






Curriculum Vitae



DUBBA SANTHOSH KUMAR
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Education

Qualification	Discipline/ Specialization	Institution/Board	Year	Division
Ph. D.	Thermal Engineering <i>Project: Flow through curved channel</i>	 IIT Roorkee	2018	--
M.Tech.	Thermal Science and Engg. <i>Project: Pool boiling on thin film Nano-coated surface</i>	 NIT Agartala	2013	Distinction
B.Tech.	Mechanical Engineering <i>Project: Design of Manual operated hacksaw</i>	 JNTU Kakinada	2010	First
Intermediate	Mathematics, Physics & Chemistry	 BIE Andhra Pradesh	2006	First
Matriculation	All subjects	 BSE Andhra Pradesh	2004	First

Details of doctorate degree

- + Title: An experimental study on the flow of refrigerants through a capillary tube
- + Supervisor: **Prof. Ravi Kumar**

Work experience	Designation	Organization	From	To
	Assistant Professor	Aditya Institute of Technology and Management, Tekkali	Sep, 2019	--
	Assistant Professor	Madanapalle Institute of Technology & Science, Madanapalle	Jul, 2018	Aug, 2019

Research proposals

- + Investigation of diabatic and adiabatic flow characteristics of natural refrigerants inside the capillary tubes
- + Effect of partial condensation of the refrigerant entering the capillary tube on the overall performance of a modern refrigerant system – **To be communicated**

Research area

- + Flow through curved channels, Bio-thermal & Bio-mechanical engineering, Nucleate Pool boiling and flow boiling heat transfer, Free expansion in capillary tubes used in domestic refrigerators

Courses to offer

- + Heat Transfer, Thermodynamics, Refrigeration and Air-conditioning, Machine Design, Strength of materials, Engineering mechanics, Engineering graphics, Fluid mechanics, Operations research

Publications - Article

- Dubba, S. K., & Kumar, R., “**Flow of refrigerants through capillary tubes : A state-of-the-art**”, *Exp. Therm. Fluid Sci.*, 81, pp. 370–381, 2016
- Dubba, S. K., & Kumar, R., “**Experimental investigation on flow of R-600a inside a diabatic helically coiled capillary tube: Concentric configuration**”, *Int. Journal of Ref.*, 86, pp. 186–195, 2017

	<ol style="list-style-type: none"> 3. Dubba, S. K., & Kumar, R., “Flow of partially condensed R-134a vapor through an adiabatic capillary tube”, <i>Flow Meas. Inst.</i>, 59, pp. 1–7, 2017 4. Dubba, S. K., & Kumar, R., “Adiabatic flow characteristics of R-600a inside a helically coiled capillary tube”, <i>Appl. Therm. Eng.</i>, 132, pp. 500–507, 2017 5. Das, S., Kumar, D.S., and Bhaumik, S., “Experimental study of nucleate pool boiling heat transfer of water on silicon oxide nanoparticle coated copper heating surface”, <i>Appl. Therm. Eng.</i>, 95, pp. 555–567, 2015
Publications - Conference	<ol style="list-style-type: none"> 1. Dhurandher B.K., Ravi Kumar, Dhiman A., Dubba S.K., “Computation of a Compartment Fire with Smagorinsky Sub-Grid Scale Model”, International conference on applications in computational engineering & sciences (IConACES 2020), VIT Chennai, Oct 30th & 31st, 2020 2. Dubba, S.K., Menda, V.R., Dhurandher, B.K., and Ravi Kumar, “Performance predictions of adiabatic flow of Isobutane inside a helically coiled capillary tube: Artificial Neural Network”, Rankine 2020 Conference – Advances in Cooling, Heating and Power Generation, 27th – 31st July, 2020 3. Santhosh K. Dubba, and Ravi Kumar, “Design parametric study of a lateral configured diabatic straight capillary tube with R-134a”, Proceedings of the 25th IIR International Congress of Refrigeration: Montréal, Canada, August 24-30, PP. 2076-2081, 2019. DOI: http://dx.doi.org/10.18462/iir.icr.2019.0379 4. Dubba, S. K., & Kumar, R., “The Two Phase Flow of R-134a Vapor through an Adiabatic Capillary Tube”, ISHMT-ASTFE Heat and Mass Transfer Conference (IHMTTC-2017), December 27-30, 2017, BITS Pilani, Hyderabad, India 5. Sudev, D., Santhosh kumar, D., Bhowmik, A., and Bhaumik, S., “Enhancement and Characterization of Nucleate Pool Boiling Heat Transfer on Titanium Oxide Nano coated Surface”, ISHMT-ASME Heat and Mass Transfer Conference, IIT Kharagpur, India-2013 6. Sudev, D., Dubba, S.K., and Bhaumik, S., “Enhancement of Nucleate Pool Boiling Heat Transfer on silicon Oxide Thin Film Surface”, International Conference on Mechanical Engineering, BUET, Bangladesh, Vol.90, PP.530-537, 2014 7. Dubba, S.K., and Bhaumik, S., “Review of Nucleate Pool Boiling Heat Transfer of Refrigerants”, National Conference on Advances in Heat Transfer and Fluid Dynamics, Aligarh Muslim University
Software package	<ul style="list-style-type: none"> ✚ 3D CAD models: Auto-CAD, Pro-E, Solid works ✚ <u>Simulation</u>: Altair Hyper mesh, Ansys-FLUENT, MATLAB-ANNs tool
Research interests	<ul style="list-style-type: none"> ✚ Flow through curved channels ✚ Heat transfer – Pool/flow boiling, Heat exchangers ✚ Refrigeration ✚ Bio-Mechanical Engineering ✚ Rural waste management through the production of Bio-gas
Mini-Projects	<ul style="list-style-type: none"> ✚ Industrial training at “Vijayawada thermal power station” Vijayawada ✚ Design and modelling of “Manual operated hacksaw” (B.Tech.) ✚ Experimental study of Nucleate Pool boiling heat transfer of water from Nano-coated thin-film surface with 100 nm and 200 nm thickness (M.Tech.)
Academic	<ul style="list-style-type: none"> ✚ Qualified and secured 454 in GATE 2011 ✚ Qualified and secured 431 in GATE 2012

achievements	<ul style="list-style-type: none"> ✦ Published and presented paper in “<i>Rankine 2020 Conference – Advances in Cooling, Heating and Power Generation</i>”, 40 Hours 		
Academic activities	<ul style="list-style-type: none"> ✦ Teaching Assistant, NPTEL Online course, R&AC, 2016 ✦ Teaching Assistant, NPTEL Online course, R&AC, 2017 ✦ Teaching Assistant, NPTEL Online course, R&AC, 2018 ✦ One-day workshop on "Intellectual Property Rights", NIT Agartala, 2012 ✦ Seminar presentation on “Effect of partial condensation of refrigerant on design and installation of a capillary tube in a refrigeration system” at Intellectual meet, MITS, Madanapalle, 2018 ✦ An inspirational talk - “Engineering as career: A road map” on Engineers day celebrations 		
Personnel achievements	<ul style="list-style-type: none"> ✦ Mess Secretary, SAC Member, CCB Member, IIT Roorkee, 2014-15 ✦ Head of Discipline committee, IIT Roorkee, 2014-15 ✦ Volleyball winner 2015-16, IIT Roorkee ✦ Volleyball runner 2016-17, IIT Roorkee ✦ Volleyball winner 2017-18, IIT Roorkee 		
Personnel activities	Volleyball, Badminton, Development of complex 3D CAD models		
Referees	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <p>1. Prof. Ravi Kumar Mechanical and Industrial Engg. Dept. IIT Roorkee Ph. +91-9458158967 Email: ravikfme@iitr.ac.in</p> <p>2. Prof. Akhilesh Gupta Mechanical and Industrial Engg. Dept. IIT Roorkee Ph. +91-9412968997 Email: akhilfme@iitr.ac.in</p> </td> <td style="width: 50%; vertical-align: top;"> <p>3. Dr. Swapan Bhaumik Associate Professor Mechanical Engineering Dept. NIT Agartala Ph. +91-9436120130 Email: drsbhaumik@gmail.com</p> </td> </tr> </table>	<p>1. Prof. Ravi Kumar Mechanical and Industrial Engg. Dept. IIT Roorkee Ph. +91-9458158967 Email: ravikfme@iitr.ac.in</p> <p>2. Prof. Akhilesh Gupta Mechanical and Industrial Engg. Dept. IIT Roorkee Ph. +91-9412968997 Email: akhilfme@iitr.ac.in</p>	<p>3. Dr. Swapan Bhaumik Associate Professor Mechanical Engineering Dept. NIT Agartala Ph. +91-9436120130 Email: drsbhaumik@gmail.com</p>
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