Dr. K H MAMATHA	
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Faculty ID	SIT0770

Education

S. No	Degree	Year	Institute	Specialization
1	Ph. D	2018	Visvesvaraya Technological University, Belagavi	Pavement Materials, Design and Analysis
2	M. Tech	2012	Siddaganga Institute of Technology, Tumakuru	Transportation Engineering and Management
3	B.E.	2010	PES College of Engineering, Mandya	Civil Engineering

Professional Experience

	Date (from-to)	Designation	Organization
1	25-02-2023 To Till date	Associate Professor	Siddaganga Institute of Technology, Tumakuru
2	29-06-2017 To 25-02-2023	Assistant Professor	Siddaganga Institute of Technology, Tumakuru

Positions held

- Member of Board of Examiners – UG & PG (Transportation Engineering and Management)
- Member of Accreditation Committee (NBA)
- NAAC Co-ordinator
- Program Co-ordinator – M. Tech in Transportation Engineering and Management
- Controller of Examinations (COE) Co-ordinator
- Member of Strategic Plan Implementation Unit

- Co-ordinator for Technical Seminar - M. Tech in Transportation Engineering and Management
- Member of Online Examination (MOODLE) facilitation Committee (UG & PG - Transportation Engineering and Management)
- Member of Departmental Project Evaluation Committee – UG and PG (Transportation Engineering and Management)
- Member of Curriculum Committee (UG & PG - Transportation Engineering and Management)
- Member of Programme Assessment Committee (UG & PG - Transportation Engineering and Management)
- NPTEL coordinator
- Project work coordinator (PG - Transportation Engineering and Management)
- Industrial Training Coordinator (PG - Transportation Engineering and Management)
- Department meeting Convener
- Module Coordinator (PG - Transportation Engineering and Management)
- Member of Departmental Research Committee
- Member of Departmental Academic Affairs Committee (DAAC)
- Member of Departmental BOS Committee
- Placement Co-ordinator (PG - Transportation Engineering and Management)

Affiliations of Professional organizations

- Life Member, Indian Roads Congress (**IRC**), eLM-103449
- Life Member, Indian Geotechnical Society (**IGS**), LM-5682

Awards and Honors

- Recipient of **Award for Research Publications (ARP)** from Vision Group on Science and Technology (VGST), Government of Karnataka (GoK), 2021-22.
- Recipient of **Gold Medal** for securing **1st Rank** in M. Tech - Transportation Engineering and Management from Siddaganga Institute of Technology, Tuamkauru.

Courses Taught

Undergraduate Courses

- Engineering Mechanics
- Introduction to Civil Engineering
- Geotechnical Engineering I
- Geotechnical Engineering II
- Construction Planning and Scheduling
- Project Management
- Transportation Engineering – I
- Transportation Engineering
- Pavement Materials, Equipment and Construction

- Pavement Design
- Geotechnical Engineering (Integrated)
- Advanced Geotechnical Engineering
- Professional Practice I
- Hydraulics Laboratory
- Transportation Engineering Lab
- Professional Practice

Postgraduate Courses

- Applied Soil Mechanics
- Rural Roads
- Road Safety and Management
- Airport Planning and Construction
- Pavement Materials and Construction
- Pavement Design
- Advanced Geotechnical Laboratory
- Advanced Highway Materials Laboratory
- Pavement Materials
- Pavement Analysis and Design
- Advanced Pavement Materials Lab
- Design Studio

Research Guidance

S. no	Name of the Scholar	Title	Year of completion
1	Mohan Badiger	Performance Evaluation of Geocell Reinforced Pavements built with Recycled Materials	Ongoing
2	Shrinidhi D	Evaluation of Impact of Particle Breakage on the Strength and Hydraulic Conductivity of Granular Subbase Materials	Ongoing
3	Tejeshwini S	Performance Characterization of Field and Laboratory Aged Bitumen	Ongoing
4	Ashwini H D	Assessment of unbonded overlay of rigid pavement over flexible pavement	Ongoing

Research Areas

- Pavement Engineering: Alternate/Low cost/Sustainable pavement materials and Characterization, Analysis and Design
- Geotechnical Engineering: Ground Improvement, Geosynthetics

Sponsored Projects

Ongoing Projects:

1. Title: Use of Construction Waste and Scarp Tyres for Sustainable pavements
   Funding Agency: Vision Group on Science and Technology (VGST), Government of Karnataka (GoK), 2020-21
   Amount: Rs. 20 Lakhs
   Duration: Two years
   Role: Principal Investigator (PI)

Publications

Journals

- S. Tejeshwini, **K. H. Mamatha**, S. V. Dinesh & S. Tilak Kumar (2025). Characterization of crumb rubber modified binder from different sources. *International Journal of System Assurance Engineering and Management. https://doi.org/10.1007/s13198-025-02829-x*
- Badiger, M., **Mamatha, K. H.**, & Dinesh, S. V. (2025). Mechanical Evaluation of Granular Sub-base Reinforced with Recycled Tyres: A Way Towards Sustainability. *Geotechnical and Geological Engineering*, *43*(5), 1-25. https://doi.org/10.1007/s10706-025-03139-6
- Badiger, M., **Mamatha, K. H.**, & Dinesh, S. V. (2025). Laboratory study on the performance evaluation of RCA reinforced with geosynthetics for GSB layer application in low volume roads. *Sustainable Materials and Technologies*, *44*, e01393. https://doi.org/10.1016/j.susmat.2025.e01393
- Badiger, M., **Mamatha, K. H.**, & Dinesh, S. V. (2025). Utilisation of construction and demolition waste in granular sub-base along with scrap tyre cellular reinforcement: A sustainable practice. *Road Materials and Pavement Design*, 1-26. https://doi.org/10.1080/14680629.2025.2479581
- Shrinidhi, D., Adarsh, K. L., **Mamatha, K. H.**, & Dinesh, S. V. (2025). Feasibility of use of recycled concrete aggregates in drainage layer of pavements: a comparative analysis. *Journal of Material Cycles and Waste Management*, 1-18. https://doi.org/10.1007/s10163-025-02172-0
- Tejeshwini, S., **Mamatha, K. H.**, & Dinesh, S. V. (2025). Characterization of long-term field aging: differential impact on rheological, chemical, and morphological properties of binders across the lanes of flexible pavement. *International Journal of Transportation Science and Technology*. https://doi.org/10.1016/j.ijtst.2025.01.002
- Tejeshwini, S., **Mamatha, K. H.**, & Dinesh, S. V. (2025). Performance characterization of long-term aged bitumen: Field and laboratory

investigation. *International Journal of Transportation Science and Technology*, *17*, 175-191. https://doi.org/10.1016/j.ijtst.2024.04.003

- Badiger, M., **Mamatha, K. H.**, & Dinesh, S. V. (2024). Evaluation of commercial and scrap tyre cellular reinforcement infilled with demolition waste for granular sub-base of flexible pavements: A sustainable approach. *International Journal of Transportation Science and Technology*. https://doi.org/10.1016/j.ijtst.2024.05.003
- **Mamatha, K. H.**, Dinesh, S. V., & Shreelakshmi. (2024). Effect of steel fibers and recycled concrete aggregates on the mechanical behaviour of concrete. *International Journal of System Assurance Engineering and Management*, *15*(6), 2743-2756. https://doi.org/10.1007/s13198-024-02297-9
- Badiger, M., **Mamatha, K. H.**, & Dinesh, S. V. (2024). Use of Geocell for Reinforcing CDW in GSB of Flexible Pavements: An Experimental Investigation. *International Journal of Pavement Research and Technology*, 1-23. https://doi.org/10.1007/s42947-024-00490-4
- Tejeshwini, S., Gowda, C. P., **Mamatha, K. H.**, Balreddy, M. S., & Dinesh, S. V. (2024). Impact of antiaging additives on the conventional properties of bituminous binder. *Journal of Engineering and Applied Science*, *71*(1), 184. https://doi.org/10.1186/s44147-024-00518-3
- Dinesh, S. V., **Mamatha, K. H.**, & Susheel Kumar, G. (2023). Effect of recycled concrete aggregates on the mechanical and durability properties of self-cured concrete for sustainable construction. *International Journal of System Assurance Engineering and Management*, *14*(3), 865-877. https://doi.org/10.1007/s13198-023-01886-4
- Sanjay, R., Tejeshwini, S., **Mamatha, K. H.**, & Dinesh, S. V. (2022). Comparative study on structural evaluation of flexible pavement using BBD and FWD. *Materials Today: Proceedings*, *60*, 608-615. https://doi.org/10.1016/j.matpr.2022.02.124
- Umashankar, O., Gowreesh, Y. S., **Mamatha, K. H.**, & Dinesh, S. V. (2022). Effect of crushing mechanism on the shape properties of coarse aggregates. *Materials Today: Proceedings*, *60*, 534-540. https://doi.org/10.1016/j.matpr.2022.01.428
- Harshita, H., **Mamatha, K. H.**, & Dinesh, S. V. (2022). RAP as an improved layer for low volume roads. *Materials Today: Proceedings*, *61*, 552-557. https://doi.org/10.1016/j.matpr.2022.01.351
- Sagar, C. P., Badiger, M., **Mamatha, K. H.**, & Dinesh, S. V. (2022). Prediction of CBR using dynamic cone penetrometer index. *Materials Today: Proceedings*, *60*, 223-228. https://doi.org/10.1016/j.matpr.2021.12.467
- Koushik, S. J., **Mamatha, K. H.**, & Dinesh, S. V. (2022). Performance of DBM mixtures with unmodified and modified binder with RAP. *Materials Today: Proceedings*, *61*, 543-551. https://doi.org/10.1016/j.matpr.2022.01.350

- **Mamatha, K. H.**, Dinesh, S. V., & Dattatreya, J. K. (2019). Evaluation of flexural behaviour of geosynthetic-reinforced unbound granular material beams. *Road Materials and Pavement Design*, *20*(4), 859-876. https://doi.org/10.1080/14680629.2017.1422790
- **Mamatha, K. H.**, & Dinesh, S. V. (2019). Effectiveness of geogrid and its position on the performance of unpaved roads under repetitive loading. *Innovative Infrastructure Solutions*, *4*, 1-19. https://doi.org/10.1007/s41062-019-0244-x
- **Mamatha, K. H.**, & Dinesh, S. V. (2019). Performance evaluation of geocell-reinforced pavements. *International Journal of Geotechnical Engineering*, *13*(3), 277-286. https://doi.org/10.1080/19386362.2017.1343988
- **Mamatha, K. H.**, & Dinesh, S. V. (2018). Evaluation of strain modulus and deformation characteristics of geosynthetic-reinforced soil–aggregate system under repetitive loading. *International Journal of Geotechnical Engineering*, *12*(6), 546-555. https://doi.org/10.1080/19386362.2017.1307309
- **Mamatha, K. H.**, Dinesh, S. V., & Swamy, B. C. (2018). Performance of geosynthetic reinforced model pavements under repetitive loading. *Geotechnical Engineering Journal of the SEAGS & AGSSEA*, *49*(4), 42-48. https://doi.org/10.14456/seagj.2018.6
- **Mamatha, K. H.**, & Dinesh, S. V. (2017). Resilient modulus of black cotton soil. *International Journal of Pavement Research and Technology*, *10*(2), 171-184. https://doi.org/10.1016/j.ijprt.2017.01.008

Conference Proceedings

- Badiger, M., Bhatakande, R. R., **Mamatha, K. H.**, & Dinesh, S. V. (2022). Performance of pavement sections constructed using RAP with Geocell as reinforcement. In *Earthquake Geotechnics: Select Proceedings of 7th ICRAGEE 2021* (pp. 153-165). Springer Singapore. https://doi.org/10.1007/978-981-16-5669-9_13
- Kumar, A., Ganesh, B. A., Vats, S., Sumanth, P., Gangadharaiah, T., & **Mamatha, K. H.** (2021). Scour Around Bridge Abutments in Clay Bed. In *Recent Trends in Civil Engineering: Select Proceedings of ICRTICE 2019* (pp. 393-404). Springer Singapore. https://doi.org/10.1007/978-981-15-5195-6_31
- Tejeshwini, S., Gowtham, B., **Mamatha, K. H.**, Dinesh, S. V., & Tadas, A. (2021). Influence of Long-Term Laboratory Aging on Properties of Binder. In *Recent Trends in Civil Engineering: Select Proceedings of ICRTICE 2019* (pp. 431-443). Springer Singapore. https://doi.org/10.1007/978-981-15-5195-6_34

- Darshan, H. C., **Mamatha, K. H.**, Dinesh, S. V., & Latha, B. M. (2020). Effectiveness of cow dung for rammed earth application. In *Problematic Soils and Geoenvironmental Concerns: Proceedings of IGC 2018* (pp. 493-502). Singapore: Springer Singapore. https://doi.org/10.1007/978-981-15-6237-2_41
- Swamy, S. T., **Mamatha, K. H.**, Dinesh, S. V., & Chandrashekar, A. (2021). Strength properties of laterite soil stabilized with rice husk ash and geopolymer. In *Problematic Soils and Geoenvironmental Concerns: Proceedings of IGC 2018* (pp. 789-799). Springer Singapore. https://doi.org/10.1007/978-981-15-6237-2_64
- Nayana, D., **Mamatha, K. H.**, Dinesh, S. V., & Lokesh, T. R. (2021). Pavement Evaluation Using Falling Weight Deflectometer (FWD). In *Recent Trends in Civil Engineering: Select Proceedings of ICRTICE 2019* (pp. 445-456). Springer Singapore. https://doi.org/10.1007/978-981-15-5195-6_35
- Vidyashree, V. K., **Mamatha, K. H.,** & Dinesh, S. V. (2021). Strength Characteristics of Cement-Stabilized Recycled Asphaltic Pavement (RAP) for Pavement Applications. In *Recent Trends in Civil Engineering: Select Proceedings of ICRTICE 2019* (pp. 351-361). Springer Singapore. https://doi.org/10.1007/978-981-15-5195-6_28
- Suresh, B., **Mamatha, K. H.**, & Dinesh, S. V. (2021). Utilization of RAP in flexible pavements. In *Recent Trends in Civil Engineering: Select Proceedings of ICRTICE 2019* (pp. 419-429). Springer Singapore. https://doi.org/10.1007/978-981-15-5195-6_33
- Vinod Raj, B. N., **Mamatha, K. H.**, & Dinesh, S. V. (2021). Feasibility of Recycled Tyre as Reinforcing Material for Pavements. In *Recent Trends in Civil Engineering: Select Proceedings of ICRTICE 2019* (pp. 363-379). Springer Singapore. https://doi.org/10.1007/978-981-15-5195-6_29

Book Chapters

- Nil

Books

- NIL

Editorial

- Nil

Reviewer of Journals

- Reviewer, International Journal of System Assurance Engineering and Management, Springer
- Reviewer, KSCE Journal of Civil Engineering, Springer

Editor/ Reviewer of Journal

- Reviewer, International Journal of System Assurance Engineering and Management, Springer
- Reviewer, KSCE Journal of Civil Engineering, Springer

Patents

- NIL

Invited Lectures, talks and workshops

- Resource person for “Design and Analysis of Flexible Pavement: An Indian Perspective” in the Department of Civil Engineering, Acharya Institute of Technology, Bengaluru. SIT, Tumkur
- Resource person for “Demonstration of MS Project software” in the School of Architecture, Siddaganga Institute of Technology, Tumakuru.