

Faculty Profile

Dr. Rupesh Jaising Yadav

M.E.(Mechanical - Heat Power), Ph.D.

Professor

Department of Mechanical Engineering



Areas of Interest

Heat Transfer, Fluid Mechanics, Power Plant Engineering, I. C. Engines, Alternative Fuels, Combustion, Emissions, Energy

Academic / Industrial Experience

- Academic Experience : 14 Yrs
- Industrial Experience : -03 Yrs
- Research Experience: -07 Yrs

Research

- Completed **Ph.D.** from **Savitribai Phule Pune University, Pune** with topic, '*CFD predication of Heat transfer & Friction Characteristics of Partially decaying and full length Swirl flow*' in Feb 2015.
- **Publications** : a. International Journals: 10
b. International Conference: 15
c. National Conference: 10
d. Books: -
- **Reviewer for Journals / Conferences:**
 - ELSEVIER's 'International Journal of Heat and Mass Transfer' Journal
 - International Journal of Thermal Science and engineering
 - Reviewer for MECH PGCON 2016/2017 of SPPU, Pune.
- **Editorial Member for Journals / Conferences :IFERP/MECH PGCON 2016-2017**
- **Completed Research Projects:**

2009-2012 , BCUD, Pune University for Rs. 1,50,000/-

- **Undergoing Research Project**
2016-2018, BCUD, SPPU, Pune for Rs. 2,40,000/-
Applied to Swarnjayanti Fellowship 2016-17
Applied for DRDO Project
Applied for SERB, DST 17-18

Selected Publications

List of papers published in the year 2009-17

Total Publications = 41

Faculty Profile

International Conference -	14
National Conference -	20
International Journal-	07
National Journal-	NIL

International Journal

1. Rupesh J. Yadav , Sagar S. Desai, and Omkar R. Chavan, “ Numerical Heat Transfer Study of Turbulent Square Duct Flow through W-Type Turbulators”, International Journal of Thermal Technologies, pp 320-324, Vol. 04, No 4(Dec.2014), **E-ISSN 2277 – 4114**.
2. R.J.Yadav, A.S Padalkar , “CFD analysis of fully decaying, partially decaying and partly swirl flow in round tubes with short length twisted tapes”, Journal of Energy Technology and Policy, Vol 3 No 1 (2013)(**ISSN 2224-3232 (print),ISSN 2225-0573 (online)**)
3. R.J.Yadav, A.S Padalkar , “Swirl intensity analysis in round tubes with short length twisted tapes”, International Review of Mechanical Engineering (I.RE.M.E.), Vol. 07,No 2 ,(2013), **ISSN 1970 - 8734 (print) ISSN 1970 - 8742 (online)**.
4. R.J.Yadav, A.S Padalkar , “Swirl intensity analysis in round tubes with short length twisted tapes”, International Journal on Heat and Mass Transfer - Theory and Applications, Vol. 01,No 1 ,(2013), **ISSN 2281 - 8537 (print) ISSN 2281 - 7352 (online)**.
5. R.J.Yadav, A.S Padalkar , “CFD Analysis for Heat Transfer Enhancement inside a Circular Tube with Half-Length Upstream and Half-Length Downstream Twisted Tape”,Journal of Thermodynamics, Volume 2012,**Article ID 580593,12 pgs, (doi:10.1155/2012/580593),(ISSN:1687-9244(Print),ISSN: 1687-9252 (Online)**).

International/ National Conference

6. Rupesh J. Yadav and Sagar S. Desai, “Experimental and CFD analysis of heat transfer enhancement in square duct using W-shaped turbulators”, in the Proceedings of 3rd National Conference on “Innovations in Mechanical Engineering” at **Sinhagad Institute of Technology, Lonavala, between 9-10 Jan 2015**.
7. Rupesh J. Yadav and Priti Bodke, “Experimental Heat transfer enhancement through quarter baffles insert in a tube”, in the Proceedings of 3rd National Conference on “Innovations in Mechanical Engineering” at **Sinhagad Institute of Technology, Lonavala, between 9-10 Jan 2015**.
8. Rajendra N. Todkar, Sanjay. N. Havaladar and R. J. Yadav, “Forced Convection Heat Transfer over a plate through Jets – a review” in the Proceedings of International

Faculty Profile

Conference on “Recent Advances in Mechanical Engineering” (**ICRAME-2015**) at **G.H. Raisoni College of Engineering, Wagholi, Pune between 26-28 Feb 2015.**

9. Rupesh J. Yadav and Priti Bodke, “Investigations of Heat Transfer through Quarter Baffles Insert In A Tube”, in the Proceedings of National Conference on Advances In Mechanical Engineering Techniques (**AMET2015**) **between March 12-13, 2015** MIT College of Engineering, Pune, Maharashtra, India.
10. Rupesh J. Yadav and Prathamesh Joshi, “Review of Passive Heat Transfer Augmentation Technique Using Twisted Tape Inserts”, in the Proceedings of National Conference on Advances In Mechanical Engineering Techniques (**AMET2015**) **between March 12-13, 2015** MIT College of Engineering, Pune, Maharashtra, India.
11. Rupesh J. Yadav, S.N.Hawaladar, Bhausahab Karande and Farzin Irani, “CFD Analysis of Aerofoil for Single Axis Double Rotor Utility Drone”, in the Proceedings of National Conference on Advances In Mechanical Engineering Techniques (**AMET2015**) **between March 12-13, 2015** MIT College of Engineering, Pune, Maharashtra, India.
12. R.J.Yadav, A.S Padalkar , “CFD Analysis of Swirl Intensity for Fully and Partly Swirl Flow in Round Tubes with Short Length Twisted Tapes” Proceedings of the 22nd National and 11th International ISHMT-ASME Heat and Mass Transfer Conference- 2013, IIT Kharagpur, India, 28-31st December 2013, **Paper ID- HMT1300312**
13. R.J.Yadav, A.S Padalkar , “CFD analysis of heat transfer due to swirl flow in round tubes with twisted tapes”1st RDME 2013, Raisoni College of Engineering, Pune.
14. R.J.Yadav, A.S Padalkar , “Experimental Analysis of Friction Characteristics in Tubes due to Diamond Hole Twisted Tape Inserts”, Proceedings of the Fortieth National Conference on Fluid Mechanics and Fluid Power ,December 12-14, 2013, NIT Hamirpur, Himachal Pradesh, India. **Paper ID-254.**
15. R.J.Yadav, A.S Padalkar , “CFD Analysis for Friction Characteristics inside a Circular Tube with Fully and Partially Decaying Swirl Flow and Partly Swirl Flow”, Proceedings of the Fortieth National Conference on Fluid Mechanics and Fluid Power ,December 12-14, 2013, NIT Hamirpur, Himachal Pradesh, India. **Paper ID-255.**
16. R.J.Yadav, “CFD prediction of fully decaying and partially decaying swirl flow in tube due to twisted tape inserts”, INNOVATION-2012, 21-22 March 2012, organized by University of Pune, at PDVVP COE ,Ahmednagar.
17. R.J.Yadav, A.S Padalkar , “CFD Analysis for Heat Transfer Enhancement inside a Circular Tube with fully and partially decaying swirl flow”, Proceedings of the Thirty Ninth National Conference on Fluid Mechanics and Fluid Power ,December 13-15, 2012, SVNIT Surat, Gujarat, India. Paper ID-179, pg 9 (**ISBN:978-81-925-494-0-8**)
18. R.J.Yadav , “CFD Analysis for Heat Transfer enhancement for Air flow inside a circular tube with partially decaying swirl flow with twisted tape inserts,

Faculty Profile

Proceedings of the 21st. National & 10th. ISHMT-ASME Heat and Mass Transfer Conference ISHMT2011 ,IIT Chennai, India, 27 - 30th Dec 2011, **Paper ID-ISHMT_IND_05-22**

19. R.J.Yadav , “Experimental Analysis for Heat Transfer enhancement for Air flow inside a circular tube with different longitudinal tape inserts, Proceedings of the 21st. National & 10th. ISHMT-ASME Heat and Mass Transfer Conference ISHMT2011,IIT Chennai, India, 27 - 30th Dec 2011, **Paper ID-ISHMT_IND_05-23**
20. R.J.Yadav, “Review on the heat transfer & Friction characteristics in Tubes due to swirl flow” National Conference on Recent Decelopments in Mechanical Engineering, RDME - 2011, 4- 5th July 2011, Department of Mechanical Engg.,MES’s College of Engg., Pune411001, India.
21. R.J.Yadav, “Recent advances in Turbochargers”, National conference Trendz in mechanical engineering , TIME 2010, Pune, 5-7th March 2010, PDEA’s College of Engg., Hadapsar Pune-411028.
22. R.J.Yadav, A.S Padalkar, “Review on the heat transfer & Friction characteristics in Tubes due to swirl flow” Proceedings of the International Conference on Recent Advances in Mechanical Engineering, ICROME - 2010, 7-8th April 2010, NI University, Kumarcoil, Kanyakumari , India.(**ISBN-978-81-907917-8-6**)
23. R.J.Yadav, “ Prediction of Heat transfer and friction in tube due to swirl flow ”, INNOVATION-2010-11, 27-28th Oct 2010, organized by University of Pune, at PDVVP COE ,Ahmednagar.
24. R.J.Yadav , “Effective Utilization Of Waste Heat From Tri-generation -The Need of Hour For The World” International Conference on Emerging Research and Advances in Mechanical Engineering, ERA - 2009 , Chennai, India, 19 - 21st March 2009, Velemal College of Engineering, Chennai, India.
25. R.J.Yadav , “Performane Evaluation of P IV computer cooling fin” International Conference on Emerging Research and Advances in Mechanical Engineering, ERA - 2009 , Chennai, India, 19 - 21st March 2009, Velemal College of Engineering, Chennai, India.
26. R.J.Yadav, “CFD prediction of swirl flow due to twisted tape inserts”, INNOVATION-2009-10, organized by University of Pune, at AVCOE ,Snagamner.

Post Ph.D. Publications

27. R.J. of Yadav, V.N.Raibhole,Prathamesh Joshi “Experimental transfer coefficient for a non-circular duct with twisted tape for a wide prediction of friction factor and heat range of Re”, Proceedings the 23rd national Heat and Mass transfer conference and 1st ISHMT-ASTFE Heat and Mass Transfer Conference hosted by LPSC, ISRO, Thiruananthpuram, Kerala between 17-20 December 2015.(**Paper ID-IHMTC-1353**)

Faculty Profile

28. R.J.Yadav, D.A.Kamble, Prathamesh Joshi, "Analysis of entropy generation in a circular tube with half length twisted tape and full length twisted tape", Proceedings of the 42nd National conference on Fluid Mechanics and Fluid Power at NIT, Surathkal between 14-16 December 2015. .(**Paper ID-FMFP-2015-261**)
29. R.J.Yadav,S.Kore,V.N.Raibhole,P.Joshi, "Development of correlations for friction factor and heat transfer coefficient for square and hex duct with twisted tape inserts in laminar flow", Proceedings of the International Conference on Computational Heat and Mass Transfer November 30 to December 2, 2015 Organized by ,National Institute of Technology Warangal-506 004, Telangana State, India. (**Paper ID-MS- 1440090636**).
30. S.S. Kore, R.J.Yadav, N.K.Sane, "Investigation of effect of dimple depth on heat transfer and fluid flow within rectangular channel", International Conference on Computational Heat and Mass Transfer November 30 to December 2, 2015 Organized by ,National Institute of Technology Warangal-506 004, Telangana State, India. (**Paper ID-MS- 1440087130**).
31. R.J.Yadav,S.Kore,V.N.Raibhole,P.Joshi, "Development of correlations for friction factor and heat transfer coefficient for square and hex duct with twisted tape inserts in laminar flow", Procidia Engineering, 127 (2015) pp. 250-257. (**ISSN-1877-7058, Impact Factor = 0.629**).
32. S.S. Kore, R.J.Yadav, N.K.Sane, "Investigation of effect of dimple depth on heat transfer and fluid flow within rectangular channel", Procidia Engineering, 127 (2015) pp. 1110-1117. (**ISSN-1877-7058, Impact Factor = 0.629**).
33. Rupesh J. Yadav, Prashant K. Kurve And Pooja J. Pawar , "A Review on Performance and Emission Analysis of Different Vegetable Oil as Biodiesel for CI Engine", International Journal of Current Engineering and Technology/Special Issue-4 (March 2016)/Pages: 78-82;**Http://Dx.Doi.Org/10.14741/Ijcet/22774106/Spl.4.2016.13**.(**ISSN-2277 - 4106, Print-2347 - 5161, Global Impact Factor =5.126**).
34. Vikas Shelke, R.J.Yadav S.B. And Girase, "A Review of Heat Pipe Systems for Heat Recovery and Renewable Energy Application", International Journal of Current Engineering and Technology/Special Issue-4 (March 2016)/Pages : 102-107;**Http://Dx.Doi.Org/10.14741/Ijcet/22774106/Spl.4.2016.19**. (**ISSN-2277 - 4106, Print-2347 - 5161, Global Impact Factor =5.126**).
35. Gagandeep Singh Theti, Pramod E. Chaudhari And Rupesh J. Yadav , "Effect of Acoustic Energy on Fluidization of Ultra-Fine Particle", International Journal of Current Engineering and Technology/Special Issue-4 (March 2016)/Pages : 128-132;**Http://Dx.Doi.Org/10.14741/Ijcet/22774106/Spl.4.2016.26**. (**ISSN-2277 - 4106, Print-2347 - 5161, Global Impact Factor =5.126**).
36. Gagandeep Singh Theti, Rupesh J. Yadav, Kiran More,"Implementation of Bharat Stage VI norms for small and medium duty CI engines",in the Proceedings

Faculty Profile

of National Conference on Advances In Mechanical Engineering Techniques (AMET 2017) between March 16-17, 2017 MIT College of Engineering, Pune, Maharashtra, India.
[Http://Dx.Doi.Org/10.14741/Ijcet/22774106/Spl.3.2017.26](http://Dx.Doi.Org/10.14741/Ijcet/22774106/Spl.3.2017.26). (ISSN-2277 - 4106, Print-2347 - 5161, Global Impact Factor =5.126)

- 37.** Rupesh J. Yadav, Kiran More, Mohammad Yusuf. M, ,S.B. Girase, Ashish S. Utage, “Design and Experimental study of Adhesive double lap joint”, in the Proceedings of National Conference on Advances In Mechanical Engineering Techniques (AMET 2017) between March 16-17, 2017 MIT College of Engineering, Pune, Maharashtra, India.
[Http://Dx.Doi.Org/10.14741/Ijcet/22774106/Spl.3.2017.26](http://Dx.Doi.Org/10.14741/Ijcet/22774106/Spl.3.2017.26). (ISSN-2277 - 4106, Print-2347 - 5161, Global Impact Factor =5.126).
- 38.** S.B.Girase¹, R.J.Yadav, C.K.Patil³, K.C.More, S.P.Shisode, “Geometry optimization of exhaust manifold using CFD”,in the Proceedings of National Conference on Advances In Mechanical Engineering Techniques (AMET 2017) between March 16-17, 2017 MIT College of Engineering, Pune, Maharashtra, India. **[Http://Dx.Doi.Org/10.14741/Ijcet/22774106/Spl.3.2017.26](http://Dx.Doi.Org/10.14741/Ijcet/22774106/Spl.3.2017.26). (ISSN-2277 - 4106, Print-2347 - 5161, Global Impact Factor =5.126).**
- 39.** P. M. Gadhe , Sapana Deshmukh² and R. J. Yadav, “Design of Heliostat Field for Small Scale Central Receiver System” , in the Proceedings of National Conference on Advances In Mechanical Engineering Techniques (AMET 2017) between March 16-17, 2017 MIT College of Engineering, Pune, Maharashtra, India. **[Http://Dx.Doi.Org/10.14741/Ijcet/22774106/Spl.3.2017.26](http://Dx.Doi.Org/10.14741/Ijcet/22774106/Spl.3.2017.26). (ISSN-2277 - 4106, Print-2347 - 5161, Global Impact Factor =5.126).**
- 40.** R. J. Yadav , Prathmesh Joshi , Sandip Kore ,D.A.Kamble, “Experimental determination of forced convection transfer over a plate with nozzle plate”, in the Proceedings the 2nd international Thermal & Fluid Engineering Conference, TFEC2017, 4th International Workshop on Heat Transfer, IWHT2017, April 2-5, 2017, Las Vegas, NV, USA.(**Paper ID-TFEC-IWHT2017-18145**).
- 41.** R. J. Yadav, R.N.Todkar, Sandip Kore, “Experimental determination of forced convection heat transfer over a plate with nozzle plate” in the Proceedings the 2nd international Thermal & Fluid Engineering Conference, TFEC2017, 4th International Workshop on Heat Transfer, IWHT2017, April 2-5, 2017, Las Vegas, NV, USA.(**Paper ID-TFEC-IWHT2017-17804**).

Professional Affiliations

- Life Member, Indian Society of Heat & Mass Transfer (ISHMT)
- Life Member, International Society for Research and Development (ISRDR)

Awards and Recognitions

Recognized Post-Graduate Teacher in Mechanical Engineering of SPPU

Faculty Profile

Present Responsibilities at MMCOE

- Sponsored Research Projects, Mechanical Engg. Department
- Coordinator, NBA CR-2
- TG for TE Mechanical

Other Responsibilities

- Subject Expert on UGC Panel for Regular Selection Committee and Local Selection Committee
- Paper Setter for many subjects , SPPU at , Pune
- Senior Supervisor and Custodian: University Online and Offline Exams.
- Member, B.E. & M.E. Syllabus Setting Committee of SPPU, Pune
- Recognized Post-Graduate Teacher in Mechanical Engineering of SPPU
- External Examiner, M.Tech Viva-voce Exam at Shivaji University,Kolhapur and VIT, Pune
- Coordinated and Participated in many Conferences, Workshops and Seminars
- Invited lectures at different Engineering colleges.