

## CURRICULUM VITAE

### **Dr. Naveen Kumar Gupta**

Ph.D. (IIT ISM Dhanbad)

Professor (Training & Placement)

Harcourt Butler Technical University,  
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**Objective:** To leverage my expertise in career development, industry connections, and educational excellence to serve as a dynamic Professor of Training and Placement.

### **Mailing Address:**

Professor (Training & Placement)

Harcourt Butler Technical University,  
(HBTU) Kanpur (U.P.) India.

Phone: +91-9557705108

**Date of Birth & Gender:** 21.11.1976, Male

### **Educational Qualifications :**

- Ph.D.in Mechanical Engineering, Indian Institute of Technology (ISM), Dhanbad, India.  
**Thesis:** Thermal Performance Analysis of Heat Pipe using Nanofluids.

### **Details of employment : (20 Years Experience)**

- Professor (Training & Placement), Harcourt Butler Technical University, (HBTU) Kanpur India (26, Sept 2023 to continue)
- Professor, Department of Mechanical Engineering, G L A University, Mathura India (01, Feb 2023 – 25, Sept 2023).
- Associate Professor, Department of Mechanical Engineering, G L A University, Mathura India (01, June 2019 – 31, Jan 2023).
- Assistant Professor, Department of Mechanical Engineering, G L A University, Mathura India (22, October 2005 – 31, May 2019).

### **International Journal Publications (SCI/Scopus indexed)**

- Number of papers published in SCI indexed journals: 52
- Number of papers published in SCOPUS indexed journals: 10
- Number of papers published in conference proceeding indexed journals: 25

### **Some SCI/Scopus indexed research papers:**

1. **Gupta N.K., Tiwari A.K., Ghosh S.K;** “Heat Transfer Mechanisms in Heat Pipes using Nanofluids-A review” **Experimental Thermal and Fluid Science, (SCI indexed, Q1 Quartile), (Elsevier), (I.F. 3.73)** 90 (2018):84–100.
2. **Gupta N.K., Tiwari A.K., Ghosh S.K,** “Experimental Study of the Thermal Performance of Nanofluid-filled and Nanoparticles-coated Mesh Wick Heat Pipes”, *Journal of Heat Transfer, (SCI indexed), Transactions of ASME, (I.F. 2.02),* 2018; 140(10):102403-102403-7.
3. **Gupta N.K., Tiwari A.K., Ghosh S.K,** Experimental Investigation of Thermal Performance of Mesh Wick Heat Pipe, *Heat Transfer Research, (SCI indexed, Q2 Quartile), Begell House, (I.F. 2.44),* 49(18):1793–1811 (2018).
4. **Gupta N.K., Tiwari A.K., Verma S.K., Rathore P.K.S., Ghosh S.K,** “A Comparative Experimental Study of Thermal Performance Uncoated Wick Heat Pipe Using Water, Nanofluid and Nanoparticles Coated Wick Heat Pipe Using Water”. *Heat Transfer Research, 50(18), pp. 1767-1779, Begell House (SCI indexed, Q2 Quartile) (I.F. 2.44).*
5. **Gupta N.K., Verma S.K., Rathore P.K.S., Sharma A.** “Effects of CuO/H<sub>2</sub>O nanofluid application on thermal performance of mesh wick heat pipe”, *Heat Transfer Research* 51(9):837–850 (2020) Begell House **(SCI indexed, Q2 Quartile) (I.F. 2.44).**
6. **Gupta N.K., Sharma A, Rathore P.K.S., Verma S.K.** “Thermal performance optimization of Heat pipe using the nanofluid-Response surface methodology”. *Journal of the Brazilian Society of Mechanical Sciences and Engineering, 42 (11), 590 Springer, (SCI indexed) (I.F. 2.36).*
7. **Gupta N.K., Karmveer, Alam T., Siddique M.I.H., Khargota R., Dobrota D.,** “ A Case Study on thermal performance of solar air heater with down apex position of open trapezoidal ribs with gaps”, *Case Studies in Thermal Engineering, 51(2023) 103572, Elsevier (SCI indexed, Q1 Quartile) (I.F. 6.4)*
8. Pandey H., **Gupta N.K.,** “A descriptive review of the thermal transport mechanisms in mono and hybrid nanofluid-filled heat pipes and current developments” *Thermal Science and Engineering Progress (Elsevier), (SCI indexed, Q1 Quartile, I.F. 4.56).*
9. Pandey H., **Gupta N.K.,** “Analysis of heat transfer mechanisms in heat pipes: A Review” *Journal of Enhanced Heat Transfer, 29(8):61–96 (2022), Begell House, (SCI indexed, Q2 Quartile, I.F. 2.4).*

10. Verma S. K., **Gupta N. K.**, Rakshit D., “A comprehensive analysis on advances in application of solar collectors considering design, process and working fluid parameters for solar to thermal conversion”, **Solar Energy**, 208, pp. 1114-1150 (**SCI indexed, Q1 Quartile**), (**Elsevier**), (**I.F. 7.18**).
11. Rathore P.K.S, **Gupta N.K.**, Yadav D., Shukla S.K., Kaul S., “Thermal performance of the building envelope integrated with phase change material for thermal energy storage: an updated review” **Sustainable Cities and Society**, <https://doi.org/10.1016/j.scs.2022.103690>. (**SCI indexed, Q1 Quartile**) (**Elsevier**), (**I.F 10.7**).
12. Karmveer, **Gupta N.K.**, Alam T., Cozzolino R., Bella G., “A Descriptive Review to Access the Most Suitable Rib’s Configuration of Roughness for the Maximum Performance of Solar Air Heater” **Energies** (**SCI indexed, I.F. 3.25**).
13. Karmveer, **Gupta N.K.**, Md Irfanul Haque Siddiqui et al “The Effect of Roughness in Absorbing Materials on Solar Air Heater Performance” **Materials** 2022, 15, 7020 (**SCI indexed, Q1 Quartile, I.F. 3.74**).
14. Rathore P.K.S, Shukla S.K., **Gupta N.K.**, “Potential of Microencapsulated PCM for Energy Savings in Buildings: A critical review” **Sustainable Cities and Society**, 53,101884 (2019) (**SCI indexed, Q1 Quartile**) (**Elsevier**), (**I.F 10.7**).
15. Verma S K, Sharma K, **Gupta N.K**, Verma P, Upadhyay N, “Performance Comparison of Innovative Spiral Shaped Solar Collector Design with Conventional Flat Plate Solar Collector” (accepted) **Energy**, 194,116853, (2019), (**SCI indexed, Q1 Quartile**) (**Elsevier**), (**I.F. 8.85**).
16. Rathore P.K.S, Shukla S.K., **Gupta N.K**, “Synthesis and characterization of the paraffin/expanded perlite loaded with graphene nanoparticles as a thermal energy storage material in buildings” **Journal of Solar Energy Engineering: Including Wind Energy and Building Energy Conservation** (**SCI indexed, Q2 quartile**), **Transactions of ASME**, 142(4), e041006, (**I.F. 2.38**),
17. Rathore P.K.S, Shukla S.K., **Gupta N.K**, “Yearly analysis of peak temperature, thermal amplitude, time lag and decrement factor of building envelope in tropical climate” **Journal of Building Engineering**, 31,101459, (**SCI indexed, Q1 Quartile**) (**Elsevier**) (2020), (**I.F. 7.14**).
18. Pandey H., Agrawal S., **Gupta N.K.**, “Temporal performance evaluation of hybrid nanofluid in heat pipe: An experimental study” (Accepted), **Heat Transfer Research**, Begell House (**SCI indexed, Q2 Quartile**) (**I.F. 2.44**).
19. Singh A.K., Rathore P.K.S., Sharma R.K., **Gupta N.K.**, Kumar R., “Experimental evaluation of composite concrete incorporated with thermal energy storage material for improved thermal behavior of buildings”, **Energy** 263(2023) 125701, (**SCI indexed, Q1 Quartile**) (**Elsevier**), (**I.F. 8.85**).
20. Karmveer, **Gupta N.K.**, Alam T., Singh H., “An Experimental Study of Thermohydraulic Performance of Solar Air Heater Having Multiple Open Trapezoidal Rib Roughnesses” **Experimental Heat Transfer** (**SCI Indexed, Q2 Quartile**) (**Taylor & Francis**) (**I.F. 3.5**).

21. Saha S., Alam T., **Gupta N.K.**, Dobrota D., “Analysis of microchannel heat sink of silicon material with right triangular groove on sidewall of passage” *Materials* (SCI Indexed, Q1 Quartile) (I.F. 3.5).
22. Kumar N, Rathore PKS, Sharma RK, **Gupta NK**, “Integration of Lauric acid/zeolite/graphite as shape stabilized composite phase change material in gypsum for enhanced thermal energy storage in buildings” *Applied Thermal Energy*, (SCI indexed, Q1 Quartile, I.F. 6.8) (Elsevier) <https://doi.org/10.1016/j.applthermaleng.2023.120088>.
23. Kumar, A.; Maithani, R.; Sharma, S.; Kumar, S.; Sharifpur, M.; Alam, T.; **Gupta, N.K.**; Eldin, S.M. Effect of Dimpled Rib with Arc Pattern on Hydrothermal Characteristics of Al<sub>2</sub>O<sub>3</sub>-H<sub>2</sub>O Nanofluid Flow in a Square Duct. *Sustainability* **2022**, *14*, 14675. <https://doi.org/10.3390/su142214675>. (SCI indexed, Q2 Quartile, I.F. 3.25).
24. Kumar, S.; Sharma, M.; Bala, A.; Kumar, A.; Maithani, R.; Sharma, S.; Alam, T.; **Gupta, N.K.**; Sharifpur, M. Enhanced Heat Transfer Using Oil-Based Nanofluid Flow through Conduits: A Review. *Energies* **2022**, *15*, 8422. <https://doi.org/10.3390/en15228422>. (SCI indexed, I.F. 3.25)
25. Yadav, A.S.; Alam, T.; Gupta, G.; Saxena, R.; **Gupta, N.K.**; Allamraju, K.V.; Kumar, R.; Sharma, N.; Sharma, A.; Pandey, U.; Agrawal, Y. A Numerical Investigation of an Artificially Roughened Solar Air Heater. *Energies* **2022**, *15*, 8045. <https://doi.org/10.3390/en15218045>. (SCI indexed, I.F. 3.25)
26. Dash, A.P.; Alam, T.; Siddiqui, M.I.H.; Blecich, P.; Kumar, M.; **Gupta, N.K.**; Ali, M.A.; Yadav, A.S. Impact on Heat Transfer Rate Due to an Extended Surface on the Passage of Microchannel Using Cylindrical Ribs with Varying Sector Angle. *Energies* **2022**, *15*, 8191. <https://doi.org/10.3390/en15218191>. (SCI indexed, I.F. 3.25)
27. Saha, S.; Alam, T.; Siddiqui, M.I.H.; Kumar, M.; Ali, M.A.; **Gupta, N.K.**; Dobrotă, D. Analysis of Microchannel Heat Sink of Silicon Material with Right Triangular Groove on Sidewall of Passage. *Materials* **2022**, *15*, 7020. <https://doi.org/10.3390/ma15197020>. (SCI indexed, Q1 Quartile, I.F. 3.74).
28. Sharma, A., Pali, H. S., Kumar, M., Singh, N. K., Rahim, E. A., Singh, Y., & **Gupta, N. K.** (2022). Effect of  $\alpha$ -aluminium oxide nano additives with Sal biodiesel blend as a potential alternative fuel for existing DI diesel engine. *Energy & Environment*, 0(0). <https://doi.org/10.1177/0958305X221133257>. (SCI indexed, I.F. 3.45).
29. Gupta, M.K.; Kumar, R.; Banerjee, M.K.; **Gupta, N.K.**; Alam, T.; Eldin, S.M.; Khan, M.Y.A. Assessment of Chambal River Water Quality Parameters: A MATLAB Simulation Analysis. *Water* **2022**, *14*, 4040. <https://doi.org/10.3390/w14244040>. (SCI indexed, Q2 Quartile, I.F. 3.25).
30. Kumari, N.; Alam, T.; Ali, M.A.; Yadav, A.S.; **Gupta, N.K.**; Siddiqui, M.I.H.; Dobrotă, D.; Rotaru, I.M.; Sharma, A. A Numerical Investigation on Hydrothermal Performance of Micro Channel Heat Sink with Periodic Spatial Modification on

Sidewalls. *Micromachines* **2022**, *13*, 1986. <https://doi.org/10.3390/mi13111986>. (SCI indexed, Q2 Quartile, I.F. 3.25).

31. Ajit, **Gupta N.K.**, “Effect of Different Al<sub>2</sub>O<sub>3</sub> nanofluid Concentrations on the Efficiency of Solar Water Desalination system” *Journal of Thermal Engineering*, (**ESCI & Scopus**) (**Accepted**).
32. Karmveer., **Gupta N.K.**, Alam T., Singh H., “Exergetic efficiency prediction of roughened solar air heater” *Journal of Thermal Engineering* (**ESCI & Scopus**) (**Accepted**).
33. Sigh U., **Gupta N.K.**, “Thermal performance analysis of heat pipe using response surface methodology” *Journal of Thermal Engineering* (**ESCI & Scopus**) (**Accepted**).
34. Ajit, Pandey H., **Gupta N.K.**, “Analysis of solar water desalination using hybrid nanofluids: An experimental study” (Accepted), *Journal of Thermal Engineering* (**ESCI & Scopus**) (**Accepted**).
35. Sigh U., Pandey H., **Gupta N.K.**, “An exploratory review on heat transfer mechanisms in nanofluid based heat pipe” *Journal of Thermal Engineering* (**ESCI & Scopus**) (**Accepted**).
36. Pandey H., Agrawal S., **Gupta N.K.**, “An experimental investigation of the performance characteristics of heat pipe using aqueous hybrid nanofluid” (Accepted), *Journal of Thermal Engineering* (**ESCI & Scopus**) (**Accepted**).
37. Kumar, R., Verma, S. K., **Gupta, N. K.**, & Singh, S. K. (2022). “Performance Enhancement of TSAH using Graphene and Graphene/CeO<sub>2</sub>-Black Paint Coating on Absorber: A Comparative Study” *Transdisciplinary Research and Education Center for Green Technologies, Kyushu University (Evergreen)*, <https://doi.org/10.5109/4843098>. (**ESCI & Scopus**).

### **Patents:**

#### **1. Patent Granted:**

Title: “Distillation based water purification system”

Application Number: 201911052368,

Date of Filing 17/12/2019

Request for Examination 27/12/2019

Publication Date (U/S 11A): 03.01.2020

Date of certificate issue: 11/12/2020

Post Grant Journal Date: 18/12/2020

#### **2. Patent Granted:**

Title: “Thermally efficient light weight brick”

Application Number: 202211066060

Date of Filing 17/11/2022

Publication Date (U/S 11A): 25.11.2022

Date of Grant: 26/02/2024

### **3. Patent Published:**

Title: "Foldable Cross-Flow Laptop Cooling Pad"

Application Number: 202011047438,

Date of Filing 30/10/2020

Publication Date (U/S 11A): 11.12.2020

### **4. Patent Published:**

Title: "Design and analysis of micro wind turbine for electricity generation in four wheelers"

Application Number: 202011045685

Date of Filing 22/10/2020

Publication Date (U/S 11A): 06.11.2020

### **Research Project & Consultancy work:**

- Project completed on "**Design and Fabrication of Water Purification System**" (Rs.1, 50, 000) by NSTEDB, DST, Govt. of India, New Delhi. Working on technology transfer.
- Consultancy of Rs 1,85,000 received from Prakash Diesel Pvt Ltd Agra (Project Title: Biodiesel generator development).
- Consultancy of Rs 47,200 received from Gaurav Transformers & Electrical Agra (Project Title: Reduction in burning rate of Transformers).
- Working on Consultancy work of Rs 30,000 for Aditya Clean energy (P) Ltd. (Titled "Development of prototype of solar thermal energy system")
- Project Proposal submitted to SERB of Rs 29 Lakhs (Title: IOT enabled solar driven air conditioning system for rural application").

### **International Conference Proceedings (WOS/Scopus)**

1. **Gupta N.K.**, Rathore P.K.S., Sinha S. "Biodiesel Production from Waste Cooking Oil Using Ultrasonic cavitation & its characteristics" **Proceedings of IEEE Explorer (Scopus)**.
2. **Gupta N.K.**, Barua A, Tiwari A.K., Ghosh S.K., "Numerical study of CeO<sub>2</sub> /H<sub>2</sub>O nanofluid application on thermal performance of heat pipe", **Materials Today Proceedings (Elsevier) (Scopus)**.
3. **Gupta N.K.**, Mishra S. Tiwari A.K., Ghosh S.K., "A review of thermo physical properties of nanofluids", **Materials Today Proceedings (Elsevier) (Scopus)**.
4. **Gupta N.K.**, "Effects of hybrid nanofluids on the thermal performance of heat pipe: An experimental investigation" (Accepted), proceedings "Lecture Notes in Mechanical Engineering" (**Scopus indexed**), **Springer**.

5. **Gupta N.K.**, “Thermal performance optimization of heat pipe using nanofluids” (Accepted), proceedings “Lecture Notes in Mechanical Engineering” (**Scopus indexed**), **Springer**.
6. Alam P., **Gupta N.K.**, Nizam A.R., “Characterization of nanoparticles embedded phase change materials” Materials Today Proceedings (**Scopus indexed**) (**Elsevier**).
7. **Naveen Kr. Gupta**, Manika Singh, Monalisa Gloria James “Solar Powered Air Conditioner :An Approach to Utilise the Solar Energy”, Proceedings of National Conference on “Emerging Vistas of Mechanical Engineering in 21<sup>st</sup> Century, 04-05 April 2011, AEC, Agra.
8. **Naveen Kr. Gupta**, Shailendra Sinha “Biodiesel Production from waste cooking oil and its characterization” Proceedings of 4<sup>th</sup> International Conference on Production and Industrial Engineering held at **Dr. B R Ambedkar NIT Jalandhar** during December 19-21, 2016.
9. **Gupta N. K.**, Tiwari A. K., Ghosh S. K., Application of hybrid nanofluids in heat pipe – An experimental study, First International Conference on Energy & Environment: Global Challenges-ICEE-2018, 09-10 March 2018, **NIT, Calicut**.
10. **Gupta N. K.**, Agrawal S., Tiwari A. K., Ghosh S. K., Effects of CeO<sub>2</sub>/H<sub>2</sub>O Nanofluid application on thermal performance of mesh wick heat pipe, First International Conference on Energy & Environment: Global Challenges-ICEE-2018, 09-10 March 2018, **NIT, Calicut**.
11. **Gupta N.K.**, Tiwari A.K., Ghosh S.K., “Effects of TiO<sub>2</sub>/H<sub>2</sub>O Nano fluid application on thermal performance of mesh wick heat pipe” International Conference on Nanotechnology: Ideas, Innovation & Initiatives - 2017, Paper Id- Div. Appl.\_319-ICN3I, **IIT, Roorkee**, Dec. 06-08, 2017.
12. **Gupta N.K.**, Tiwari A.K., Ghosh S.K, Progress in the application of nanofluids in heat pipes- A review, International Conference on Frontiers in Engineering, Applied Sciences and Technology, 31<sup>st</sup> March & 1<sup>st</sup>April 2017, **NIT Trichi**, Tiruchirappalli-620015.
13. **Gupta N.K.**,Tiwari A.K., Ghosh S.K, Experimental Investigation of thermal efficiency of the thermosyphon heat pipe, International Conference on Frontiers in Engineering, Applied Sciences and Technology,31<sup>st</sup> March & 1<sup>st</sup>April 2017, **NIT Trichi**, Tiruchirappalli-620015

#### **MTech. Thesis Supervised**

- Awarded- 03

#### **Ph.D. Thesis Supervised**

- Awarded- 04
- Working- 02

#### **Administrative Responsibility**

- Working as Professor, Training & Placement, at HBTU Kanpur.
- Worked as Associate Head of the Mechanical Engineering Department
- Worked as NAAC Criteria-1 Head
- Worked as NBA coordinator of the Mechanical Engineering Department
- Worked as Lab-In charge of Refrigeration and Air Conditioning Lab.

- Worked as member of the Board of Studies of the Department.
- Worked as Program coordinator of the Department.
- Worked as Project In-charge of B.Tech. Program
- Worked as Lab- In charge of Heat and Mass Transfer Lab
- Worked as Year coordinator of B. Tech IV year
- Worked as member of the Disciplinary committee of the Department.

#### **Award/Recognition:**

- Enlisted in Top 2% scientist's list of the year 2024 (List is released by Stanford University USA).
- Certificate of Appreciation for **teaching and research** for the Academic Session 2018-19, GLA University, Mathura.
- Certificate of Appreciation for **significant research contribution** for the Academic Session 2018-19, GLA University, Mathura.
- Certificate of Appreciation for **significant research contribution** for the Academic Session 2019-20, GLA University, Mathura.
- Editor of special issue "Advancement in heat exchangers" released by international journal "Energies" (MDPI publication) (**SCI indexed, Impact Factor: 3.25**)
- Examiner of Research project submitted to National Research and Development Agency (ANIP) of the Ministry of Science, Technology, Knowledge and Innovation of **Chile**

#### **Reviewer**

- Renewable and Sustainable Energy Reviews (Elsevier)
- Applied Thermal Engineering (Elsevier)
- Energy (Elsevier)
- Case Studies in Thermal Engineering (Elsevier)
- Experimental Thermal and Fluid Science (Elsevier)
- Thermal Science and Engineering Progress (Elsevier)
- Engineering Science and Technology, an International Journal (Elsevier)
- Microelectronics Reliability (Elsevier)
- Energy Reports (Elsevier)
- Environmental Science and Pollution Research (Springer-Nature)
- International Journal of Energy Research (Wiley)
- Journal of the Brazilian Society of Mechanical Sciences and Engineering (Springer-Nature)
- Journal of Thermal engineering (Yildiz publications)
- International Journal of Ambient Energy (Taylor & Francis)

#### **Conference/Workshop/Training Organized**

- Organized 5 days workshop on Employability upskilling of the students.
- Convener of International conference on "Futuristic and Sustainable Aspects in Engineering and Technology (FSAET-2020)" held on 18-19 December, 2020.



- Organized 5 days' workshop on "Solar Energy and it's Applications" (11-15 October' 2019).
- Organized training program on Computational Fluid Dynamics (CFD) in Collaboration with Techno Soft Educational and Research Consultancy (TSERC) running by alumni of IIT Delhi, India.

### **Design of new curricula**

- Designed "Advanced Heat Transfer Processes" course for PG students.
- Designed "Advanced Instruments in Material Research" course for PG students.

### **Center of Excellence/ MOU**

- Established the Center of Excellence in Collaboration with Daikin Air conditioning India Pvt. Ltd.
- Cordinated (SPOC also) of MOU with "National Institute of Solar Energy" (NISE) Faridabad (Haryana).

### **Workshop Attended**

- Attended three-day workshop on "X- Ray Diffraction" at **MNIT Jaipur**, during 13-15 April 2017.
- Attended six days faculty development program on "Nanofluid and its Engineering Applications" at **IIT (BHU), Varanasi** during 06-11 November 2017.

### **References**

- Dr. Subrata Kumar Ghosh (Ph: 9430187029, Email: subratarec@yahoo.co.in) Department of Mechanical Engineering, Indian Institute of Technology (ISM), Dhanbad, 221005 India.
- Dr Dibakar Rakshit, Associate Professor, (Ph: 9999804464, Email: [dibakar@iitd.ac.in](mailto:dibakar@iitd.ac.in)) Centre of Energy, Indian Institute of Technology Delhi, India.

Date. 11-02-2025

Place: HBTU, Kanpur



(Naveen Kumar Gupta)