

BIO-DATA



1. **Name** Mr. Badal Kudachi
2. **Designation** Assistant Professor
3. **Residential Address** Agnel Technical Education Complex, Sector 9A, Vashi, 400703.
4. **Date of birth** 01st June
5. **Total Experience** 7.5 yrs
Teaching 7.5 yrs
6. **Qualifications**

Exam Passed	Year	Institution/ University	Branch/Specialization
M.Tech	2012-2014	VTU Regional Centre, Mysore	Thermal Power Engg.
B.E.	2007-2011	Sri Jayachamarajendra College of Engineering, Mysore-570006.	Mechanical

7. **Employment Record**

Institution	Year (From To)	Designation
Fr. C. Rodrigues Institute of Technology, Vashi Navi Mumbai	June 2017 to till date	Assistant Professor
Vidya Vikas Institute of Engineering and Technology, Mysore	Jan 2016 to June 2017	Assistant Professor
PA College of Engineering, Mangalore	July 2014 to June 2015	Lecturer

8. Undergraduate / Postgraduate Teaching Experience and Subjects Taught**Subjects Taught at UG level**

Sr.No.	Name of Subject	Semester
1.	ELEMENTS OF MECHANICAL ENGINEERING	I
2.	BASIC THERMODYNAMICS	III
3.	FLUID MECHANICS	IV
4.	APPLIED THERMODYNAMICS	IV
5.	TURBO MACHINES	V
6.	HEAT AND MASS TRANSFER	VI
7.	RENEWABLE ENERGY SOURCES	VIII

Subjects Taught at PG level

Sr.No.	Name of Subject	Semester

9. Research Experience**10. Research Funding / Consultancy Services:**

Sr.No.	Name of the Company	Address	Product	Consulting Service	Consulting Fees	Period

Research Grants:

Sr.No.	Name of Funding Organization	Type of Grant	Amount (Rs.)	Year	Name of Research Project
1.	University of Mumbai	University Minor Research	40,000	2019-20	Design and Fabrication of Nanoparticle Enriched PCM based Thermal Energy Storage System
2.	Fr. C. Rodrigues Institute of Technology	Departmental research grant	10,000	2019-20	PCM Based Thermal Energy Storage System

Technical Collaboration / Lab Funding with Industries

Sr.No.	Name of the Funding Organization	Type of Support	Amount (Rs.)	Year

11. Professional Societies Fellowship / Membership:

- Member of “National Society of Fluid Mechanics and Fluid Power (NSFMFP)”, IIT Bombay, India.
- Associate member of Indian Society of Heating, Refrigeration and Air Conditioning Engineers (ISHRAE), Mumbai Chapter, India.

12. Achievements / Awards / Position

13. Projects guided in UG/PG level: 8 UG

- Passive Control of Thermo-Acoustic Instabilities (2017-18).
- Design and Fabrication of PCM Based Heat Exchanger for Energy Storage (2018-19).
- Experimental Study of PCM Based Latent Heat Thermal Energy Storage System Using Cylindrical Fins (2019-20).
- Design and fabrication of Nano-Enhanced PCM based thermal energy storage system (2019-20).
- Experimental Study of PCM Based Triple Tube Latent Heat Thermal Energy Storage System Using Longitudinal Fins (2020-21).
- Experimental Study of Nano (Graphene) PCM Based Triple Tube Latent Heat Thermal Energy Storage System (2020-21).
- Low Cost Cooling/Heating System using Ground Coupled Heat Exchanger (2021-22).
- Hybrid cooling of PhotoVoltaic panel using finned PCM and water cooling (2021-22).

14. Short Term Training Programmes attended :

- One week (Feb. 21-25, 2022) AICTE Training and Learning (ATAL) Academy Online FDP on “**Electric Vehicles**” conducted by Department of Energy Engineering, DEFENCE INSTITUTE OF ADVANCED TECHNOLOGY (DU), Pune.
- One week (May 5-10, 2021) CFD- Ansys Fluent “Beginner to Expert Level”, Udemy online workshop,
- One week (Nov. 2-6, 2020) AICTE Training and Learning (ATAL) Academy Online FDP on “**Electric Vehicles**” conducted by Department of Mechanical Engineering, Fr. C. Rodrigues Institute of Technology, Vashi, Navi Mumbai.
- Three days training program (6th, 20th July and 14th Sep, 2019) on “**Measurement, Control and Virtual Instrumentation**” conducted by Department of Mechanical Engineering, Fr. C. Rodrigues Institute of Technology, Vashi, Navi Mumbai.
- One week (June 25-29, 2019) training on “**ANSYS Mechanical and CFD**” conducted by Department of Mechanical Engineering, Fr. C. Rodrigues Institute of Technology, Vashi Navi Mumbai in association with ARK Infosolutions Pvt. Ltd.
- One week (June 17-21, 2019) AICTE-QIP Sponsored short term course on “**Solar Thermal Technologies for Process Heat and Power**” organized by Department of Energy Science and Engineering (DESE), IIT Bombay.
- One-week (May 28-June 3, 2018) AICTE-QIP Sponsored short term course on “**Introduction to Numerical Heat Transfer, Fluid Flow and its Applications**” organized by Mechanical Engineering Department, CIT, Coimbatore.
- One-week (Dec 25-30, 2017) AICTE-QIP Sponsored short term course on “**Renewable Energy Sources for Sustainable Development, Need, Technologies and Policies**” organized by Mechanical Engineering Department, VJTI, Mumbai.

- Three days (Dec 05-07, 2017) workshop on “**ANSYS skill development program**” conducted by VJTI in association with Fr. C. Rodrigues Institute of Technology, Vashi, Mumbai.
- One Day National Seminar on “**Recent Trends in Sustainable and Clean Energy Technologies**” held on 17th April 2017 at NIE Institute of Technology, Mysore Karnataka.

15. List of Journal Papers/Book Chapter Published

- Kudachi, Badal, Nilesh Varkute, Bipin Mashilkar, Srikant Guthulla, Prabhav Jayaprakash, Alex Aaron, and Simran Joy. "Experimental and computational study of phase change material based shell and tube heat exchanger for energy storage." *Materials Today: Proceedings* (2021).
- Kudachi, Badal, Nitin Satpute, Nilaj N. Deshmukh, and Bipin Mashilkar. "Performance and Emission Characteristics of Thermal Barrier Coating on Diesel Engine Fueled with Cottonseed Biodiesel." In *Advances in Applied Mechanical Engineering*, pp. 205-213. Springer, Singapore, 2020.

16. List of Papers Published in National and International Conferences

- Nilesh Varkute, Badal Kudachi, Priyan Kamble, Anmol Rane, Aishwarya Harad, Glen Rebello, “Thermal Analysis of Earth Tube Heat Exchanger Using Experimental Setup and Simulation”, 2nd International Congress on Advances in Mechanical and Systems Engineering (CAMSE), Dr B R Ambedkar National Institute of Technology Jalandhar, 17-19 July 2021.
- Nilesh Varkute, Badal Kudachi, Bipin Mashilkar, Priyan Kamble, Anmol Rane, Aishwarya Harad, Glen Rebello, “Experimental and Numerical Investigation of Latent Heat Based Energy Storage System Using Nano Enhanced Phase Change Material”, 2nd International Congress on Advances in Mechanical and Systems Engineering (CAMSE), Dr B R Ambedkar National Institute of Technology Jalandhar, 17-19 July 2021.
- Badal Kudachi, Nilesh Varkute, Bipin Mashilkar, Srikant Guthulla, Prabhav Jayaprakash, Alex Aaron, Simran Joy, “Experimental and Computational Study of Phase Change Material Based Shell and Tube Heat Exchanger for Energy Storage”, 2nd International Mechanical Engineering Congress (IMEC – 2019), NIT Tiruchirappalli, 29 Nov. 2019 – 01 Dec. 2019.
- Badal Kudachi, Nitin Satpute, Nilaj Deshmukh, Bipin Mashilkar, “Performance and Emission Characteristics of Thermal Barrier Coating on Diesel Engine Fuelled with Cottonseed Biodiesel”, 1st International Conference on Applied Mechanical Engineering Research (ICAMER - 2019), NIT Warangal, 2-4 May 2019.
- Badal Kudachi, Avnish Dubey, Harshit Singh, Mayank Upasani, “Recent Progress in Renewable Energy Sources and Challenges to Meet Future Energy Demands in India”, International Conference on Energy and Environmental Challenges (CE2C 2019), VNIT Nagpur, pp-46, 18-19 Jan 2019.
- N. N. Deshmukh, B. Kudachi, S. Joy, S. Phansalkar, V. Pillai and T. Thomas, "Suppression of Thermo-Acoustic Instabilities using Helmholtz Resonator," 2019

International Conference on Nascent Technologies in Engineering (ICNTE), 2019, pp. 1-6, <https://doi.org/10.1109/ICNTE44896.2019.8945994> Scopus Link

- N. Satpute, B. Kudachi, J. L. Maikulal, B. Mashilkar and A. R. Mali, "Implementation of Mechanical Motion Amplifier in Hybrid Shock Absorber with Linear Generator and Fluid Damper," 2019 International Conference on Nascent Technologies in Engineering (ICNTE), 2019, pp. 1-6, <https://doi.org/10.1109/ICNTE44896.2019.8945939> Scopus Link
- Badal Kudachi, Krishnamurthy K. N., "Experimental Evaluation of Ytria Partially Stabilized Zirconia Thermal Barrier Coating by Plasma Sprayed Technique on I.C engine", International Conference on Frontiers in Engineering, Applied Sciences and Technology (FEAST 2018), NIT Tiruchirappalli, 27 April 2018.
- "Mechanical Characterization of Hybrid Epoxy Reinforced with Carbon & Jute Fiber by Varying Fiber Orientation", 4th International Conference on Innovative Research in Engineering Science and Management" (ICIRESM-16), GIIT, Madhya Pradesh, IJETMAS, May 2016 (ISSN 2349-4476, Vol-4).
- "Hydro Dynamic Journal Bearing analysis by using FEM" in International conference on Technology Management for Green Environment, VTU RC Mysore, Sep 2013.

17. Books/Reports/General articles etc.

18. Invited Lectures in FDP/ STTP

19. International Conference Technical Program Committee Member / Reviewer :
Reviewer for International Conference

- National Conference On Emerging Trends In Electric - Mobility And Sustainable Development : Opportunities & Challenges (NCETEMSD-2K22) 13 - 14 MAY, 2022, RIT Islampur.
- IEEE & IAS Technically Co-Sponsored 4th Biennial International Conference on Nascent Technologies in Engineering (ICNTE-2021), Jan 15-16, FCRIT, Vashi Navi Mumbai.
- IEEE Technically Co-Sponsored 3rd Biennial International Conference on Nascent Technologies in Engineering (ICNTE-2019), Jan 4-5, FCRIT, Vashi Navi Mumbai.