



Dayananda Sagar Academy of Technology & Management

(Autonomous Institute under VTU)

Affiliated to **VTU**
Approved by **AICTE**
Accredited by **NAAC** with **A+** Grade
4 Programs Accredited by **NBA**
(CSE, ISE, ECE, MECH)

Faculty Name	Dr. Kiran Kumar K	
Academic Designation	Assistant Professor	
Educational Qualification	B.E., M.Tech, Ph.D.	
Experience in Teaching & Industry	8 &	
Date of Joining	24/08/2026	
Official Email ID	kirankumar-mech@dsatm.edu.in	
Employee ID	180972	

Educational Details

Ph.D. in Mechanical Engineering from University BDT College of Engineering, Davangere, VTU-Belagavi.

M.Tech. in Thermal Power Engineering from University BDT College of Engineering, Davangere, VTU-Belagavi.

B.E. in Mechanical Engineering from Jawaharlal Nehru National College of Engineering, Shivamogga, VTU-Belagavi.

Professional Experience

Teaching – 8 Years

Research – 2 Years

Institute	Post Held	University	Duration
IIT Guwahati	Post-Doctoral Fellow	IIT Guwahati	20/11/2024 to 30/09/2024
PESITM, Shivamogga	Assistant Professor	VTU, Belagavi	03/08/2017 to 14/11/2024
PESITM, Shivamogga	Lecturer	VTU, Belagavi	21/07/2014 to 12/06/2015

Publications

1. Kiran Kumar K, and Niranjana Sahoo, "Integrated Effects of Metal Foam Segmentation and Diameter Ratio on Heat Transfer and Thermodynamic Performance of a Horizontal Cylinder" *Thermal Advances*, Volume 8, (2026) 100179. <https://doi.org/10.1016/j.thradv.2026.100179>. Elsevier publications.
2. K. Kiran Kumar, and Niranjana Sahoo, "Heat transfer, exergy, and irreversibility analysis of a horizontal cylinder with whole and segmented metal foam layers" *Applied Thermal Engineering*, Volume 300, July 2026, 131353. <https://doi.org/10.1016/j.applthermaleng.2026.131353>. SCI Journal (Q1), Impact Factor: 7.5. Elsevier publications.
3. Kiran Kumar K, and Niranjana Sahoo, "Optimization of Irreversibility Factor with Higher Heat Transfer Rate in Different Pore Density Metal Foams" *Heat and Mass Transfer*, Volume 62, 3 (2026). <https://doi.org/10.1007/s00231-025-03631-y>. SCI Journal (Q2), Impact Factor: 2.5. Springer publications.
4. Kiran Kumar K, and Niranjana Sahoo, "Heat transfer enhancement and thermodynamic optimization in metal foam integrated pipes", *Physics of Fluids*, Volume 37, Issue 9, September 2025, 095169. <https://doi.org/10.1063/5.0287901>. SCI Journal (Q1), Impact Factor: 4.3. AIP publications.
5. Kiran Kumar K, Banjara Kotresha, and Kishan Naik, "Thermodynamic Evaluation of Metal Foams with Partial Filling in a Pipe" *Physics of Fluids*, Volume 36, Issue 9, September 2024, 097150. <https://doi.org/10.1063/5.0217709>. SCI Journal (Q1), Impact Factor: 4.3. AIP publications.
6. Kiran Kumar K, Banjara Kotresha, and Kishan Naik, "Outlining the impact of discrete filling of metal foams on thermodynamic performance" *Thermal Science and Engineering Progress*, Volume 45, 1 October 2023, 102153. <https://doi.org/10.1016/j.tsep.2023.102153>. SCI Journal (Q1), Impact Factor: 5.6. Elsevier publications.
7. Kiran Kumar K, Banjara Kotresha, and Kishan Naik, "Minimization of Exergy Destruction with Discrete Metal Foam Filling in a Pipe under Turbulent Flow Condition" *International Journal of Numerical Methods for Heat and Fluid Flow*, Vol. 33 No. 10, pp. 3353-3384. Article publication date: 7 July 2023, <https://doi.org/10.1108/HFF-12-2022-0706>. SCI Journal (Q1), Impact Factor: 5.1. Emerald publications.
8. Kiran Kumar K, Banjara Kotresha, and Kishan Naik, "Exergy Transfer and Irreversibility of Metal Foams Filled in a Vertical Channel" *ASME Journal of Thermal Science and Engineering Applications*. Vol. 15, Issue 8, 081005-1-15, Aug 2023. <https://doi.org/10.1115/1.4062399>. SCI Journal (Q2), Impact Factor: 2.2. ASME publications.
9. Kiran Kumar K, Banjara Kotresha, and Kishan Naik, "Performance Evaluation Based on Exergy Analysis Through Partially Filled Metal Foams in Forced Convection" *ASME Journal of Heat and Mass Transfer*, Vol. 145, Issue 8, 082701-1-15, Aug 2023. <https://doi.org/10.1115/1.4062214>. SCI Journal (Q2), Impact Factor: 2.8 ASME publications.
10. Kiran Kumar K, Banjara Kotresha, and Kishan Naik, "Flow and heat transfer irreversibility in partial filled metal foams" *International Journal of Thermal Sciences*, 184, February 2023, 107968. Available online: 26th October, 2022. <https://doi.org/10.1016/j.ijthermalsci.2022.107968>. SCI Journal (Q1), Impact Factor: 5.0. Elsevier publications.
11. Kiran Kumar K, Banjara Kotresha, and Kishan Naik, "Effect of Spatial Porosity of Metal Foams on Heat Transfer Filled in a Vertical Channel" *Materials Today Proceedings*, Vol 51, part 3, 2022, pp. 1539-1547. Available online: 12th November, 2021. <https://doi.org/10.1016/j.matpr.2021.10.359>. Scopus, Elsevier publications.

12. Kiran Kumar K, Banjara Kotresha, and Kishan Naik, "Impact of Partial Filling of Metal Foams on Entropy Generation in a Vertical Channel" in: S. Bhattacharyya, H. Chattopadhyay (Eds.), Fluid Mechanics and Fluid Power (Vol. 1), Springer Nature Singapore, Singapore, March 30, 2023: pp. 465–470. https://doi.org/https://doi.org/10.1007/978-981-19-7055-9_78
13. Kiran Kumar K, Banjara Kotresha, and Kishan Naik, "Effect of Partial Filling of Metal Foams on Exergy Transfer in a Vertical Channel" in: P. Pradhan, B. Pattanayak, H.C. Das, P. Mahanta (Eds.), Recent Advances in Mechanical Engineering, Springer Nature Singapore, Singapore, 2023: pp. 157–166. https://doi.org/https://doi.org/10.1007/978-981-16-9057-0_17.
14. Kiran Kumar K, Mir Jibraan Hussain, and Nabeelur Rahaman, "Power Generation by using Exhaust Gas Heat from an Internal Combustion Engine" International Journal of Engineering Research & Technology (IJERT) ISSN: 2278-0181. Published by, www.ijert.org NCMPC - 2019 Conference Proceedings, Volume 7, Issue 07, dated 06/06/2019, pp. 1-5. DOI: 10.17577/IJERTCONV7IS07024
15. Kiran Kumar K, Nagabhushan Venkatesh Gudi, and Madhu C, "Power Generation by using Kinetic Energy of Exhaust Gases from an Internal Combustion Engine" International Journal of Engineering Research & Technology (IJERT) ISSN: 2278-0181. Published by, www.ijert.org NCMPC - 2019 Conference Proceedings, Volume 7, Issue 07, dated 06/06/2019, pp. 1-5. DOI: 10.17577/IJERTCONV7IS07025
16. Kiran Kumar K, "Design of Hydraulic Ladle Tilting Device at Pig Casting Machine" Journal of Emerging Technologies and Innovative Research (JETIR), Vol. 5, Issue 7, July 2018, pp. 1450-1455 <https://www.jetir.org/papers/JETIRC006250.pdf> (ISSN-2349-5162). UGC Approved (Journal number: 63975), Impact Factor: 7.95
17. Kiran Kumar K, "Numerical Analysis of Shell and Tube Heat Exchanger Performance with Different Baffle Cut Percentage along with Different Orientations" International Journal of Engineering Technology Science and Research (IJETSR), Volume 4, Issue 12, December 2017, ISSN 2394-3386.
18. Kiran Kumar K, and Kishan Naik, "Numerical Analysis of Shell and Tube Heat Exchanger Performance with Different Baffle Space and Baffle Cut Orientations using CFD" International Journal of Engineering Technology Science and Research (IJETSR), Volume 4, Issue 7, July 2017, ISSN 2394-3386.

International Conferences:

1. Presented a paper entitled "Dynamic Shock Absorption Behaviour of Closed-Cell Metallic Foams and Glass Fiber Composites: A Shock Tube Experimental Study" in the 20th International conference on Vibration Engineering and Technology of Machinery (VETOMAC-2025) from 18th – 20th December 2025, organized by Department of Mechanical and Civil Engineering, IIT Guwahati.
2. Presented a paper entitled "Determination of Exergy Limits for Different Metal Foam Configurations" at the International Conference on Recent Advances in Modeling and Analysis of Thermal and Energy Systems (RAMATES-2023) From 10-12 May 2023, Organized by Department of Mechanical Engineering, National Institute of Technology Karnataka, Surathkal, India.

3. Presented a paper entitled "Effect of Partial Filling of Metal Foams on Exergy Transfer in a Vertical Channel" towards the 2nd International Conference on Recent Advances in Mechanical Engineering Research and Development (ICRAMERD-2021), organized by the Department of Mechanical Engineering at the Institute of Technical Education & Research, Siksha 'O' Anusandhan (Deemed to be University), Bhubaneswar, Odisha, India during held on 24th – 25th September 2021.
4. Presented a paper titled as "Effect of Spatial Porosity of Metal Foams on Heat Transfer Filled in a Vertical Channel" in 2nd International Conference on Sustainable Energy Solutions for a Better Tomorrow (SESBT2021), organized by VIT Chennai in collaboration with Groningen University, Netherlands during July 23-24, 2021.
5. Presented a paper titled as "Design of Hydraulic Ladle Tilting Device at Pig Casting Machine" in 4th International Conference on Advancement in Engineering, Applied Science and Management (ICAEASM 2018) at Indian Council of Social Science Research, North West Regional Center, Punjab University Campus, Chandigarh, India on 1st July 2018.
6. Presented a paper titled as "Numerical Analysis of Shell and Tube Heat Exchanger Performance with Different Baffle Cut Percentage along with Different Orientations" in International Conference on Latest Concepts in Science, Technology, Management and Humanities (ICLCSTMH) at GIIT, Gwalior, M.P., India on 17th December 2017.

National Conferences:

1. Presented a paper entitled "Impact of Partial Filling of Metal Foams on Entropy Generation in a Vertical Channel" in the 48th National Conference on Fluid Mechanics and Fluid power (FMFP-2021) held during 27th – 29th December 2021, at BITS Pilani, Pilani Campus, Rajasthan, India.
2. Presented a paper titled as "Power Generation by using Exhaust Gas Heat from an Internal Combustion Engine" in National Conference on Material Processing and Characterization (NCMPC – 2019) organized by PES Institute of Technology & Management, Shivamogga and Co-sponsored by Institute of Engineers, INDIA, on 20th May 2019.
3. Presented a paper titled as "Power Generation by using Kinetic Energy of Exhaust Gases from an Internal Combustion Engine" in National Conference on Material Processing and Characterization (NCMPC – 2019) organized by PES Institute of Technology & Management, Shivamogga and Co-sponsored by Institute of Engineers, INDIA, on 20th May 2019.

Conference Attended

International Conferences - 6

National Conferences - 3

Awards

Received best paper presentation award on the article entitled “Effect of Partial Filling of Metal Foams on Exergy Transfer in a Vertical Channel” towards the 2nd International Conference on Recent Advances in Mechanical Engineering Research and Development (ICRAMERD-2021), organized by the Department of Mechanical Engineering at the Institute of Technical Education & Research, Siksha 'O' Anusandhan (Deemed to be University), Bhubaneswar, Odisha, India during held on 24th – 25th September 2021.

Academic Activity

Heat Transfer Laboratory In-charge | Fluid Mechanics and Machinery Laboratory In-charge | Department Technical Activity Coordinator | Project Coordinator | Internal Assessment (IA) Coordinator | Result Analysis Coordinator | Timetable Coordinator | NBA Coordinator – Criterion 9 | Department Library Coordinator | Student Feedback Analysis Coordinator | VTU Examination Forms (EMS) Coordinator | CET Admission Committee Member | Alumni Coordinator | Parents' Meeting Coordinator | Class Teacher | Student Mentor | MOOCs Coordinator | VTU Examiner and Evaluator | Coordinator/Organizer for Conferences, FDPs and SDPs

Faculty Development Activity/Workshops

Sl. No.	Event	Particulars					
		1 week & above	5-Days	4-Days	3-Days	2-Days	1-Day
01	GIAN Course	01	--	--	--	--	--
02	Faculty Development Program	06	06	01	03	01	--
03	Short Term Training Programme	02	01	--	--	01	--
04	Webinar	--	--	--	--	03	23

1. Participated in Global Initiative of Academic Networks (GIAN) course on “Combustion Theory and Applications” organized by Center for Educational Technology & Department of Mechanical Engineering, IIT Guwahati from 25th November – 6th December 26, 2024.
2. 2-Day workshop on “Business Intelligence using Power BI” conducted by Microsoft certified trainer, Co-founder, CEO, Skill Nation from 13th to 14th July, 2024.
3. One week FDP on “Research Methodologies – Quantitative and Qualitative Research” organized during 05-09 February, 2024, by Department of ECE, CVR College of Engineering, Hyderabad, Telangana.

4. 4-Days FDP on "Machine Learning Applications in Nanocomposites and Nanofluids" organized by Department of Mechanical Engineering, PESITM, Shivamogga from 4th to 7th Dec, 2023.
5. Five days short term training programme on "Battery Thermal Management Systems: Present and Future", organized by the Departments of Mechanical Engineering, SVNIT Surat during 12-16 June, 2023.
6. Three-day online FDP on "Mentoring skills and Cognitive strategies" held during 29th – 31st March 2023, organized by Department of Electronics and Telecommunication Engineering and Skill Development Centre, BIT, Bengaluru.
7. One week online National level FDP on "Innovation, Research and IPR – Journey towards Excellence", held from 1st March 2023 – 5th March 2023 organized by BVB's Sardar Patel College of Engineering, Mumbai & HSM's Shri. Sant Gadge Baba College of Engineering & Technology, Bhusawal in collaboration with SAE India Western Section, Institution's Innovation Council, Indian Institution of Industrial Engineering and Federation of Education Leaders and Administrators under IQAC of SPCE, Mumbai and SSGBCOE&T, Bhusawal.
8. One week FDP on "Hybrid Electric Vehicles", jointly organized by the Departments of Mechanical Engineering of GMR Institute of Technology, Rajam and Velagapudi Ramakrishna Siddhartha Engineering College, Vijayawada during 21st-25th November 2022.
9. One-week online FDP on "A New Era of Manufacturing-Challenges and Opportunities", organized by Department of Mechanical Engineering, D. Y. Patil College of Engineering and Technology (An Autonomous Institute), Kasaba Bawada, Kolhapur in association with Indian Society for Technical Education (ISTE) New Delhi, from July 25, 2022 to July 30, 2022.
10. Five days SERB online International workshop on "Recent Advancement in Modelling Analysis of Porous Media (RAMAPM 2022)", organized by Department of Mechanical Engineering, National Institute of Technology, Karnataka, Surathkal from 28th Feb, 2022 to 4th Mar, 2022.
11. National webinar on "How to Write a Research Grant Proposal" organized by Biyani Group of Colleges, Jaipur on 26th February, 2022.
12. Webinar on "A Guided Tour of Taylor & Francis eBooks and Journals", organized by Visvesvaraya Technological University in association with Taylor & Francis Group, on 18th January, 2022.
13. National Seminar on "Wind Engineering and its Applications", organized by Department of Aeronautical Engineering, Bharath Institute of Higher Education and Research, Chennai, India on 17th December, 2021.
14. Five Days online FDP on "Hydrogen, Ethanol and Natural Gas as an Alternative and Sustainable Fuels for Transportation" organized by Mechanical Engineering Department of BRAC's Vishwakarma Institute of Information Technology, Pune in association with The Indian Society for Technical Education (ISTE), from 7th to 11th December, 2021.
15. Webinar on "How to effectively use ScienceDirect – Read Quality... Publish Quality" organized by Visvesvaraya Technological University on 26th November, 2021.
16. Participated in the Weekly Mech/Auto webinar on "Injection Molding: How it Works" organized by Elite Techno Groups. Certificate issued date: 20th November, 2021.

17. Pre-Conference workshop titled "Simulating and Optimizing thermo-Chemical Energy Systems using Cycle-Tempo" as part of the two days international conference on SESBT-2021 organized in virtual mode by the SMEC, VIT Chennai in collaboration with ESRIG, University of Groningen, Netherlands during 23 -24 July, 2021.
18. Webinar on "Optimizing the Number of Experiments and Cost of Project using Taguchi Method" organized by the Centre of Excellence – Natural Resource management on 21st September, 2021.
19. Participated in BITE'21 topic "Insight on Hybrid EV Battery Pack of Tesla X and Audi e-tron" conducted by Elite Techno Groups on 19th July, 2021.
20. Participated in BITE'21 topic "Design F1 Mercedes Race Car's Steering System" conducted by Elite Techno Groups on 11th July, 2021.
21. 3-Day Online FDP on "Advances in Machining Process", organized by Department of Mechanical Engineering, PES Institute of Technology and Management, Shivamogga from 17th to 19th June 2020.
22. Five Days National Level Online FDP on "Finite Element Analysis Practice and MATLAB", organized by Department of Mechanical Engineering, Tontadarya College of Engineering, Gadag, from 13th to 17th July 2020.
23. Webinar on the topic "AI getting used in impact of Covid-19" organized by Institute for Engineering research and Publication (IFERP) on 14th June 2020.
24. Webinar on the topic "Research Article Writing and Publishing in Good Impact Journal" organized by Institute for Engineering research and Publication (IFERP) on 13th June 2020.
25. Five Days FDP on "Research Trends in Thermal Engineering (RTTE) – 2020" from 9th to 13th June 2020, organized by Department of Mechanical Engineering, BITM, Ballari.
26. One week online Short-Term Training programme on "Post Covid Challenges in Infrastructural and Environmental Engineering" organized by Department of Civil Engineering, Pillai HOC College of Engineering and Technology, Rasayani from 8th June to 12th June 2020.
27. Webinar on "Recent Trends in Advanced Composites and Smart Materials & Structures", Conducted by Department of Mechanical Engineering, Brindavan College of Engineering, Bengaluru, on 11th June 2020.
28. Webinar on "Project-based Learning & Development of Employability Skills", organized by Department of ISE, GSSSIETW, Mysuru on 9th June 2020.
29. One-week National Level Online Short Time Training Program on "MATLAB for ALL", organized by Sir M Visvesvaraya Institute of Technology, Bangalore from 4th to 8th June 2020.
30. One-week online FDP on "NBA and NAAC Accreditation Process", organized by Internal Quality Assurance Cell (IQAC) M S Ramaiah Institute of Technology under AICTE Margadarshan Scheme from 4th to 8th June 2020.
31. Five-Days' webinar of FDP on "Emerging Engineering Materials" organized by Department of Mechanical Engineering in association with ISME from 1st to 5th June, 2020.
32. Online webinar on occasion of World Environment Day on "Waste to Energy", organized by Department of Agricultural Engineering and Civil Engineering, Maharashtra Institute of Technology, Aurangabad (M.S) India on 5th June, 2020.
33. Webinar on the topic "Virtual Interactive Classroom for Teachers and the Challenging Technologies in Post Covid – 19 Era" Organized by IFERP on 05th June, 2020.

34. Webinar on "Introduction to IoT and Case Studies on Industrial Applications" on 4th & 5th June 2020, organized by Department of Mechanical Engineering, Bharati Vidyapeeth College of Engineering, Navi Mumbai.
35. Webinar on the topic "Revising Teaching & Learning Strategies" Organized by Department of Science and Humanities, Hindusthan College of Engineering and Technology, Coimbatore, held on 04/06/2020.
36. Webinar on the topic "Knowledge Sharing on A to Z of Journal Publications (Survey to Citations!!)" organized by IFERP on 30th May, 2020.
37. 3-Day Online Faculty Development Program on "Technology Advancements in Mechanical Engineering (TAME-2020)" conducted by Department of Mechanical Engineering, Anantha Lakshmi Institute of Technology and Sciences, in association with ISME from 26/05/2020 to 28/05/2020.
38. Webinar on "Recent Trends in Industrial Automation", organized by the Department of ECE, Swamandhra College of Engineering and Technology, Narsapur, Andhra Pradesh on 27/05/2020.
39. Two-day webinar on "Recent Innovations and Future of Automobiles" held on 21st and 22nd May, 2020, organized by Department of Mechanical Engineering, Vignana Bharathi Institute of Technology, Hyderabad.
40. Webinar on "Engineering Simulation for Aerospace and Defence Domains" organized by Cambridge Institute of Technology in association with NAFEMS on 21st May, 2020.
41. Successfully completed the online "Faculty Awareness Program on NBA and NAAC" on 21/05/2020, organized by Internal Quality Assurance Cell (IQAC), GMIT, Davanagere.
42. Participated in the Post COVID - 19 Resurgence of Indian Industry and R & D organized by IARE - TIIC (Technology Innovation and Incubation Centre) from 18th to 20th May 2020.
43. One day webinar on "Graphene-The Future Material" held on 18th May, 2020 at Cambridge Institute of Technology, Bengaluru.
44. One day online workshop on 'Scientific Writing for Journals' organized by Springer Nature on 15th May, 2020.
45. One day Faculty Development Program on "OpenFoam Framework – Essential Computational Fluid Dynamics" held on 9th April, 2019 at PESITM, Shivamogga.
46. One-week National level workshop on "Current Scenario in Bioenergy Conversion and Waste Management Technologies" held at JNNCE, Shivamogga, from 24th to 28th Jan-2018.
47. One day workshop on the "Engine Technology Training" held on 6th of April 2016 at UBDT College of Engineering, Davangere.
48. Four days Faculty Development Program on CAED and CAMD conducted by 'Autodesk, Inc' at VTU Regional Office, Mysore from 30th April to 03rd May 2015.
49. Faculty Development Program on 'Research Methodology' held at PESITM, Shivamogga, from 19th – 23rd January 2015.
50. Successfully completed the training program on "Programming and Operations of Computer Numerical Control Machine Tools" organized by JNN College of Engineering, Shimoga, during October-November, 2011.

Contact Details

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