RESUME

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Scientist
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Educational Qualifications

Degree	Institute	CGPA	Year
Ph.D. (Civil Engineering)	IIT Roorkee	9.07/10	Pursuing
M.Tech.(Highway Technology)	RASTA-Center for Road Technology, Bengaluru.	9.51/10	2018
B.E (Civil Engineering)	P.E.S. College of Engineering, Mandya.	9.38/10	2016

Areas of Interest

- Pavement Material Characterization and Pavement Design
- Self-Healing Pavements
- Artificial Intelligence and Machine Learning for Civil Engineering
- Road Asset Management systems (RAMS) and Data-Base Management Systems (DBMS)
- Pavement condition assessment and Pavement Performance Modeling
- Airfield Pavements, ACN-PCN (ACR-PCR) Method of Airfield Evaluation
- Pavement Materials Recycling

Software Skills

HDM-4, MATLAB, MX Roads, Auto CAD, IIT-PAVE, SPSS.

Honours & Awards

- Received the *Gold Medal* for securing the highest CGPA in all post-graduation semesters at the university level.

Research and Consultancy Experience

Position	Institute/Organization	Nature of Projects	Year
Scientist	Central Road Research Institute (CSIR-CRRI), New Delhi.	Research, Consultancy, and Teaching.	Dec.2020 - **till date**
Assistant Engineer (Highways)	SAI Consulting Engineers Pvt. Limited. (SYSTRA)	Detailed Design, DPR Preparation.	June 2019 – Nov. 2020
Deputy Engineer	LEA Associates South Asia Pvt. Limited (LASA).	Road Asset Management Systems.	Aug. 2018 - June 2019
Project Intern	AECOM India Pvt. Ltd.	Road Asset Management Systems.	Dec. 2017 – June 2018

Research Projects (Completed/Ongoing) at CRRI as Principal (PI) / Co. Principal Investigator (Co. PI)

Sl. No.	Project Title	Sponsoring Agency	Project No. & Budget
1.	Study on Self-healing Performance of Bituminous Mixes using Microcapsule Encapsulate Rejuvenators **(PI)**	CSIR-CRRI	OLP - 0647 (16.10 Lakhs)
2.	Assessing the Suitability of Imperial Smelting Furnace Slag (ISFS) as a Construction Material in Flexible and Rigid Pavements. **(Co. PI)**	CSIR-CRRI	OLP - 0648 (10.49 Lakhs)
3.	Performance Evaluation of Road Constructed using Brick Aggregates in Sub-Base and Foam Bitumen in Base Layers **(PI)**	NHIDCL, Govt. of India	GAP-4707 (33.00 Lakhs)
4.	Performance Evaluation of PMGSY Roads Constructed Using New Technology, Full Depth Reclamation (FDR) with Cement and Additive **(PI)**	NRIDA, Govt. of India	GAP - 4762 (46.88 Lakhs)
5.	Technical evaluation of Pavement Classification Number (PCN) and strengthening of HAL Airport (Runway, Taxiway, and Aprons), Bengaluru. **(PI)**	HAL, Bengaluru	SSP - 4760 (41.30 Lakhs)
6.	Quality Control Supervision and Post Construction Assessment of the wearing course of the Race Track at Buddh International Circuit, Greater Noida. **(Co. PI)**	Solitaire Engineering Corporation Ltd.	SSP - 4727 (11.80 Lakhs)
7.	Performance Evaluation of Epoxy Asphalt Overlay on PQC at Mumbai Pune Expressway (Chainage from km 34+500 to km 38+390). **(Co. PI)**	SSPL-KIBPL (JV)	SSP - 4770 (41.30 Lakhs)

*OLP = Other lab Projects (Funded by CSIR), *GAP = Grant-in-Aid Projects (Funded by Central Government Organizations), *SSP = Sponsored Research Projects (Funded by Industries/State Agencies), *FBR = Focus Based Research

Research Projects (Completed/Ongoing) at CRRI as Team Member

Sl. No.	Project Title	Sponsoring Agency	Project No. & Budget
8.	Development of Pavement Structural Health Index for Network-Level Evaluation of Flexible Pavements	CSIR-CRRI	OLP - 0634 (18.50 Lakhs)
9.	Delhi Cluster-"Delhi Research Implementation and Innovation" (DRIIV), Theme Solid Waste Management, WP-6 Use of construction & demolition wastes, incinerated residues in road construction	Principal Scientific Advisor (PSA), Government of India.	GAP - 4667 (5.77 lakh)
10.	Condition Assessment Using Modern Data Collection Techniques and Preparation of Annual Maintenance Plan using HDM-4 of Odhisa PWD Roads	Odisha Works Department.	SSP - 4704 (1588 Lakhs)
11.	Recycling of Ghazipur Municipal Solid Wastes for Road Embankment and Subgrade Construction	East Delhi Municipal Corporation (EDMC), New Delhi.	SSP - 4662 (17.70 Lakhs)
12.	Design, Construction, Supervision, and Pavement Performance Evaluation of Road constructed by using Red Mud.	Hindalco Industries Ltd.	SSP - 4706 (47.20 Lakhs)

Sl. No.	Project Title	Sponsoring Agency	Project No. & Budget
13.	External technical/Quality and Safety Audit of the16-lane carriageway in the stretches of UER-II (NH-344m&NH-344N) and Dwaraka Expressway (NH-248Bb), total 8 construction Packages under PIU, NHAI, Dwaraka, New Delhi	NHAI	SSP - 4731 (224.2 Lakhs)
14.	Development of Fatigue Performance Model for the Full Depth Recycling Pavement Layer	CSIR	FBR – 040301 (76.00 Lakhs)
15.	Development of Performance Prediction Models for Geosynthetic-Reinforced Pavements	Ministry of Textiles	GAP – 4791 (231.0 Lakhs)

Consultancy Projects (Completed/Ongoing) at CRRI

Sl. No.	Project Title	Nature of Project & Role	Project No. & Budget
16.	Development of Airfield Pavement Management System (APMS) for Ten Airports of India	Consultancy Project (Member)	CNP - 2507 (531 lakhs)
17.	Capsule on Airfield Engineering	Consultancy Project (Member)	CNP-2692
18.	Creation of Research and Development Facilities and a Center of Excellence in Highway Sector for BSRDC, Patna Bihar.	Consultancy Project (Member)	CNP - 2711 (70.80 Lakhs)
19.	Review of DPR's of Karnataka, Maharashtra, Manipur and Sikkim States for NRIDA	Consultancy Project (Member)	CNP - 2742 (10.60 Lakh)
20.	Review of DPR's of Maharashtra, Sikkim, Pondicherry and Uttarakhand States for NRIDA	Consultancy Project (Member)	CNP - 2751 (6.50 Lakh)
21.	Customized Training Programme on "Capsule on Airfield Engineering", for the officers of BRO, December 20-24, 2021.	Consultancy Project (Member)	CNP – 2770 (10.03 Lakhs)
22.	Functional and Structural Evaluation of DND Flyway and Mayur Vihar link road for Maintenance and Rehabilitation Measures	Consultancy Project (Member)	CNP - 2778 (37.76 Lakhs)
23.	Design of Flexible pavement for New Transport Nagar, Aligarh, Uttar Pradesh	Consultancy Project **(Project Leader)**	CNP - 2820 (14.16 Lakhs)
24.	Evaluation of Delhi PWD Bituminous Roads for Strengthening Requirements	Consultancy Project **(Project Leader)**	CNP - 2818 (7.08 Lakhs)
25.	Customized online training programme on various topics for the officials of NRIDA (Working under PMGSY projects)	Consultancy Project (Member)	CNP – 2846 (15.57 Lakhs)
26.	Technical Audit of Indore Gujarat Sections of NH-47 in MP State	Consultancy Project (Member)	CNP - 2826 (59.00 Lakhs)
27.	Customized Training on Highway Development and Management Tool (HDM-4) at Road Development Authority, Srilanka	Consultancy Project (Member)	CNP - 2778 (36.86 Lakhs)

Sl. No.	Project Title	Nature of Project & Role	Project No. & Budget
28.	Evaluation of Pavement Design for NH-08 in the State of Tripura.	Consultancy Project **(Project Leader)**	CNP - 2931 (5.90 Lakhs)
29.	Evaluation of NDMC Roads for suggesting recommendations for suitable maintenance and rehabilitation measures and Third party construction quality supervision works under the jurisdiction of SE (Road) North & South	Consultancy Project (Member)	CNP - 2990 (88.50 Lakhs)
30.	Validation of E-NEXCO Eye Network Survey Vehicle System	Consultancy Project (Member)	CNP - 2758 (8.26 Lakhs)

Projects involved at Consulting firms

Sl. No.	Project Title	Organization
1.	Consultancy Services for Preparation of Feasibility Study and Detailed Project Report for Selected Corridors of State Highways in Uttarakhand under Uttarakhand State Highway Improvement Project (USHIP)Package No.:1 (Kumaun Zone); Total Length 345.065 Kms.	SYSTRA
2.	Detail Design and Engineering Consultancy services for Widening and Upgradation to 2 Lane with Paved Shoulder configuration and Geometric Improvements from, KM 166+000 TO KM 208+000 (Package-4) on Aizawl – Tuipang section of NH-54 in the state of Mizoram on Engineering, Procurement, and Construction (EPC) mode with JICA loan assistance	SYSTRA
3.	Preparation of Detailed Engineering Design and drawing for Railway and Tunnel access roads under ETIHAD Railway PKG-2A & 2D with AREMA code	SYSTRA
4.	Assam Roads Asset Management System (A World Bank Project), ARAM Sunder PWRD Assam	LASA
5.	Consultancy Services to Develop and Establish Web GIS Based Road Asset Management System for Mizoram PWD, Mizoram.	LASA
6.	Transport Infrastructure Management System (TIAMS), Addis Ababa, Ethiopia.	LASA
7.	Program Coordination and Management Consultancy for Asom Mala (Task 2 - Road Network Data Collection for SH & MDR Network Including Updation of Data in RAMS and Preparation of Multi-Year Asset Management Plan), Assam.	LASA
8.	Development of Road Management System (RAMS)and Preparation of Road Maintenance Plan for the Andhra Pradesh Road Network	AECOM

Patents Filed

Sl. No.	Title of the Invention	Application No.
1.	Bituminous Mix for Flexible Pavement using Imperial Smelting Furnace Slag (ISFS)	202211063795 A
2.	Concrete Mix for Rigid Pavement Using Imperial Smelting Furnace Slag (ISFS)	202211063794 A

Membership in Professional Organizations (National/International)

1. Life membership of Indian Road Congress (IRC)) ELM-103547

2. Life membership of Indian Geotechnical Society (IGS) LM-1275

Contributions to the National Committees

1. Invitee for developing Code of *Guidelines for Soil and Granular Material Stabilization Using Cement, Lime & Fly Ash*, IRC SP 89 document.

PUBLICATIONS

Journals (SCI/SCOPUS/Peer Reviewed)

1. **Gowda, S.,** Murthy, Y. I., & Gupta, A. Explainable AI-based *support vector machine models for soaked CBR prediction*. *International Journal of Pavement Research and Technology* (2025) (E**SCI, Impact Factor - 3.0**). *(Accepted)*

2. **Gowda, S.,** Nandan, C.S., Jayaram, M.A., Gupta, A., Jaya, R.S. (2025). *Prediction of Deflection Bowl Parameters by Gain Ratio Enabled Feature Selection and Machine Learning Ensembles.* Journal of Transportation Engineering: Part B, Pavements, *(ASCE)*. DOI: https://doi.org/10.1061/JPEODX.PVENG-1630 (**SCIE, Impact Factor – 1.9**)

3. **Gowda, S.,** Ganesha, K., Vijaykumar, S., Gupta, A., and Jaya, R.S. (2024). *Sensitivity Analysis of HDM-4 Models for Developing Road Asset Management in India: A Case Study on Regional Calibration Approach.* Indian Highways, Indian Roads Congress. Volume: 52; Number: 11; Pages: 36 - 52; Month: November - 2024.

4. **Gowda, S., and** Gupta, A. *Advancements in Road Asset Management Systems: Leveraging Image Processing and Machine Learning for Enhanced Decision Making–A Systematic Review.* Indian Highways, Indian Roads Congress. Volume: 52; Number: 06; Pages: 27-41; Month: June - 2024.

5. Gupta, A., **Gowda, S**., Tiwari, A., & Gupta, A. K. (2024). *XGBoost-SHAP framework for asphalt pavement condition evaluation.* Construction and Building Materials, Vol. 426, ISSN 0950-0618. https://doi.org/10.1016/j.conbuildmat.2024.136182 (**SCIE, Impact Factor - 7.4**)

6. Kavitha, G., Kunjar, V., *Gowda, S.* et al. *Evaluation of drainage ability of granular subbase through large-scale model pavement studies and machine learning models.* *Innovative Infrastructure Solutions*. 9, 82 (2024). https://doi.org/10.1007/s41062-024-01391-y (**SCIE, Impact Factor - 2.4**)

7. Gupta, A., Prajwal M G., **Gowda, S.,** and Jaya R S. (2024). *Development of Correlation Between Indirect Tensile Strength and Resilient Modulus for VG-40 Bituminous Concrete.* Indian Highways, Indian Roads Congress. Volume: 52; Number: 01; Pages: 17-27; Month: January - 2024.

8. **Gowda, S**.; Kunjar, V.; Gupta, A.; Kavitha, G.; Shukla, B.K.; Sihag, P. *Prediction of the Subgrade Soil California Bearing Ratio Using Machine Learning and Neuro-Fuzzy Inference System Techniques: A Sustainable Approach in Urban Infrastructure Development.* Urban Sci. 2024, 8, 4. https://doi.org/10.3390/urbansci8010004 (E**SCI, Impact Factor - 2.1**)

9. Gupta, A., Kumar, P., & **Gowda, S.** *Advancing Flexible Pavement Structural Health Monitoring: A user-friendly Approach for Network-Scale Assessments.* *International Journal of Pavement Research and Technology* (2023). https://doi.org/10.1007/s42947-023-00395-8 (E**SCI, Impact Factor - 3.0**)

10. **Gowda, S.,** Kunjar, V., & Gupta, A. et al. *Municipal incinerated solid waste bottom ash as sustainable construction material in the construction of flexible pavements*. *Journal of Material Cycles and Waste Management (2023).* https://doi.org/10.1007/s10163-023-01809-2 (**SCIE, Impact Factor - 3.1**)

11. **Gowda, S.,** Kavitha, G. & Gupta, A. *Economic Analysis and Prioritisation of Non-core Roads in India: A Case Study*. *International Journal of Pavement Research and Technology* (2022). https://doi.org/10.1007/s42947-022-00250-2 (E**SCI, Impact Factor - 3.0**).

12. **Gowda, S.,** Niranjan, A. S., Gupta, A., & Kavitha, G. (2024). *Analysis of rutting behaviour of recycled asphalt binder and rejuvenated recycled asphalt binder by multiple stress creep recovery (MSCR) test.* IOP Conference Series: Earth and Environmental Science, 1326, 012065. https://doi.org/10.1088/1755-1315/1326/1/012065 (**Scopus Indexed**).

13. **Gowda, S.,** Kumar, P., Niranjan, A. S., Gupta, A., & Kavitha, G. (2024). *Influence of recycled asphalt and rejuvenated recycled asphalt on mechanical performance and chemical makeup of asphalt binder.* IOP Conference Series: Earth and Environmental Science, 1326, 012064. https://doi.org/10.1088/1755-1315/1326/1/012064 (**Scopus Indexed**).

Book Chapters

1. **Gowda, S**., Nandan, C.S., Jayaram, M.A., Gupta, A., Kavitha, G. (2025). *Unsupervised Clustering of Asphalt Pavement Conditions with Principal Component Analysis-aided Dimensionality Reduction*. In: Sahu, P.K., Saboo, N., Majumdar, B.B., Pani, A. (eds) Proceedings of the 7th International Conference of Transportation Research Group of India (CTRG 2023), Volume 1. CTRG 2023. Lecture Notes in Civil Engineering, vol 417. Springer, Singapore. https://doi.org/10.1007/978-981-97-9654-0_7

2. Gupta, A., **Gowda, S.,** Nandan, C.S., Kavitha, G. (2025). *Machine Learning Approach for Deflection Bowl Parameter Prediction in Flexible Pavements: A Random Forest Algorithm-Based Study*. In: Sahu, P.K., Saboo, N., Majumdar, B.B., Pani, A. (eds) Proceedings of the 7th International Conference of Transportation Research Group of India (CTRG 2023), Volume 1. CTRG 2023. Lecture Notes in Civil Engineering, vol 417. Springer, Singapore. https://doi.org/10.1007/978-981-97-9654-0_2

3. *Gowda, S.,* Prakash, R., Kavitha, G., Gupta, A. (2024). *Comparison Study on Various Backcalculation Techniques for Estimating the Resilient Modulus of Asphalt Pavement Layers*. In: Ravi Shankar, K., Prasad, C., Mallikarjuna, C., Suresha, S. (eds) Recent Advances in Transportation Systems Engineering and Management—Volume 2. CTSEM 2023. Lecture Notes in Civil Engineering, vol 545. Springer, Singapore. https://doi.org/10.1007/978-981-97-6071-8_3 (**Scopus Indexed**).

4. Kavitha, G., Savanur, J., **Gowda, S.,** Gupta, A. (2025). *Alternative Proposal to Intersection Design Connecting National Highway-48 Belgaum*. In: Ravi Shankar, K.V.R., Prasad, C.S.R.K., Mallikarjuna, C., Suresha, S.N. (eds) Recent Advances in Transportation Systems Engineering and Management—Volume 1. CTSEM 2023. Lecture Notes in Civil Engineering, vol 544. Springer, Singapore. https://doi.org/10.1007/978-981-97-6075-6_14 (**Scopus Indexed**).

5. Shukla, B.K. et al. (2025). Extensive Evaluation of Eco-Friendly Green Concrete Construction Procedures Utilizing Recycled Waste Materials. In: Agnihotri, A.K., Reddy, K.R., Bansal, A. (eds) Waste Management. EGRWSE 2023. Lecture Notes in Civil Engineering, vol 419. Springer, Singapore. https://doi.org/10.1007/978-981-97-9777-6_3

6. **Gowda, S.,** Nandan, C.S., Jayaram, M.A., Gupta, A., Jaya, R.S. (2024). *Unsupervised Clustering of Asphalt Pavement Conditions Using Fuzzy C-Means Algorithm with Principal Component Analysis Aided Dimensionality Reduction.* In: Verma, O.P., Wang, L., Kumar, R., Yadav, A. (eds) Machine Intelligence for Research and Innovations. MAiTRI 2023. Lecture Notes in Networks and Systems, vol 831. Springer, Singapore. https://doi.org/10.1007/978-981-99-8135-9_4 (**Scopus Indexed**).

7. **Gowda, S.,** Vaishakh, K., Gupta, A., Prakash, R., Kavitha, G. (2024). *Modeling of Deflection Basin Parameters of Asphalt Pavements Using Artificial Neural Networks and Adaptive Neuro-Fuzzy Inference Systems.* In: Singh, D., Maji, A., Karmarkar, O., Gupta, M., Velaga, N.R., Debbarma, S. (eds) Transportation Research. TPMDC 2022. Lecture Notes in Civil Engineering, vol 434. Springer, Singapore. https://doi.org/10.1007/978-981-99-6090-3_2 (**Scopus Indexed**).

8. Singh Yadav, S., Gupta, A., **Gowda, S.,** Aggarwal, Y. (2024). *Development of Maintenance Priority Index for Urban Road Network.* In: Singh, D., Maji, A., Karmarkar, O., Gupta, M., Velaga, N.R., Debbarma, S. (eds) Transportation Research. TPMDC 2022. Lecture Notes in Civil Engineering, vol 434. Springer, Singapore. https://doi.org/10.1007/978-981-99-6090-3_1 (**Scopus Indexed**).

9. Kumar, P., **Gowda, S**., Gupta, A. (2024). *Implementation of Airfield Pavement Management System in India*. In: Dhamaniya, A., Chand, S., Ghosh, I. (eds) Recent Advances in Traffic Engineering. RATE 2022. Lecture Notes in Civil Engineering, vol 377. Springer, Singapore. https://doi.org/10.1007/978-981-99-4464-4_37 (**Scopus Indexed**).

10. B.K. Shukla, A. Gupta, **S. Gowda,** et al., *Constructing a greener future: A comprehensive review on the sustainable use of fly ash in the construction industry and beyond*, *Materials Today: Proceedings (2023)*, https://doi.org/10.1016/j.matpr.2023.07.179, (**Scopus Indexed**).

Magazines:

1. Ambika Behl and **Sachin Gowda**, *Self-Healing Pavements: The Future of Road Infrastructure,* India's Top Construction, Infrastructure & Civil Engineering Magazine, Pages: 30-35; Month: June - 2024. *https://www.cecr.in/june-2024-issue*

International and National Conferences:

1. *Sachin Gowda*, Nikhil Saboo, Gottumukkala Bharath and Aakash Gupta; *Experimental Study on the Influence of Out-of-Band Gradations and Ageing on Fracture Properties of Asphalt Concrete using IDEAL-CT Test,* Advances in Materials and Pavement Performance Prediction (AM3P), 7 - 9 May 2025, Vienna @ TU Wien, Austria.

2. *Sachin Gowda*, Aakash Gupta, and Vasant G Havanagi; *Pavements through waste valorization: MSWI Bottom ash as a viable fine aggregate alternative*, Advances in Materials and Pavement Performance Prediction (AM3P), 7 - 9 May 2025, Vienna @ TU Wien, Austria.

3. *Sachin Gowda,* Ambika Behl, Kadhiravan Shanmuganathan, and Aakash Gupta; *Microcapsules-Encapsulated Rejuvenators for Asphalt Self-Healing: Effects on Pavement Performance,* Advances in Materials and Pavement Performance Prediction (AM3P), 7 - 9 May 2025, Vienna @ TU Wien, Austria.

4. Ayush Sharma, Aakash Gupta, *Sachin Gowda; Optimizing pavement performance prediction with stacking regressor models*, Advances in Materials and Pavement Performance Prediction (AM3P), 7 - 9 May 2025, Vienna @ TU Wien, Austria.

5. *Sachin Gowda,* Aakash Gupta; *Performance and Environmental Evaluation of Incinerated Bottom Ash as Fine Aggregate in Asphalt Mix,* International Airfield and Highway Pavements Conference (Pavements 2025) (ASCE), Glendale, Arizona, June 8–11, 2025. *(Accepted)*

6. Aakash Gupta, *Sachin Gowda, Enhanced Pavement Condition Assessment through Stacking Regressor Techniques,* International Airfield and Highway Pavements Conference (Pavements 2025) (ASCE), Glendale, Arizona, June 8–11, 2025. *(Accepted)*

7. *Sachin Gowda,* Ambika Bhel, Kadhiravan Shanmuganathan and Aakash Gupta, *Study on the Influence of Microcapsule-Encapsulated Rejuvenators on Performance of Asphalt Mixes,* 11th European Asphalt Technology Association (EATA) Conference, Mole Vanvitelliana in Ancona (Italy) from 10 to 12 June 2025. *(Accepted)*

8. Ayush Sharma, Aakash Gupta and *Sachin Gowda; An Advanced Methodology for Pavement Condition Assessment Using a Stacking Regressor Model*, 9th International Conference on Soft Computing: Theory and Applications, SoCTA-2024 held at Malaviya National Institute of Technology (MNIT) Jaipur Rajasthan, India, 27-29th December 2025.

9. Vandana Sharma, **Sachin Gowda,** and Aakash Gupta; *Prediction of Deflection bowl Parameters of Asphalt Pavement Using Machine Learning Techniques*, 15th International Conference on Transportation Planning and Implementation Methodologies for Developing Countries **(TPMDC),** IIT Bombay, December 18-20, 2024.

10. Niranjan A S, **Sachin Gowda**, Aakash Gupta, G Kavitha; *Characterizing the chemical composition and rutting performance of RAP and RAP-rejuvenated bitumen*, New Horizons in Civil Engineering with a theme of Innovative Civil Engineering Materials and Systems, Organised by the Department of Civil Engineering, MIT MANIPAL 12-14th December 2024.

11. Aakash Gupta, **Sachin Gowda**; *Prediction of modified structural number for asphalt pavements using machine learning algorithms*, New Horizons in Civil Engineering with a theme of Innovative Civil Engineering Materials and Systems, Organised by the Department of Civil Engineering, MIT MANIPAL 12-14th December 2024.

12. **Sachin Gowda**, Nandan C S, M A Jayaram, Aakash Gupta, Sampath Kumar Pasupunuri and Jays R S*; Machine Learning-Based Ensemble Techniques for Optimal Prediction of Pavement Condition,* Transportation Research Board, 103rd Transportation Research Board (**TRB**) Annual Meeting, Washington, DC, January 7–11, 2024.

13. Aakash Gupta, **Sachin Gowda**, Sampath Kumar Pasupunuri; *Prediction of Modified Structural Number for Asphalt Pavements Using Machine Learning Algorithms*, Transportation Research Board, 103rd Transportation Research Board (**TRB**) Annual Meeting, Washington, DC, January 7–11, 2024.

14. Aakash Gupta, **Sachin Gowda**, Nandan C S, G Kavitha; *Machine Learning Approach for Deflection Bowl Parameter Prediction in Flexible Pavements: A Random Forest Algorithm-Based Study*, 7th Conference of the Transportation Research Group of India (**CTRG-2023**) between 17th to 20th December, Surat, India.

15. **Sachin Gowda**, Nandan C S, M A Jayaram, Aakash Gupta, G Kavitha; *Unsupervised Clustering of Asphalt Pavement Conditions with Principal Component Analysis Aided Dimensionality Reduction*, 7th Conference of the Transportation Research Group of India (**CTRG-2023**) between 17th to 20th December, Surat, India.

16. **Sachin Gowda**, Prakash R, G Kavitha, and Aakash Gupta; *Comparison Study on Various Backcalculation Techniques for Estimating the Resilient Modulus of Asphalt Pavement Layers*, 9th Conference on Transportation Systems Engineering and Management (CTSEM 2023) between October 12-14, 2023 Organised by National Institute of Technology Warangal, India.

17. G Kavitha, Junaid Savanur, **Sachin Gowda** and Aakash Gupta; *Alternative Proposal to Intersection Design connecting National Highway-48 Belgaum: A case study*, 9th Conference on Transportation Systems Engineering and Management (CTSEM 2023) between October 12-14, 2023 Organised by National Institute of Technology Warangal, India.

18. G Kavitha, Nandini N, **Sachin Gowda**, and Aakash Gupta; *Experimental Studies on Bitumen Modified with Crumb Rubber in the Laboratory*, 9th Conference on Transportation Systems Engineering and Management (CTSEM 2023) between October 12-14, 2023 Organised by National Institute of Technology Warangal, India.

19. G Kavitha, Varun T M, Kiran M, **Sachin Gowda**, and Aakash Gupta; *Exploring Cement-Treated Base Layers: Laboratory Performance and Economic Viability in Road Pavements*, 9th Conference on Transportation Systems Engineering and Management (CTSEM 2023) between October 12-14, 2023 Organised by National Institute of Technology Warangal, India.

20. G Kavitha, Prathap S, Abhishek G Malji, Sachin Gowda and Aakash Gupta; *Geometric Design and Cloverleaf Intersection Planning for a 14.8 Km 6-Lane Greenfield Highway in Bhandara, Maharashtra,* 9th Conference on Transportation Systems Engineering and Management (CTSEM 2023) between October 12-14, 2023 Organised by National Institute of Technology Warangal, India.

21. **Sachin Gowda**, Nandan C S, M A Jayaram, Aakash Gupta, and Jays R S; *Unsupervised Clustering of Asphalt*

Pavement Conditions using Fuzzy C-Means Algorithm with Principal Component Analysis Aided Dimensionality Reduction, International Conference on MAchine inTelligence for Research & Innovations (MAiTRI-2023 Summit) 01 – 03 September 2023 (Hybrid Mode), organized by NIT Jalandhar.

22. **Sachin Gowda**, Pramod Kumar, Niranjan A S, Aakash Gupta, and G Kavitha; *Influence of Recycled Asphalt and Rejuvenated Recycled Asphalt on Mechanical Performance and Chemical Makeup of Asphalt Binder,* International Conference on Creative and Innovative Solutions in Civil Engineering (CISCE-2023) August 11-12th, 2023 (Hybrid Mode), organized by MNIT Jaipur.

23. **Sachin Gowda**, Niranjan A S, Aakash Gupta, and G Kavitha; *Analysis of Rutting Behaviour of Recycled Asphalt Binder and Rejuvenated Recycled Asphalt Binder by Multiple Stress Creep Recovery (MSCR) Test*, International Conference on Creative and Innovative Solutions in Civil Engineering (CISCE-2023) August 11-12th, 2023 (Hybrid Mode), organized by MNIT Jaipur.

24. Aakash Gupta, Prajwal M G, **Sachin Gowda**; *Evaluating the Performance of Gradient Boosted Trees in Predicting Flexible Pavement Deflection Parameters,* International Conference on Creative and Innovative Solutions in Civil Engineering (CISCE-2023) August 11-12th, 2023 (Hybrid Mode), organized by MNIT Jaipur.

25. Pramod Kumar, **Sachin Gowda**, Saraswati Setia, Aakash Gupta, Sunil Jain; *Rejuvenated RAP Binder Blends' Fatigue and Healing Characteristics,* International Conference on Recent Trends in Engineering and Science (RTES-2023), 2nd – 3rd May 2023 conducted by, Sardar Vallabhbhai National Institute of Technology, Surat.

26. Pramod Kumar, **Sachin Gowda**, Saraswati Setia, Aakash Gupta, and Sunil Jain; Review of Self-Healing Asphalt Materials and their Evaluation Indices, National Conference on Sustainable Development of Smart Cities Infrastructure' (SDSCI–2023) during May 27–28, 2023 conducted by, National Institute of Technology Kurukshetra.

27. Bishnu Kant Shukla, Aakash Gupta, **Sachin Gowda**, Yuvraj Srivastav; *Recycling fly ash as a construction material: An environmentally sustainable approach* [UCC-2023-136], Proceedings of the International UKIERI Concrete Congress held at Dr B R Ambedkar National Institute of Technology Jalandhar, Punjab, India, on 14 - 17 March 2023 (Virtual Mode).

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29. **Sachin Gowda**, Aakash Gupta, Vaishakh K, G Kavitha; *Modeling asphalt pavement condition using artificial neural networks and adaptive neural fuzzy inference system approaches*, Advances in Materials and Pavement Performance Prediction **(AM3P)** 22-24 May 2023, Hong Kong. (Accepted)

30. Aakash Gupta, Pradeep Kumar, **Sachin Gowda**; *A Simplified Tool for Flexible Pavement Structural Health Assessment at Network Level*, Advances in Materials and Pavement Performance Prediction **(AM3P)** 22-24 May 2023, Hong Kong. (Accepted)

31. **Sachin Gowda**, Vaishakh K, Aakash Gupta, G Kavitha; *Assessing the suitability of Municipal Solid Waste Incineration-Bottom Ash as a construction material in flexible pavements*, International Airfield & Highway Pavements Conference **(ASCE),** Austin, Texas. 14-17 June 2023. (Accepted)

32. **Sachin Gowda**, Vaishakh K, Aakash Gupta, Pradeep Kumar, G Kavitha; *Effectiveness of Adaptive Neuro-fuzzy Inference Systems in modeling the deflection bowl parameters of asphalt pavements*, International Airfield & Highway Pavements Conference **(ASCE),** Austin, Texas. 14-17 June 2023. (Accepted).

33. Pradeep Kumar, Manoranjan Parida, Aakash Gupta, and **Sachin Gowda**; *Pavement Management System for Maintenance of Airfield Pavement Network in India,* International Airfield & Highway Pavements Conference

(ASCE), Austin, Texas. 14-17 June 2023. (Accepted)

34. **Sachin Gowda**, Vaishakh K, Aakash Gupta, Prakash R and G Kavitha; *Modeling of deflection basin parameters of asphalt pavements using Artificial Neural Networks and Adaptive Neuro-fuzzy Inference Systems*, 14th International Conference on Transportation Planning and Implementation Methodologies for Developing Countries **(TPMDC),** IIT Bombay, 19-21 December 2022.

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36. **Sachin Gowda**, Vaishakh K, Aakash Gupta, G Kavitha; *Application of Artificial Neural Networks and Adaptive Neural Inference System approaches in Modeling of Asphalt Pavement Condition*, 7th International Conference on Soft Computing: Theory and Applications, **SoCTA**, Himachal Pradesh University, Shimla, India. 16-18 December 2022.

37. **Sachin Gowda**, Prakash b, Aakash Gupta and G Kavitha; *Study on Analysis of Co-Relation between Various Algorithms used for Back-Calculating the Elastic Modulus of Asphalt Pavement*, 2nd International Conference on Construction materials and Structures (Virtual Mode) ICCMS-2022, Department of Civil Engineering, National Institute of Technology Calicut (Kerala, India), 14-18 December 2022.

38. Pradeep Kumar, **Sachin Gowda**, Aakash Gupta; *Implementation of Airfield Pavement Management System in India*, Fourth National Conference on Recent Advances in Traffic Engineering **(RATE-2022),** SVNIT Surat, Gujarat, India. 11-12th November 2022.

39. Prakash R, **Sachin Gowda**, Aakash Gupta, G Kavitha, and Pradeep Kumar; *Comparative study on backcalculated and laboratory-measured modulus of asphalt pavement layer using various algorithms*, ICIET 2022 (International Conference on Innovations in Engineering and Technology), Hyderabad. 15-17th September 2022.

40. **Sachin Gowda**, Vaishakh K, Aakash Gupta, Pradeep Kumar, G Kavitha, Bishnu Kant Shukla; *Modeling of Subgrade soil CBR using Artificial Neural Networks and Adaptive Neuro-Fuzzy Inference System*- ICFMMP-2022 (3rd International Conference on Functional Materials, Manufacturing, and Performances), 29-30 July 2022 (Virtual event).

41. Saurabh Singh Yadav, Dr Aakash Gupta, **Sachin Gowda**, Dr. Yogesh Agarwal, Dr. Pratibha Aggarwal, *Development of Pavement Maintenance Priority Index (Poster Presentation),* 10th NATIONAL CONFERENCE ON NANOSCIENCE AND INSTRUMENTATION TECHNOLOGY, July 09-10, 2022, National Institute of Technology Kurukshetra.

42. Singh Y, S., Gupta, A., Agarwal, Y., Kumar, P., **Gowda MK, S.,** *A comparative study on overall priority indices for Flexible Pavement network*", Smart and Sustainable Development of Urban Green Infrastructure in India and Canada, 25 – 26th March 2022, at NIT Trichy.

43. **Sachin Gowda**, & Vidhi Vyas; *Road asset management system for low-volume roads: A case study of India*, International Airfield & Highway Pavements Conference **(ASCE),** 8-10 June 2021 (Virtual event).

44. G Kavitha, Ranjana Sarjapur, Meenakshi K.S, and **Sachin Gowda**; *Laboratory Performance Studies on Different Pothole Mixes*; **2nd ASCE India** Conference on " Challenges of Resilient and Sustainable Infrastructure Development in Emerging economies (CRSIDE2020) during March 2- 4th, 2020.

45. **Sachin Gowda,** G Kavitha, Vijay Kumar, *Road Asset Management Systems and Application for Pavement Maintenance for Non-Core Road Networks of Krishna district in Andhra Pradesh State – A case study*, 5th Conference of the Transportation Research Group of India (CTRG-2019) between 18 to 21 December, Bhopal.

46. **Sachin Gowda,** Arun Kumar, G Kavitha; *Enhancement of Engineering Properties of Black-Cotton Soil using Lime,*

Cement and Flyash, INFRA ROAD TECH-2019, 4-5th April 2019, Bengaluru.

Students Guided for Dissertation/Internships (M.Tech/B.Tech)

Sl. No.	Name of the Student	Academic Institute	Dissertation Title
1.	Prakash R (M.Tech)	RASTA-Center for Road Technology, Bangalore.	Comparative study on back-calculated and actual resilient modulus of asphalt pavement layers using soft computing techniques
2.	Vaishakh K (M.Tech)	RASTA-Center for Road Technology, Bangalore.	Performance Evaluation of Bituminous Mixes by Partially replacing fine aggregates with Bottom Ash
3.	Pramod Kumar (M.Tech)	NIT Kurukshetra	Study on Self-Healing Behaviour of Asphalt Pavements
4.	Nandan C S (M.Tech)	RASTA-Center for Road Technology, Bangalore.	Data-driven Approaches for Predicting Pavement Condition and Deflection Bowl Parameters
5.	Niranjan A S (M.Tech)	RASTA-Center for Road Technology, Bangalore.	Chemical and Rheological Characterization of RAP and RAP-Rejuvenated Bitumen Binder
6.	Prajwal M G (M.Tech)	RASTA-Center for Road Technology, Bangalore.	Development of Correlation between Indirect Tensile Strength (ITS) and Resilient Modulus (M_R) for Bituminous Concrete.
7.	K. Naga Suneetha (B.Tech)	Shri Vishnu Engineering College for Women(A), Bhimavaram, Andhra Pradesh.	Optimizing Pavement Condition Index Prediction using PSO- LSTM Hybrid Algorithm: A Data-Driven Approach for Road Maintenance Strategies
8.	G. Kavya Sri (B.Tech)	Shri Vishnu Engineering College for Women(A), Bhimavaram, Andhra Pradesh.	Application of Machine Learning for Developing Pavement Condition Index: Introducing the M5 Prime Model Tree Algorithm
9.	Veekshith K T (M.Tech)	RASTA-Center for Road Technology, Bangalore.	Influence of Aggregate Gradation and Ageing factors on performance of Dense graded Asphalt mixes.
10	Vandana Sharma (B.Tech)	NIT Warangal	Prediction of Deflection Bowl Parameters of Asphalt Pavements Using Machine Learning Techniques
11	Shreyas M C (M.Tech)	SIT, Tumkur	To be decided
12	Darshan G (M.Tech)	RASTA-Center for Road Technology, Bangalore.	To be decided
13	Amrutha D (M.Tech)	RASTA-Center for Road Technology, Bangalore.	To be decided
14	Dharavath Vamshi Naik (M.Tech)	IIT Bhubaneswar	To be decided