

Dr. Siddesha H

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Education

	Degree	Year	Institute	Specialization
1	Ph.D	2019	Visvesvaraya Technological University, Belgaum	Structural Health Monitoring
2	M.Tech.	2009	University B.D.T. College of Engineering, Davanagere	Computer-Aided Design of Structures and Substructures
3	B.E	2006	University B.D.T. College of Engineering, Davanagere	Civil Engineering

Professional Experience

	Date (from-to)	Designation	Organization
1	24-02-2023 to Till date	Associate Professor	Siddaganga Institute of Technology, Tumakuru
2	03-08-2009 to 23-02-2023	Assistant Professor	Siddaganga Institute of Technology, Tumakuru

(Please fill in reverse order. Current designation should be at the top)

Positions held

- Proctor
- Test Co-ordinator
- Coordinator for PG Project work
- Coordinator for PG - Structures
- Coordinator of Accreditation Committee (NBA)

- Coordinator of NAAC
- Departmental project evaluation Committee(DPEC) – member
- Member of Departmental Academic Affairs Committee (DAAC)
- Member of Departmental BOS Committee – (PG-Structures)
- Dynamics Laboratory In-charge.
- Building Materials – II (Concrete) Laboratory In-charge.
- Member of curriculum committee (UG)
- Member of the Curriculum Committee - (PG-Structures)
- Coordinator for Technical seminar- PG structures.
- Consultant for Building materials
- Internship Coordinator - (PG-Structures)

Courses Taught

Undergraduate Courses

- Elements of Civil Engineering (Engineering Mechanics).
- Design of RC Structures
- Design of Steel Structures
- Building Structures II (Strength of Materials)
- Theory of Elasticity
- Building Materials and Concrete Technology
- Matrix Methods of Structural Analysis
- Finite Element Method
- Environmental Science
- Building Construction

Postgraduate Courses

- Advanced Concrete Technology
- Transportation Structures
- Design of Bridge Structures
- Finite Element Analysis
- Computational Structural Mechanics
- Repair, Rehabilitation, and Health Monitoring of Structures

Research Guidance

Sl. no	Name of the Scholar	Title	Year of completion
Nil			

M.TECH GUIDANCE DETAILS:

Sl No	Name of the student	Title of Thesis	Year Completed
1	Amruthavarshini	Damage identification in frame structure using ANFIS technique	2021
2	Nischith B K	Study on seismic performance of conventional and mivan structures	2018
3	Kavya H K	Study on the seismic design of raft foundation for a RC multi-storey building	2014
4	Kushal Shetty M N	Damage detection on 3D trusses by flexibility energy quotient difference method	2019
5	Kavyashree K	Sensitivity of RC frame structures to support settlements using technique based on modal characteristics	2016
6	H Arun	Damage detection in 3D frame using modal strain energy and flexibility method	2018
7	Sachin HR	Comparative study on seismic Behaviour of RC Framed Building with Shear Wall And Infill As Lateral Load Resisting System by using ETABS	2019
8	Naveen M	Damage identification in beams using flexibility changes and modal strain energy methods	2017
9	Manjunath Badiger	Damage detection in truss using changes in flexibility and modal strain energy method	2017
10	Rachana R	Structural System identification using extended Kalman Filter Technique in Time-domain	2012
11	Umesha Naik R	Damage detection in communication tower	2014
12	Rashmi R	Damage detection in beams using frequency response function technique	2020
13	Arun Kumar Y	Strengthening of distressed bridge superstructure- A case study	2020
14	Dileep G.R	Pushover Analysis of irregular buildings with the effect of masonry in-fill wall	2020
15	Rajeshwari T K	Flexibility based damage detection technique for 3D frame structure	2020
16	Shreeharsha Dombale H L	Artificial intelligence approaches in damage detection of beams	2020
17	Thanushree H	Analysis of RCC and PSC bridge deck slab for various spans	2017

18	Shwetha	Vibration response of deck slab	2014
19	Poornima Patil	Computation of damage indices for through type truss bridge	2015
20	Puneetha K R	Investigation of the effects of local damage on dynamic characteristics of truss bridges	2016
21	Chandana kori	A case study of upgradation of existing flexible pavement of a typical stretch of a state highway near Tumkur city	2012
22	M.I.Basavalinganagowda	Experimental studies on the effect of ceramic sand on the strength properties of concrete	2010
23	Gowthami N	Damage assessment in framed structures due to settlement of supports	2015
24	Darshan B U	Damage detection in plate structures using flexibility strain energy-based method	2021
25	Shravan S B	Damage identification in frame using flexibility energy quotient difference method	2021
26	M.C. Shivakumar	Damage detection in plate using flexibility energy quotient difference method	2022
27	Ramya P	Experimental study on effects of Tuf-Strand SF fibers and GGBS on mechanical and durability properties of concrete	2022
28	Hammad Maroof Imdadi	Damage detection in laminated composite plate using flexibility energy quotient difference method	2023
29	Amith C H	Damage detection in steel frames using modal strain energy method	2024
30	Rakshitha	Damage detection in laminated composite skew plate using Modal Strain Energy Method.	2024
31	Gowri M.D	Structural damage detection of doubly tapered beam	2025
32	Navyashree R	Damage detection of truss structure using artificial neural networks	2025
33	Jagadeesh R	Seismic response analysis of offshore jacket structure with main pile and skirt pile foundation	2025
34	Vikram Rajput	Analysis of fixed jacket at different fields using FE software	2025
35	Suhas K.U	Experimental study on partial replacement of cement with coconut shell ash and sugarcane bagasse ash and coarse aggregate with coconut shell	2025

Research Areas

- Structural Health Monitoring
- Sustainable concrete

Sponsored Projects

Ongoing Projects: Nil

Publications

Publications in International Journals

1. **Siddesha H**, Manjunath N Hegde (2017). Structural Damage Detection in Framed Structures using Under Foundation Settlement/ Rotation of Bases. *Structural Durability and Health Monitoring*, Vol.11, No.1, Pages17-41
<https://doi.org/10.3970/sdhm.2017.012.017>
2. **Siddesha Hanumanthappa** (2023). A new structural damage detection method for cantilever beam using Generalized Flexibility Quotient Difference Method. *Journal of Vibration Engineering and Technologies*, Volume 11, Pages 1525-1533.
[DOI:10.1007/s42417-022-00655-0](https://doi.org/10.1007/s42417-022-00655-0)
3. Shreeharsha Dombale, **Siddesha H**, Sreedhar B M, Sujay Raghavendra (2023). Machine Learning Models for Damage Detection in Steel Beams. *International Journal of System Assurance Engineering and Management*, Volume 14, Pages 1898-1911
[DOI:10.1007/s13198-023-02020-0](https://doi.org/10.1007/s13198-023-02020-0)
4. **Siddesha Hanumanthappa** (2024). Damage detection in steel beam using Generalized Flexibility Quotient Difference based damage index and Artificial Neural Network. *Journal of Vibration Engineering and Technologies*, Volume 12, Pages 2715-2728
[DOI:10.1007/s42417-023-01009-0](https://doi.org/10.1007/s42417-023-01009-0)
5. **Siddesha Hanumanthappa**, T.K. Bharath, H.O. Chethan Naik, Vaishali, D.S. Rajendra Prasad and A.R. Pradeep (2025). Investigation on partial replacement of cement with coconut shell ash and coarse aggregate with coconut shell with the addition of steel fibers. *Structural Engineering and Mechanics*, Vol. 93, No. 2 (2025), Pages 125-134
<https://doi.org/10.12989/sem.2025.93.2.125>
6. **Siddesha Hanumanthappa**, D.S Rajendra Prasad, Pavan Kumar Emani and H.D. Sharma (2025). Machine learning regression and optimal neural network models for the prediction of compressive strength of high strength SCC-A comparative study. *Structural Engineering and Mechanics*, Vol. 95, No. 4 (2025), Pages 263-279.
DOI: <https://doi.org/10.12989/sem.2025.95.4.263>
7. **Siddesha Hanumanthappa**, Bharath T. K., Chethan Naik H. O., Vaishali Thimmayya, Basavashree B. Hiremath, V. Amruthavarshini (2026). Utilization of coconut shell ash and coconut shell in the production of sustainable concrete.

Publications in International Conferences

- 1 **Siddesha Hanumanthappa, Ramya P (2023)**. The influence of blended polypropylene and polyethylene fibres on mechanical and durability properties of concrete. *Materials Today: Proceedings*, Volume 88, Part 1, 2023, Pages 19-28. DOI:10.1016/j.matpr.2023.04.459
- 2 **V Amruthavarshini, Siddesha Hanumanthappa (2023)**. Comparative study of ANN and ANFIS models for detection of damages due to cracks in single bay framed structure. *Materials Today: Proceedings*, Volume 88, Part 1, 2023, Pages 93-99. <https://doi.org/10.1016/j.matpr.2023.05.021>
- 3 V. Amruthavarshini, C. T. Monish Muthamma, **Siddesha Hanumanthappa (2025)**. Flexibility Energy Quotient Difference Method for Structural Damage Detection in Beams. *Lecture Notes in Civil Engineering*, pp 453–463, https://link.springer.com/chapter/10.1007/978-981-97-9885-8_43
- 4 Kumar A, Pradeep A.R., Vijayanand M, **Siddesha H (2024)**. Analysis of Multistory Steel Framed Structure with Different Infills Subjected to Seismic Loading. *Lecture Notes in Civil Engineering*, Volume 457, Pages 389-403. DOI:10.1007/978-981-99-9610-0_31
- 5 **Siddesha Hanumanthappa, A. S. Sinchana & Pavan Kumar Emani (2024)**. Structural Damage Detection in Double-Tapered Steel Beam Using Modal Strain Energy Method. *Technologies for Sustainable Buildings and Infrastructure*, Springer, Pages pp 23–33. DOI:https://doi.org/10.1007/978-981-97-4844-0_3
- 6 V. Amruthavarshini, **Siddesha Hanumanthappa, S. Sailesh (2024)**. Identification of Structural Damage in Single Bay Steel Frame Using ANFIS Software. *Proceedings of the First Artificial Intelligence Summit on Smart Sustainable Society*, Vol 1259, Springer, Singapore. https://doi.org/10.1007/978-981-97-7592-7_15.

(I) FACULTY DEVELOPMENT PROGRAMME

Workshops Attended (Inhouse/outside) :			
Sl. No	Nature of Programme	Period	Name of the Institution/Training center
1	National Seminar and Deminar on Recent Development in design and construction technologies (REDECON-2010)	28 th , 29 th and 30 th January 2010	NIMHANS Campus, Hosur Road, Bangalore-560 028
2	Five day short Term Training on Application of Finite Element Method in Civil Engineering	30 th May to 3 rd June 2011	2Department of Civil Engg., NMIT, Nitte.
3	Faculty development program on Civil FEM	30 th -31 st January 2012	Innovent and VTU
4	Advanced Course on Health Assessment of Structures using Innovative Technologies	8-10 February 2012	CSIR-SERC Chennai
5	National Seminar on Emerging trends in Civil Engineering	19 th April 2012	Department of Civil Engg., The Oxford College of Engineering

6	Recent Developments in Concrete Science and Technology	28-29 th February 2012.	Department of Civil Engineering, Siddaganga Institute of Technology, Tumkur
7	Statistical application in civil engineering (In-house)	25 th to 30 th of June 2012.	Dept of civil Engg., Siddaganga Institute of Technology, Tumkur
8	International colloquium on Nanotechnology in Construction	16 th February 2013	Department of Civil Engineering, Siddaganga Institute of Technology, Tumkur
9	Faculty Development International Workshop on Analytical and Computational Solid Mechanics (ACSM-2013)	5 th – 09 th August 2013.	Department of Civil Engg., NITTE Meenakshi Institute of Technology, Bangalore
10	One day workshop on “STRUCTURAL DYNAMICS: THEORY, EXPERIMENTS & APPLICATIONS (Smart Structures, Structural Health Monitoring, Advanced Sensing Technologies & Energy Harvesting)”	22 nd March, 2014	Indian Institute of Technology, Delhi. And IVS Noble Solutions
11	Workshop on Structural Modelling and Nonlinear Analysis for Seismic Vulnerability Assessment of RC frame buildings using the software SAP 2000	28 th April-2 nd May 2014	BMS College of Engineering, Department of Civil Engineering, Bengaluru
12	FDP on Research Areas of Structural Engineering	22 nd December 2015	NIE, Mysore
13	Industry Academia Conclave: Employability Enhancement of Post Graduate Students	5 th February 2016	R.V. College of Engineering, Bengaluru
14	Finite Element Method	14-24 July 2016	IIT Hyderabad
15	New model curriculum for first year BE/B.Tech-CBCS Detailed Syllabus (2018-19) as per Outcome-Based Education (OBE) format including course outcomes (CO) and Blooms Taxonomy	09 th May 2018	BNMIT, Bengaluru
16	Two day seminar on Retrofitting of Steel Structures	27 th – 28 th September 2019	Structural Steel Research Group held at IIT Hyderabad

