Profile Page

Name	:	Dr Dwesh K. Singh
Designation	:	Assistant Professor Grade-i
Department	:	Mechanical Engineering
Qualification	:	Ph.D Mechanical(Thermal Engineering) (IIT(ISM) Dhanbad)
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Research Interests :

Heat transfer, Fluid Mechanics, Nanofluid, Computational Fluid Dynamics, Numerical fluid flow, Refrigeration, Lattice Boltzmann Method, Parallel processing

Other Profile Links :

Google Scholar Link :

Dr. Dwesh K. Singh Click Here

Journal Publications :

Year	Journal	Publication
2022	Heat and Mass Transfer	Ravinder Kumar, Dwesh K. Singh, Subhash Chander, A Critical Review on the Effect of Nanorefrigerant and Nanolubricant on the Performance of Heat Transfer Cycles
2022	Environmental progress and sustainable Energy	Thermal performance analysis of a novel direct absorption solar collector augmented solar still using silver nanofluids
2022	Journal of Power Sources 555 (2023) 232351	Abhijeet Mitra, Rajan Kumar, Dwesh K. Singh, Thermal management of lithium-ion batteries using carbon-based nanofluid flowing through different flow channel configurations
2022	Journal of applied mathematics and computational mechanics, 21(2), 63-76	Durgesh Kushawaha, Sushil Yadav, Dwesh K. Singh, Pravata Kumar Behera, THERMO-DIFFUSION MHD CONVECTION IN ENCLOSURE USING HEAT AND MASS LINES VISUALIZATION TECHNIQUES
2022	Journal of Energy Storage, 53, 105195	Abhijeet Mitra, Rajan Kumar, Dwesh Kumar Singh, Zafar Said, Advances in the improvement of thermal-conductivity of phase change material-based lithium-ion battery thermal management systems: An updated review
2021	Chaos, Solitons & Fractals, 110607, 143	Durgesh Kushawaha, Sushil Yadav, Dwesh K. Singh, Effect of non-uniform diameter and fractal dimension of Al2O3 nanoparticle on double-diffusion in tilted enclosure

2021	Accepted, Materials Today: Proceedings	Ankit Kotia, Patil Rutua , Vivek Singh , Awadesh Kumar , Shripad Dhoke , Prasann Kumar , Dwesh Kumar Singh, Rheological Analysis of Rice Husk-Starch Suspended in Water for Sustainable Agriculture Application
2021	Journal of the Brazilian Society of Mechanical Sciences and Engineering, 43,540	Dwesh K. Singh, Sanjay, Satish Kumar, Ravinder Kumar, POTENTIAL OF MWCNT/R134A NANOREFRIGERANT ON PERFORMANCE AND ENERGY CONSUMPTION OF VAPOR COMPRESSION CYCLE: A DOMESTIC APPLICATION
2021	Journal of the Brazilian Society of Mechanical Sciences and Engineering, Accepted	Dwesh K. Singh, Waquar Ahmad, Rajan Kumar,Two Phase Nanofluid Flow and Heat Transfer Characteristics in Smooth Horizontal Tube Installed by Twisted Tapes with Alternate Axes of Rotation
2021	International Journal of Applied and Computational Mathematics, 7,234	Dwesh K. Singh, Durgesh Kushawaha, Sushil Yadav, Simulation by heat and mass lines technique of double-diffusive convection under magnetic field of exponentially heated and soluted enclosure
2021	International Journal of Mechanical Sciences, 191,106085	Durgesh Kushawaha, Sushil Yadav, Dwesh K. Singh, Magnetic field effect on double-diffusion with magnetic and non-magnetic nanofluids
2021	JP Journal of Heat and Mass Transfer, 23,303-317	Durgesh Kushawaha, Sushil Yadav, Dwesh K. Singh, Manoj Kumar and Anu Jain Impact of cavity aspect ratio on natural convection utilizing hybrid nanofluid using heatlines technique
2020	International J. Mechanical Sciences, 178, 105626	Dwesh K. Singh, Free convection with MWCNT/water nanofluid having varying aspect ratio of MWCNT nanoparticle in thermally undulated enclosures
2020	Int. J. Thermal Sciences, 148, 106160	Durgesh Kushawaha, Sushil Yadav, Dwesh K. Singh, Thermo-solute natural convection with heat and mass lines in a uniformlyheated and soluted rectangular enclosure for low Prandtl number fluids
2020	Heat and Mass Transfer,56, 2303-2311	Ravinder Kumar, Dwesh K. Singh, Subhash Chander, An experimental approach to study thermal and tribology behavior of LPG refrigerant and MO lubricant appended with ZnO nanoparticles in domestic refrigeration cycle
2017	International Journal of Advance Research and Innovation, 5 Issue 4, 456-458	A. Singh, Dwesh K. Singh, A Review on Design and Flow Simulation in an Axial Flow Hydro Turbine
2016	Int. J. Thermal Sciences, 107 (2016) 111-120	Dwesh K. Singh, S.N. Singh, Combined free convection and surface radiation in tilted open cavity
2015	Int. J. Heat and Mass Transfer 89, 444–453	Dwesh K. Singh, S.N. Singh, Conjugate free convection with surface radiation in open top cavity
2015	Int. J. Heat and Technology 33 (2015) 1-8	S. N. Singh, Dwesh K. Singh, Study of combined free convection and surface radiation in closed cavities partially heated from below

Conference Publications :

Year	Conference	Publication
2022	International Conference in Fluid, Thermal and Energy Systems, NIT Calicut	Dwesh k. Singh, Rakesh k. Singh, Moupriya Das and Ankit Kotia, Mixed convection in lid driven cavities with non-uniform diameter and fractal dimension of Al 2 O 3 nanoparticle by Lattice Boltzmann Method
2020	3rd International Conference on Frontiers in Industrial and Applied Mathematics, NIT Jamshedpur, December 21-22, 2020	Durgesh Kushawaha,Sushil Yadav, Dwesh K. Singh, Influence of Cavity Aspect Ratio on Thermal Management Utilizing Cu+Al2O3/H2O Hybrid Nanofluid

2020	4 th International Conference on Recent Advances in Mathematical Sciences and its Applications, JIIT, Noida, U.P, Inia	Durgesh Kushawahaa, Sushil Yadavb , Dwesh K. Singh, Heat and Mass Flows Visualization in Double-Diffusive Natural Convection in the Influence of Magnetic Field using Heat and Mass Lines Techniques
2019	International Conference on Advancements and Futuristic Trends in Mechanical and Materials Engineering, IIT Ropar, 5–7 December 2019	Durgesh Kushawaha,Sushil Yadav, Dwesh K. Singh; Visualization of heat and mass lines in thermosolute natural convection in Cu-water nanofluid
2018	19th ISME Conference	Dwesh K. Singh, Ravinder Kumar, Subash Chander, Mechanism to enhance thermal performance of refrigeration cycle using nanorefrigerants and nanolubricants – A review
2018	19th ISME Conference, December,20-22, 2018	Isha Srivastava, Sanjay Jagga, Ankit Kotia, Dwesh Kumar Singh , and Subrata Kumar Ghosh, Analyze and Correlate the rheological properties of MWCNT+CuO/engine and MWCNT+Al2O3/engine oil nanolubricant
2016	Int. Conf. of Adv. Research and Innovation, Institution of Engineers, New Delhi	Ajay Singh, Dwesh K. Singh and Pranay Tanwar, A review on design and flow simulation in an axial flow hydro turbine
2014	5th International and 41st National Conference on Fluid Mechanics and Fluid Power, IIT Kanpur, 12-14 Dec 2014	Dwesh K. Singh, S.N. Singh, Investigation of Fluid Flow in Cavities Partially Heated from Below
2014	National conference on Advances in Thermal Engineering, IIT(ISM) Dhanbad	Dwesh K. Singh, S.N. Singh, Study of Conjugate Free Convection with Surface Radiation from Left Volumetric Heat Generating Vertical Wall in Closed Cavities
2013	2nd CAE International Conference, IIT Madras, 19-21 Dec 2013	Dwesh K. Singh, S.N. Singh, Numerical Study of Combined Free convection and Surface Radiation in Closed Cavities Partially Heated from Bottom
2013	11th International and 22nd National ISHMT-ASME Heat and Mass Transfer Conference, IIT Kharagpur, 28-31 Dec 2013	Dwesh K. Singh, S.N. Singh, Numerical Investigation of Coupled Heat Transfer by Natural Convection and Surface Radiation in Closed Cavities Partially Heated From Bottom Wall

Research Projects :

Role	Project Type	Title	Funding Agency	From	To	Amount	Status	Co-Investigator
Investigator	TEQIP-III	Performance analysis of vapour compression refrigeration system with MWCNT nanorefrigerants	TEQIP-III	01-02-2019	10-07-2019	44550	Completed	

Co-PI	ISRO	Improving the Conductive Heat Transfer Efficiency of Thermal Base Plate inside a Thermal Vacuum Chamber	ISRO	04-03-2020	Continue	30 Lakh	Ongoing	Subhash Chander, Satyender Singh

Events Organized :

Category	Type	Title	Venue	From	To	Designation
Seminar	National	Industrial Motivational Campaign for Youth / Prospective Entrepreneurs	Dr. B R Ambedkar National Institiute of Technology Jalandhar	01-02-2020	02-02-2020	Coordinator
STC	National	Multi-scale Computational Fluid Dynamics: Fundamentals and Applications	NIT Jalandhar	21/09/2020	25/09/2020	Convener
Conference	International	Recent Advances in Sustainable Environment	Sobhit University, Gangoh	26/02/2022	27/02/2022	Organizing Secretary

Professional Affiliations :

Designation	Organization
Member (2017-18)	Society of Automotive Engineers India
Reviewer	Heat transfer Engineering, Taylor and Francis
Reviewer	Journal Of Brazilian Society Of Mechanical Sciences and Engineering, Springer
Reviewer	Mathematical Modelling of Engineering Problems, IIETA
Reviewer	Journal of Thermal Science, Springer
Member	Indian Society of Mechanical Engineers
Reviewer	International Journal of Fluid Machinery and Systems

PhD Supervised :

Scholar Name	Research Topic	Status	Year	Co-Supervisor
Harishchandra Patel	Thermal Engineering	Ongoing	2022	Dr. O P verma
Durgesh Kushawaha	“Thermo-Solute Natural Convection in Rectangular Enclosures with Newtonian and Nano Fluids Using Head and Mass Lines Techniques	Completed	2022	Sushil Yadav
Ankush Banyal	Parabolic Trough Collector with Phase Change Material (PCM)	Ongoing	2021	Dr. Rajan Kumar
Ravinder Kumar	Flow condensation heat transfer characteristics of refrigerant using nanoparticles	Ongoing	2018	Prof. Subhash Chander

PG Dissertation Guided :

Student Name	Dissertation Title	Status	Year	Co-Supervisor
Moupriya das	Mixed convection in lid driven cavities with parallel processing in Lattice Boltzmann method	Completed	2022	Dr. Sanjay
Avneesh	Experimental investigation on condensation heat transfer and pressure drop of refrigerant R134a in horizontal macro channels having enhanced inner surface	Completed	2022	Dr. Rajeev Kukreja
Abhijit Mitra	Thermal management of lithium ion batteries using carbon based nanofluid flowing through serpentine channel	Completed	2022	Dr. Rajan Kumar
Rakesh Kumar Singh	Mixed convection in lid driven cavities with non-uniform diameter and fractal dimension of Al2O3 nano particle by lattice Boltzmann method	Completed	2021	Dr. Sanjay
Waquar Ahmad	Numerical Simulation of Condensation in pipe	Completed	2020	
Satish Kumar Singh	Performance analysis of vapour compression refrigeration system with MWCNT nanorefrigerants	Completed	2019	
Manish Kumar	Simulation of water-cooled photovoltaic/Thermal(PV/T) system on fluent	Completed	2019	Dr. Pramod Kumar
Shailendra K. Chaurasiya	Field study of thermal comfort and adaption of hostel occupants in composite climate of Jalandhar city	Completed	2019	Dr. Sanjay

Patents :

Name	Reg./Ref. No.	Date of Award/Filling	Organization	Status
MULTI-FUNCTIONAL INDUCTION FURNACE FOR HEATING AND MELTING OF MATERIALS METHOD AND THEREOF	202121048186	29/10/2021	Indian patent	Published

Admin. Responsiblities :

Position Held	Organization	From	To
2017 Batch Co-ordinator	Mechanical Engineering Department, Dr. B R Ambedkar National institute of Technology	30-08-2018	continue
Convener	Students grievance cell, Mechanical Engineering Department, Dr. B R Ambedkar National institute of Technology	30-03-2018	continue
Convener, M.Tech Project Seminar	Mechanical Engineering Department, Dr. B R Ambedkar National institute of Technology	29/03/2019	continue
Warden	NIT Jalandhar	17/03/2021	continue
Member Time Table	Department of Mechancal Engineering, NIT Jalandhar	17/01/2019	31/12/2020
Co-coordinator Institute Magazine	NIT Jalandhar	02/03/2021	