

PROFILE

Dr. MADHUKESHWARA. N

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1 Present status

Working as Professor of Mechanical Engineering Department at Jain Institute of Technology, Davanagere. (Visvesvaraya Technological University, Belgaum, affiliated institute)

2 Personal information

Name	Madhukeshwara. N
Qualification	B.E. (Mechanical Engineering) M.Tech. (Thermal Engineering Systems Technology) Ph.D (Mechanical Engineering)
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Mobile	(+91) 9242202964
Teaching Experience	15 Years

3 Education

3.1 Professional qualification and discipline

- Ph.D in Mechanical Engineering from Kuvempu University, Shankaraghatta (UBDTCE, Davanagere) in the year 2014 (**Convective heat transfer specialization**).
- M.Tech in Thermal Engineering Systems Technology from Kuvempu University, Shankaraghatta (UBDTCE, Davanagere) in the year 2005. (**Aggregate 84%**)
- B.E in Mechanical Engineering from VTU, Belagavi (BIET, Davanagere) in the year 2002. (**Aggregate 72%**)

3.2 Title of Ph.D thesis

“Theoretical and experimental investigations on heat transfer and friction in solar air heater duct with artificial roughness on the absorber surface”

4 Professional society membership

5.1 Life member of the “*Combustion Institute*” No.LMC-1133, date of joining 11-12-2009.

5.2 Life member of the “*India Society for Technical Education*” No.LM-126249, date of joining 01-01-2019.

5 Projects

5.1 Projects executed

Sl. No.	Semester/ Course	Title of the project
1.	2 nd Year M.Tech	“Computer aided & experimental analysis of heat transfer & friction in solar air heater duct with artificial rib roughness on absorber plate.”
2.	8 th Semester BE	“Experimental investigations on the performance of blends of biodiesel fueled internal combustion engines.”
3.	6 th Semester BE	“Heat transfer through annulus space with specific reference to gas geyser.”

5.2 Projects guided

5.2.1 UG Projects

Sl. No.	Academic year	Title of the project
1.	2005-06	“Enhancement of efficiency of solar air heater using artificial roughness on the absorber plate.” (Sponsored by KSCST and also Selected for 29th series Students Project cum Exhibition held in PDA college of engineering, Gulbarga in October 2006)
2.	2006-07	“Multi reflector solar oven.”
3.	2007-08	“Experimental investigations on the performance of solar air heater with artificial roughness on the absorber plate.”
4.	2008-09	“Computer aided and experimental fluid flow analysis of artificially roughened solar air heater duct.”
5.	2010-11	“Enhancement of efficiency of solar air heater using artificial roughness on the absorber plate.”
6.	2011-12	“Multi utilization of wheel driven mechanism in agriculture”
7.	2011-12	“Automatic chips making machine”
8.	2012-13	“Multi die punching machine”

9.	2013-14	“Non conventional domestic water pumping system”
10.	2013-14	“Leaf briquette making machine”
11.	2014-15	“Electricity generation system on medians of highways using solar photovoltaic cells and vertical axis wind turbine for lighting applications”
12.	2014-15	“Design and fabrication of a machine for briquette making using biomass as a raw material”
13.	2017-18	“Sterling engine powered by solar parabolic collector for small scale domestic power generation”
14.	2017-18	“Fabrication of gamma sterling engine powered by rocket stove for small scale power generation”
15.	2018-19	“Solar powered seed sowing machine”

5.2.2 PG Projects

Sl. No.	Academic year	Title of the project
1.	2012-13	“Numerical investigation of flow transition for NACA 4412 airfoil using computational fluid dynamics”
2.	2012-13	“Assessment of boundary layer flow modeling in computational fluid dynamics for compressible external flow”
3.	2013-14	“Numerical simulation of enhancement of heat transfer in a tube with and without rodhelical tape swirl generators”
4.	2013-14	“Numerical Investigation and Optimization of Solar Tower Power Plant”
5.	2013-14	“A study on the performance of solar air heater using arc shaped turbulators on the absorber plate”

5.2.3 Ph.D Projects (Ongoing)

Sl. No.	Commencement year	Title of the project
1.	2015	“Investigations on the effect of various cross sections of shroud at different wind angles of attack in small scale wind turbines”

6 Research publications

6.1 International journal papers

1. Madhukeshwara. N and E. S. Prakash, “An investigation on the performance characteristics of solar flat plate collector with different selective surface coatings”, International Journal of Energy and Environment, Volume 3, 2012, ISSN 2076-2895, pp. 99-108.
2. Madhukeshwara. N and E. S. Prakash, “An investigation of heat transfer augmentation and friction characteristics in solar air heater duct with V-shaped wire as artificial roughness on absorber plate”, International Journal of Energy and Environment, Volume 4, Issue 3, 2013, ISSN 2076-2895, pp. 519-538.
3. Madhukeshwara. N and E. S. Prakash, “An investigation of heat transfer enhancement and friction characteristics in solar air heater duct with cube shaped uniform roughness on the absorber plate”, International Journal of Mechanical Engineering, Volume 2, Issue 3, 2013, ISSN 2319-2240, pp. 1-12. (IMPACT FACTOR: 3.2766)
4. Ravi H. C, Madhukeshwara. N and S. Kumarappa, “Numerical investigation of flow transition for NACA-4412 airfoil using computational fluid dynamic”, International Journal of Innovative Research in Science, Engineering and Technology, Volume 2, Issue 7, July 2013, ISSN 2319-8753, pp. 2778-2785. (IMPACT FACTOR: 1.682)
5. Shakarmurthy. H. M, Madhukeshwara. N and S. Kumarappa, “Assessment of boundary layer flow modeling approaches in computational fluid dynamics for compressible external aerodynamics using NACA-64618 Airfoil”, International Journal of Innovative Research in Science, Engineering and Technology, Volume 2, Issue 7, July 2013, ISSN 2319-8753, pp. 3137-3144. (IMPACT FACTOR: 1.682)
6. Jagadeesh. S. Pattanashetti and Madhukeshwara. N, “Numerical investigation and optimization of solar tower power plant”, International Journal of Research in Aeronautical and Mechanical Engineering, Volume 2, Issue 1, January 2014, ISSN 2321-3051, pp. 92-104. (IMPACT FACTOR: 0.875)
7. Sadashiv and Madhukeshwara. N, “Numerical simulation of enhancement of heat transfer in a tube with and without rod helical tape swirl generators”, International Journal of Research in Aeronautical and Mechanical Engineering, Volume 2, Issue 1, January 2014, ISSN 2321-3051, pp. 112-128. (IMPACT FACTOR: 0.875)
8. Madhukeshwara. N and E. S. Prakash, “Computer aided thermo-hydraulic performance analysis of solar air heater with ribbed roughness on the absorber plate”, International Journal of Research in Aeronautical and Mechanical Engineering, Volume 2, Issue 1, January 2014, ISSN 2321-3051, pp. 129-136. (IMPACT FACTOR: 0.875)
9. Vikram Bharath B. R. and Madhukeshwara. N, “A Study on the Performance of Solar Air Heater Using Arc Shaped Turbulators on the Absorber Plate” International Journal of Re-

- search in Aeronautical and Mechanical Engineering, Volume 2, Issue 6, June 2014, ISSN 2321-3051, pp. 116-136. (IMPACT FACTOR: 0.875)
10. Vikram Bharath B. R. and Madhukeshwara. N, “A Comparison of Transverse Section with Arc Shaped Turbulators as an Artificial Roughness on the Absorber Plate of a Solar Air Heater” International Journal of Science and Research, Volume 4, Issue 3, March 2015, ISSN 2319-7064, pp. 1406-1414. (IMPACT FACTOR: 5.611)
 11. E. S. Prakash, Madhukeshwara N, Veeresh G. Gunjalli and Dadapeer, “Experimental Investigation on a Convergent-Divergent Shrouded Small Scale Wind Turbine” International Research Journal of Engineering and Technology, Volume 2, Issue 3, June 2015, ISSN 2395-0072, pp. 1745-1748. (IMPACT FACTOR: 4.45)
 12. E. S. Prakash, Madhukeshwara N, Veeresh G. Gunjalli and Dadapeer, “Modeling a Shroud for the Wind Turbine and Carrying a Fluid Flow Analysis Using CFD Software Package” International Research Journal of Engineering and Technology, Volume 2, Issue 3, June 2015, ISSN 2395-0072, pp. 1749-1754. (IMPACT FACTOR: 4.45)
 13. Nagaraj A M, Madukeswara N, Sohan A N, “Estimation of Emissions and Testing of Cold Flow Properties of Biodiesel & its Blends with Diesel” International Journal of Energy, Environment and Economics, Volume 24, Issue 1, 2016, ISSN 1054-853X, p. 113. (IMPACT FACTOR: 0.51)
 14. Madhukeshwara. N, N. H. Siddalinga Swamy, “Effect of Various Artificial Roughness Parameters on Heat Transfer and Friction Characteristics for Flow Inside Rectangular Ducts of Solar Air Heater” International Advanced Research Journal in Science, Engineering and Technology, Volume 3, Issue 09, September 2016, ISSN 2393-8021, pp. 106-112. (IMPACT FACTOR: 3.943)
 15. Arun Kumar M B, and Madhukeshwara. N, “Evaluation of compressive properties of Epoxy resin filled with flyash PMCs”, International Journal of Advanced Material Sciences, Volume 7, Issue 1, April 2016, ISSN 2231-1211.
 16. Veeresh G. Gunjalli and Madhukeshwara N, “Performance analysis of small scale wind turbine at various angles of attack with different velocities”, International Journal of Scientific Research and Reviews (An ISO: 7021 - 2008 Certified and UGC Approved Journal(64650)), Volume 7, Issue 5, May 2018, ISSN 2279-543X, pp. 97-106. (IMPACT FACTOR: 6.1)
 17. Veeresh G. Gunjalli and Madhukeshwara N, “Performance analysis of small scale wind turbines with different shrouds”, International Journal of Scientific Research and Reviews (An ISO: 7021 - 2008 Certified and UGC Approved Journal(64650)), Volume 7, Issue 5, May 2018, ISSN 2279-543X, pp. 16-23. (IMPACT FACTOR: 6.1)
 18. Madhukeshwara Nanjundappa, “Optimum thermo-hydraulic performance of solar air heater provided with cubical roughness on the absorber surface”, Experimental Heat Transfer, July 2019, ISSN 0891-6152, pp. 1-14. (IMPACT FACTOR: 2)

6.2 International conference papers

1. Madhukeshwara. N and C. N. Nataraj, “*Computer aided and experimental analysis of heat transfer and friction in solar air heater duct with artificial rib roughness on the absorber plate*”, International congress on renewable energy for sustainable development, ICORE - 2006, organized by Solar Energy Society of India (SESI),HITEC, Hyderabad, February 8th to 11th 2006, Poster Presentation.
2. Madhukeshwara. N, C. N. Nataraj and E. S Prakash, “*Computer aided and experimental analysis of heat transfer and friction in solar air heater duct with v-shaped rib roughness on absorber plate*”, International conference & exhibition on total engineering, analysis & manufacturing technologies, TEAM TECH - 2007, Indian Institute of Science (IISc), Bangalore, October 4th to 6th 2007, pp. 62-63.
3. Madhukeshwara. N and E. S Prakash, “*Heat Transfer and Friction in Solar Air Heater Duct with Ribbed Absorber Plate*”, International conference on emerging trends in engineering, ICETE - 2011, NMAM Institute of Technology, Nitte, May 4th to 5th 2011,. United Publishers Pvt. Ltd. ISBN:978-93-8119-507-9, pp. 688-692.

6.3 National conference papers

1. C. N. Nataraj, Madhukeshwara. N and Suhel Ahmed Khan. I.L, “*Experimental investigation of heat transfer and friction factor using semi circular ridges on absorber plate of solar air heater*”, National conference on current trends in technology, NUCONE - 2006, Nirma Institute of Technology, Nirma University, Ahmedabad, 30th November to 2nd December 2006, pp. 239-241.
2. Madhukeshwara. N and E. S Prakash, “*Heat transfer and friction characteristics in solar air heater duct with artificial roughness on the absorber plate*”, Thirty fifth national conference on Fluid mechanics and fluid power, FMFP - 2008, PES Institute of Technology, Bangalore, 11th to 13th December 2008, pp. 447-454.
3. Madhukeshwara. N and E. S. Prakash, “*A Study On Performance Characteristics Of Solar Flat Plate Collector With Different Selective Coatings*”, National conference on New advances in thermal, design, materials and manufacturing engineering, NATDMME - 2009, Malnad College of Engineering, Hassan,5th to 7th March 2009, pp. 39.
4. Madhukeshwara. N and E. S. Prakash, “*An investigation on the performance characteristics of solar flat plate collector with different selective surface coatings*”, National conference on emerging trends in engineering technology and applications, NCETETA - 2009, Shirdi Sai Engineering College, Bangalore, 29th & 30th April 2009. pp. 488-491.
5. Madhukeshwara. N and E. S. Prakash, “*A study on scaling due to hard water on different metals*”, National conference on Recent trends in mechanical engineering, RTME - 2009, Vemana Institute of Technology, Bangalore, 23rd & 24th November 2009. pp. 269-275.

6. Madhukeshwara. N and E. S. Prakash, "*Performance analysis of solar flat plate collector with different selective coatings*", National conference on advances in mechanical engineering, NAME - 2010, Jawaharlal Nehru National College of Engineering, Shimoga, 24th & 25th September 2010. Allied Publishers Pvt. Ltd. ISBN:978-81-8424-623-0. pp. 191-196.
7. Madhukeshwara. N and E. S. Prakash, "*Theoretical study of heat transfer and friction in solar air heater duct with ribbed roughness on the absorber plate*", National Conference on Recent Advances in Mechanical Engineering and their Impact on Indian Industries, RAMEIII-2012, PDA College of Engineering, Gulbarga-585102, 20th to 22nd September, 2012, pp. 28.
8. Veeresh G. Gunjalli and Madhukeshwara N, "*Performance analysis of small scale wind turbine at various angles of attack with different velocities*", Third National Conference on Emerging Trends in Mechanical Engineering, NCETM-2018, Adichunchanagiri Institute of Technology, Chikkamagaluru, 4th May 2018. (Awarded as Best paper)
9. Veeresh G. Gunjalli and Madhukeshwara N, "*Performance analysis of small scale wind turbines with different shrouds*", Third National Conference on Emerging Trends in Mechanical Engineering, NCETM-2018, Adichunchanagiri Institute of Technology, Chikkamagaluru, 4th May 2018.
10. Veeresh G. Gunjalli, Madhukeshwara N and Shankargoud Nyamannavar "*Effect of Reynolds number on heat transfer and friction in solar air heater duct with V-shaped rib roughness on absorber plate*", National conference on advances in science, engineering and management, NCASEM-2019, 23-24 August 2019.

7 Books published

1. Madhukeshwara Nanjundappa, "*Elements of Mechanical Engineering*", Pristine Publishing House, Mangaluru, 2019, ISBN-9788193783832.
2. Madhukeshwara Nanjundappa, "*Fundamentals of Fluid Mechanics*", Pristine Publishing House, Mangaluru, 2019, ISBN-9789354060328.

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