




P.E.S. College of Engineering, Mandya - 571401

(An Autonomous Institution, affiliated to VTU, Belagavi)

Faculty Profile

General

Name	Dr. MADHUSUDANA C K	
Designation,	Assistant Professor	
Department & Affiliated Institution	Department of Mechanical Engineering, P.E.S College of Engineering, Mandya – 571 401	
Research Area	Condition monitoring, Dynamics and Mechanical Vibrations, Vehicle Dynamics, Tribology.	
Contact Number	+91 7338513801	
Email ID	madhusudanack.008ATgmailDOTcom; madhusudanackATpesceDOTacDOTin	

Academic Profile

Educational Qualifications

Degree	College	University	Year of Passing	% ge	Class
Ph. D	NITK Surathkal	NITK Surathkal	2017	-	-
M.Tech	BMS College of Engineering, Bengaluru.	VTU, Belagavi	2012	76%	FCD
B.E.	P.E.S. College of Engineering, Mandya.	VTU, Belagavi	2009	68%	FC

Professional Experience

Organization and Department	Designation	Period	Total Experience
Asmet Industries Pvt. Ltd., Bengaluru	PPC-Engineer	March 2010 – Sept. 2010	6 Months
National Institute of Technology Karnataka, Surathkal.	Research Scholar	Dec 2013 – June 2017	3.5 Years
MVJ College of Engineering, Bengaluru.	Assistant Professor	July 2017 – October 2020	3.5 Years
P.E.S. College of Engineering, Mandya, Dept. of Mechanical Engg.	Assistant Professor	January 2021 – Till date	---

Reports on Academic and Research Activities

Academic Activities

Teaching Records (Details of courses taught)	Undergraduate: Elements of Mechanical Engineering, Mechanics of Materials, Kinematics of Machines, Dynamics of Machines, Design of Machine Elements-II, Mechanical Vibrations, Experimental Mechanics and Research Methodology.
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Research Guidance (Candidates Awarded / Pursuing Ph.D / M.Sc., Engg./ M.Phil)

Degree	Ph. D.	M.Sc., Engg.
Awarded	Nil	Nil
Pursuing	01	Nil

Sponsored Research Projects (List of Projects taken up /completed and funds receiver & funding sources)

Project Funded by	Grants Sanctioned	Grants Received
“Study of Dynamic Stability and Effect of Vehicular parameters on Road Fatalities of Indian Light Motor Vehicles” under VTU – RGS 2021, VTU Belagavi, Karnataka.	Rs. 10,00,000	Yet to receive (Accepted on 18 February 2022)

Research Publications in Refereed Journals and Conferences/Symposia		
Number of Publications in	National	International
Journals	-	09
Conferences/Symposia	-	07
Other Important Responsibilities Held in the College		
<ol style="list-style-type: none"> 1. Worked as Joint Organizing secretary for an International conference 2. Worked as R and D coordinator-Department level 3. Worked as Department Autonomous coordinator 4. BOS member for UG Course at PESCE 5. BOS member for PG Course at PESCE 6. BOE member for PG Course at PESCE, UG and PG Project reviewer. 7. Department Coordinator for NIRF. 8. Department Coordinator for PG Program. 9. Involved in research publication reviews for refereed Journals. 		

LIST OF PUBLICATIONS

INTERNATIONAL JOURNALS

1. **Madhusudana, C. K.**, Budati, S., Gangadhar, N., Kumar, H., and Narendranath, S. (2016). “Fault diagnosis studies of face milling cutter using machine learning approach”. *Journal of Low Frequency Noise, Vibration and Active Control*, 35(2), 128-138.
2. **Madhusudana, C. K.**, Kumar, H., and Narendranath, S. (2016). “Condition monitoring of face milling tool using K-star algorithm and histogram features of vibration signal”. *Engineering Science and Technology, an International Journal*, 19(3), 1543–1551.
3. **Madhusudana C. K.**, Hemantha Kumar and Narendranath S., (2017). “Face Milling Tool Condition Monitoring using Sound Signal”, *International Journal of Systems Assurance Engineering and Management*, 8(2), 1643-1653.
4. **Madhusudana C. K.**, Hemantha Kumar and Narendranath S., (2016) “Fault Detection of Face Milling Cutter through Spectrum, Cepstrum and Wavelet Analysis”, *Journal of Vibration Analysis, Measurement and Control*, 4(1), 10-28.
5. Gangadhar, N., **Madhusudana, C. K.**, Kumar, H., and Narendranath, S. (2016). “Recurrence quantification analysis to classify the tool condition of tungsten carbide while machining die steel”. *International Journal of Condition Monitoring*, 6(1), 2-8.
6. **Madhusudana, C. K.**, Gangadhar, N., Hemantha Kumar and Narendranath, S., (2018) “Use of Discrete Wavelet Features and Support Vector Machine for Fault Diagnosis of Face Milling Tool”, *Structural Durability and Health Monitoring, an International Journal*, 12(2), 111-127.
7. **Madhusudana C. K.**, Hemantha Kumar and Narendranath S. (2018) “Fault Diagnosis of Face Milling Tool using Decision Tree and Sound Signal”, *Materials Today: Proceedings*, 5(5), 12035-12044.

8. **Madhusudana C. K.**, Hemantha Kumar and Narendranath S., (2019) “Vibration based Fault Diagnosis of Face Milling Tool using Empirical Mode Decomposition Features and Artificial Neural Network”, *International Journal of Condition Monitoring*, 9(2), 25-34.
9. Ravikumar K.N., **Madhusudana C.K.**, Hemantha Kumara and Gangadharan K.V. (2022). “Classification of Gear faults in Internal Combustion (IC) Engine Gearbox using discrete wavelet transform features and K star algorithm”. *Engineering Science and Technology, an International Journal*, Vol. 30, 101048 (<https://doi.org/10.1016/j.jestch.2021.08.005>).

BOOK CHAPTER PUBLICATION:

1. Ravikumar K.N., **Madhusudana C.K.**, Kumar H., Gangadharan K.V. (2020) Ball Bearing Fault Diagnosis Based on Vibration Signals of Two Stroke IC Engine Using Continuous Wavelet Transform. In: Dutta S., Inan E., Dwivedy S. (eds) *Advances in Rotor Dynamics, Control, and Structural Health Monitoring. Lecture Notes in Mechanical Engineering. Springer, Singapore.*
https://doi.org/10.1007/978-981-15-5693-7_28. (August 2020).

INTERNATIONAL CONFERENCES:

1. **Madhusudana C. K.**, Achutan C Pankaj and Manjunath, “Friction Induced Vibrations of an Aircraft Landing Gear” at ICCMS - 2012, IIT, Hyderabad, India, December, 2012.
2. **Madhusudana C. K.**, Hemantha Kumar and Narendranath S. "Effect of Cutting Speed and Feed Rate on Cutting Force, Temperature and Stress in Face Milling of Steel Alloy 42CrMo4 by using Computational Approach", 6th International & 27th All India Manufacturing Technology, Design and Research Conference (AIMTDR-2016) at College of Engineering., Pune, Maharashtra, India, December 16-18, 2016.
3. **Madhusudana C. K.**, Hemantha Kumar and Narendranath S. “Fault Diagnosis of Face Milling Tool using Decision Tree and Sound Signal”, The International Conference on Materials, Manufacturing and Modelling (ICMMM)-2017 at VIT University, Vellore, India, March 9-11, 2017.
4. Ravikumar K. N., **Madhusudana C. K.**, Hemantha Kumar and K. V. Gangadharan, “Ball Bearing Fault Diagnosis based on Vibration Signals of Two Stroke Ic Engine using Continuous Wavelet Transform”, ICOVP, 13th International Conference on Vibration Problems, November 29 to December 02, 2017, IIT, Guwahati, India.
5. Aman Vishwakarma, **Madhusudana C. K.**, Alfred V K, Badal Dey, Brain Lara, “Design and Fabrication of Hybrid Braking System”, International Conference on Advanced Research in Mechanical Engineering (IC-ARME2019) during 29-30 April 2019 at MVJ College of Engineering, Bengaluru, India.
6. Arjun Anand, **Madhusudana C. K.**, Ganesh, Arvind, “Multifunctional Artificial Intelligence Assisted Drone for Emergencies – eMAD”, International Conference on Advanced Research in Mechanical

Engineering (IC-ARME2019) during 29-30 April 2019 at MVJ College of Engineering, Bengaluru, India.

7. Manoj S V1, **Madhusudana C K**, Manoj K C, Manoj V, Srinivas M R, “Analysis on Wear Characteristics of Aluminium 6061 Reinforced with Graphene”, Third International Conference on Emerging Research in Civil, Aeronautical and Mechanical Engineering ERCAM – 2021, during 16-17 December 2021 at NMIT, Bengaluru, India.