Masonry Using Recycled Mortar for Sustainability. In: Kolathayar, S., Sreekesava, K.S., Vinod Chandra Menon, N. (eds) Recent Advances in Building Materials and Technologies. IACESD 2023. Lecture Notes in Civil Engineering, vol 456. Springer, Singapore. https://doi.org/10.1007/978-981-99-9458-8_6.
4. Ahmed, M., Nishchay, D.D., Joshi, A.M., Basutkar, S.M., Bharadwaj, N. (2024). Utilization of Unused Old Cement in Construction Materials. In: Kolathayar, S., Sreekesava, K.S., Vinod Chandra Menon, N. (eds) Recent Advances in Building Materials and Technologies. IACESD 2023. Lecture Notes in Civil Engineering, vol 456. Springer, Singapore. https://doi.org/10.1007/978-981-99-9458-8_14.
5. Anand Kumar, B.G., Basutkar, S.M., Renukadevi, M.V., Mendi, V., Venugopal, G. (2024). Use of Reclaimed Foundry Sand (RFS) as Fine Aggregate in Mortars and Concrete. In: Kolathayar, S., Sreekesava, K.S., Vinod Chandra Menon, N. (eds) Recent Advances in Building Materials and Technologies. IACESD 2023. Lecture Notes in Civil Engineering, vol 456. Springer, Singapore. https://doi.org/10.1007/978-981-99-9458-8_15
6. Vinayak, M., Nitish, M., Siddarth Gowda, H.M., Basutkar, S.M., Madhavi, K., Renuka Devi, M.V. (2021). Studies on Properties of Compressed Mud Blocks. In: Kumar Shukla, S., Raman, S.N., Bhattacharjee, B., Bhattacharjee, J. (eds) Advances in Geotechnics and Structural Engineering. Lecture Notes in Civil Engineering, vol 143. Springer, Singapore. https://doi.org/10.1007/978-981-33-6969-6_56
7. Vinay, Y.N., Srinivas, K., Renuka Devi, M.V., Basutkar, S.M. (2021). Analysis of Interlocking Block Masonry. In: Kumar Shukla, S., Raman, S.N., Bhattacharjee, B., Bhattacharjee, J. (eds) Advances in Geotechnics and Structural Engineering. Lecture Notes in Civil Engineering, vol 143. Springer, Singapore. https://doi.org/10.1007/978-981-33-6969-6_55.
8. Pooran, H.M., Renuka Devi, M.V., Basutkar, S.M. (2021). Investigation on Behaviour of Alternate Roofing System Using Arch Panels. In: Kumar Shukla, S., Raman, S.N., Bhattacharjee, B., Bhattacharjee, J. (eds) Advances in Geotechnics and Structural Engineering. Lecture Notes in Civil Engineering, vol 143. Springer, Singapore. https://doi.org/10.1007/978-981-33-6969-6_54.
9. Madhavi, K., Renuka Devi, M.V., Jagadish, K.S., Basutkar, S.M. (2021). Shear Bond Strength of Brick Masonry. In: Kumar Shukla, S., Raman, S.N., Bhattacharjee, B., Bhattacharjee, J. (eds) Advances in Geotechnics and Structural Engineering. Lecture Notes in Civil Engineering, vol 143. Springer, Singapore. https://doi.org/10.1007/978-981-33-6969-6_50.
10. Govardhan, L., Basutkar, S.M., Madhavi, K., Renuka Devi, M.V. (2021). Studies on Influence of Variation in Joint Thickness on Strength of Masonry with the Emphasis in Bond Characteristics. In: Kumar Shukla, S., Raman, S.N., Bhattacharjee, B., Bhattacharjee, J. (eds) Advances in Geotechnics and Structural Engineering. Lecture Notes in Civil Engineering, vol 143. Springer, Singapore. https://doi.org/10.1007/978-981-33-6969-6_58
11. Joshi, A.M., Basutkar, S.M., Jagadish, K.S. (2020). Stabilized Mud Concrete for Sustainable Construction. In: Delgado, J. (eds) Sustainable Materials in Building Construction. Building Pathology and Rehabilitation, vol 11. Springer, Cham. https://doi.org/10.1007/978-3-030-46800-2_6
12. S.M.Basutkar, K.S.Jagadish, Concrete Blocks, Sustainable Building Technology, K.S. Jagadish (Editor), TechSar Pvt. Ltd, ISBN-10 : 9386768208, 30 March 2019

Patents - NIL

R & Grants & Consultancy Projects

Completed Research Projects

- Project Title: Optimization of C&D waste (brick and concrete waste) Replacement as Aggregates in Hollow Concrete Blocks for Unreinforced Masonry
- Funding Agency - Visvesvaraya Technological University, Belagavi,
- Duration – 2021 - 2023, Role: [PI/Co-PI].
- Role: Co-PI.

Ongoing & Completed Consultancy Projects

- NIL

Professional Memberships

- Institution of Engineers of India,
- Member of the Indian Society for Technical Education,
- Indian Society of Earthquake Technology

Awards & Recognitions

- Nil

Student Supervision

- Ph.D. Candidates: [02]
- M.Tech/M.Sc. Students: [16]
- Undergraduate Research Mentees: [08]

Professional Roles

Member Peer review committee for the journals

- Journal of Building Engineering
- Construction and Building Materials
- Case studies in Construction materials

Teaching

Core Courses: **[Current semester]**

- Masonry Structures - PG
- Environment and Sustainability
- Industrial Health Monitoring of Structures

Advanced/Lab Courses:

- Structural Engineering Lab

Professional Roles

Responsibilities

- **Academic:** CIE Coordinator,
- **Administrative:**
 - Research and Consultancy Committee,
 - NBA,
 - Funded Project,
 - CALTECH

External Connect

- Member of BoE MVJCE