

PROFILE

Educational Qualification:

S. No.	Qualifications acquired	Discipline / Stream	Year of Passing	University / Institution / College	Division / % age
a)	Ph.D.	Solar Engineering	2021	SMVD University Katra	----
b)	M. Tech.	Thermal Engineering	2010	NIT, Kurukshetra University	9.15 /10 CGPA
c)	B.Tech.	Mechanical Engineering	2007	Kurukshetra University ,Kurukshetra	72.69%.

Experience:

S. No.	Employer	Post held	Pay Scale	Basic Pay	Period
1	SMVD University Katra	Assistant Prof.	57700-182400	73000	21 st May, 2013 to Till Date
2	SGI, Samalkha	Assistant Prof. & HOD	-	39684	28 th June, 2011 to 16 th May, 2013

Publications in International Journals (SCI/SCOPUS)

- ❖ **Chopra, K., V. V. Tyagi, A. K. Pandey, Zhenjun Ma, and Haoshan Ren.** "Energy, exergy, enviroeconomic & exergoeconomic (4E) assessment of thermal energy storage assisted solar water heating system: Experimental & theoretical approach." *Journal of Energy Storage* 35 (2021): 102232. (SCI)
- ❖ **Chopra, K., V. V. Tyagi, A. K. Pandey, and Ahmet Sari.** "Global advancement on experimental and thermal analysis of evacuated tube collector with and without heat pipe systems and possible applications." *Applied energy* 228 (2018): 351-389. (SCI)
- ❖ **Chopra, K., V. V. Tyagi, A. K. Pandey, Ravi Kumar Sharma, and Ahmet Sari.** "PCM integrated glass in glass tube solar collector for low and medium temperature applications: Thermodynamic & techno-economic approach." *Energy* 198 (2020): 117238. (SCI)
- ❖ **Chopra, K., Atin K. Pathak, V. V. Tyagi, A. K. Pandey, Sanjeev Anand, and Ahmet Sari.** "Thermal performance of phase change material integrated heat pipe evacuated tube solar collector system: an experimental assessment." *Energy Conversion and Management* 203 (2020): 112205. (SCI)

- ❖ **Chopra, K.**, V. V. Tyagi, and A. K. Pandey. "Thermodynamic and techno-economic analysis of heat pipe ETC water heating system for Indian composite climate." *Journal of Thermal Analysis and Calorimetry* 139, no. 2 (2020): 1395-1407. (SCI)
- ❖ **Chopra, K.**, V. V. Tyagi, Atin K. Pathak, A. K. Pandey, and Ahmet Sari. "Experimental performance evaluation of a novel designed phase change material integrated manifold heat pipe evacuated tube solar collector system." *Energy Conversion and Management* 198 (2019): 111896. (SCI)
- ❖ Pandey, A. K., Imtiaz Ali Laghari, R. Reji Kumar, **Kapil Chopra**, M. Samykano, Abdullah M. Abusorrah, Kamal Sharma, and V. V. Tyagi. "Energy, exergy, exergoeconomic and enviroeconomic (4-E) assessment of solar water heater with/without phase change material for building and other applications: A comprehensive review." *Sustainable Energy Technologies and Assessments* 45 (2021): 101139. (SCI)
- ❖ Tyagi, V. V., **K. Chopra**, B. Kalidasan, Aditya Chauhan, U. Stritih, Sanjeev Anand, A. K. Pandey, Ahmet Sari, and Richa Kothari. "Phase change material based advance solar thermal energy storage systems for building heating and cooling applications: A prospective research approach." *Sustainable Energy Technologies and Assessments* 47 (2021): 101318. (SCI)
- ❖ Singh, Gurjeet, V. V. Tyagi, **K. Chopra**, A. K. Pandey, R. K. Sharma, and Ahmet Sari. "Energetic and exergetic assessment of two-and three-stage spray drying units for milk processing industry." *Journal of the Brazilian Society of Mechanical Sciences and Engineering* 43, no. 7 (2021): 1-25. (SCI)
- ❖ Singh, Gurjeet, **K. Chopra**, V. V. Tyagi, A. K. Pandey, Zhenjun Ma, and Haoshan Ren. "A comprehensive energy, exergy and enviroeconomic (3-E) analysis with carbon mitigation for multistage evaporation assisted milk powder production unit." *Sustainable Energy Technologies and Assessments* 43 (2021): 100925. (SCI)
- ❖ Singh, Har Mohan, Atin K. Pathak, **Kapil Chopra**, V. V. Tyagi, Sanjeev Anand, and Richa Kothari. "Microbial fuel cells: a sustainable solution for bioelectricity generation and wastewater treatment." *Biofuels* 10, no. 1 (2019): 11-31. (SCI)
- ❖ **Chopra, K.**, Pratik Kumar Pathak, Mahendran Samykano, V. V. Tyagi, and A. K. Pandey. "Recent Advancements in Design of Flat Plate Solar Collectors." In *IOP Conference Series: Materials Science and Engineering*, vol. 1127, no. 1, p. 012007. IOP Publishing, 2021. (SCOPUS)
- ❖ **Chopra, K.**, V. V. Tyagi, Prajjwal Gupta, Jeyraj Selvaraj, and Nasrudin Abd Rahim. "Recent advancement in heat pipe for stationary solar collectors." (2018): 51-8. (SCOPUS)
- ❖ Pathak, Atin K., **Kapil Chopra**, Har Mohan Singh, V. V. Tyagi, Richa Kothari, Sanjeev Anand, and A. K. Pandey. "Role of Solar Energy Applications for Environmental Sustainability." In *Environmental Biotechnology: For Sustainable Future*, pp. 341-374. Springer, Singapore, 2019. (SCOPUS)

- ❖ Tyagi, V. V., Dheeraj Kumar Nagilla, Jeyraj Selvaraj, **Kapil Chopra**, Richa Kothari, and A. K. Pandey. "Thermal Energy Storage in Phase Change Material Integrated Solar Collectors for Air Heating Application." In *IOP Conference Series: Materials Science and Engineering*, vol. 1127, no. 1, p. 012006. IOP Publishing, 2021. (SCOPUS)
- ❖ Nagilla, Dheeraj Kumar, V. V. Tyagi, Kumaran Kadirgama, **K. Chopra**, A. K. Pandey, and Richa Kothari. "Application of Phase Change Materials in Solar Water Heating Systems for Thermal Energy Storage." In *IOP Conference Series: Materials Science and Engineering*, vol. 1127, no. 1, p. 012012. IOP Publishing, 2021. (SCOPUS)
- ❖ Sharma, Vipul, Rajiv Kumar, Karan Vohra, and **Kapil Chopra**. "Fabrication and Mechanical Characterization of Walnut/Polyester Composites." *International Journal of Vehicle Structures & Systems (IJVSS)* 10, no. 5 (2018). (SCOPUS)
- ❖ **Kapil Chopra**, V. Sahni, and R. S. Mishra. "Thermodynamic analyses of multiple evaporators vapor compression refrigeration systems with R410A, R290, R1234YF, R502, R404A, R152A and R134A." *International Journal of Air-Conditioning and Refrigeration* 22, no. 01 (2014): 1450003.
- ❖ **Kapil Chopra**, V. Sahni, and R. S. Mishra. "Energy, exergy and sustainability analysis of two-stage vapour compression refrigeration system." *Journal of Thermal Engineering* 1, no. 4 (2015): 440-445. (SCOPUS)

Presented papers in National/International Conferences conducted or recognized by Professional agencies:

- ❖ Paper presented entitled "Recent Advancement in Heat Pipe for Stationary Solar Collectors" in 5th IET International Conference on Clean Energy and Technology (CEAT-2018) held on 5-6 September, 2018 in UM Power Energy Dedicated Advanced Centre at University of Malaya (Malaysia).
- ❖ Paper presented entitled "Recent Advancements in Design of Flat Plate Solar Collectors" in International Scientific Forum (ISF-2019) held on 16-17 December, 2019 in UM Power Energy Dedicated Advanced Centre at University of Malaya (Malaysia).
- ❖ Paper presented entitled "Application of Phase Change Material in Solar Water Heating Systems for Thermal Energy Storage" in International Scientific Forum (ISF-2019) held on 16-17 December, 2019 in UM Power Energy Dedicated Advanced Centre at University of Malaya (Malaysia).
- ❖ Paper presented entitled "Thermodynamic Analyses of Multiple Evaporators Vapour Compression Refrigeration Systems with R410A, R290, R1234YF, R502, R404A and R152A" in international Conference on Smart technologies for Mechanical engineering (STME-2013) held on 25-26 October, 2013 in Department of Mechanical, Production & Industrial and Automobile Engineering at Delhi

Technological University, Delhi.

- ❖ Paper presented entitled “Thermodynamic analysis of multi-evaporators vapour compression refrigeration system using ecofriendly refrigerants (R1234yf, R1234ze and R134a)” in International Conference on Smart technologies for Mechanical engineering (STME-2013) held on 25-26 October, 2013 in Department of Mechanical, Production & Industrial and Automobile Engineering at Delhi Technological University, Delhi.
- ❖ Paper presented entitled “Energy, Exergy and Sustainability Investigation of Waste Heat Recovery Vapour Compression Refrigeration System with Silver Nanofluid” in International Conference on Renewable Energy for Sustainable Environment: Challenges and Remedies (ICRESE-2017) held on 20-21 March, 2017 in Department of Energy Management at Shri Mata Vaishno Devi University, Katra (J&K).
- ❖ Paper presented entitled “Heat Pipes in Evacuated Tube Solar Collector System (ETCs): A Review” in National Conference on Renewable Energy and Sustainable Environment: Challenges and Remedies (CRESE-2018) held on 24-25 April, 2018 in Department of Energy Management at Shri Mata Vaishno Devi University, Katra (J&K).
- ❖ Paper presented entitled “Solar Thermal Energy Systems for Low/Medium Temperature Applications” in International Conference on Mechanical Engineering and Allied Sciences (ICMEAS-2018) held on 14-15 September, 2018 in Department of Mechanical Engineering at Shri Mata Vaishno Devi University, Katra (J&K).

Attended Workshops/seminars/Conferences/Orientation/Refresher recognized by National /International Professional bodies:

- ❖ Attended short term course on *Optimization using MATLAB through ICT* conducted by Mechanical Engineering Department, SMVDU, Katra, from 24-28 October, 2016.
- ❖ Attended summer training program on *Pedagogy and Research* conducted by Centre for Distance Engineering Education, IIT, Bombay, from 11-15 June, 2018.
- ❖ Attended faculty development program on *Sustainable Design and Manufacturing* conducted by Mechanical Engineering Department, SMVDU, Katra, from 12-16 February, 2018.
- ❖ Attended faculty development program on *Entrepreneurship Development* conducted by Entrepreneurship Development Cell, SMVDU, Katra, from 12-24 December, 2016.
- ❖ Attended faculty development program on *Foundation Program in ICT for Education* conducted by IIT, Bombay, from 8th March to 12th April, 2018.

- ❖ Attended workshop on ***Patent Drafting and Filing*** conducted by Department of Biotechnology, SMVDU, Katra, on 20th October, 2016.
- ❖ Attended short term course on ***Recent Trends in Automobile Engineering through ICT*** conducted by Mechanical Engineering Department, SMVDU, Katra, from 29th February to 4th March, 2016.
- ❖ Attended short term course on ***Solar Energy: Modeling and Conversion*** conducted by School of Renewable Energy & Efficiency, NIT, Kurukshetra, from 24-26 August, 2012.
- ❖ Attended faculty development programme on ***Theory and practical applications of FEM*** conducted by Mechanical Engineering Department, N.C College of Engineering, Israna (Haryana) from 14-25 June, 2010.
- ❖ Attended seminar on ***Entrepreneurship Awareness Programme*** conducted by Mechanical Engineering Department, N.C College of Engineering, Israna, 29-30 April, 2010.
- ❖ Attended national workshop on ***Advances in Clean Energy Conversion Technologies and Materials for Energy Storage Applications*** conducted by School of Mechanical Engineering, SMVDU, Katra, from 24-25 January, 2019.
- ❖ Attended faculty development program on ***Best Manufacturing Practices in Industries*** conducted by Mechanical Engineering Department, SMVDU, Katra, from 17-21 December, 2018.
- ❖ Attended national workshop on ***3D Printing for New Product Development*** conducted by School of Mechanical Engineering, SMVDU, Katra, on 13th September, 2019.
- ❖ Attended refresher/induction programme on ***Recent Advances in Heating, Ventilation, Air-Conditioning and Refrigeration*** conducted by Department of Mechanical Engineering, Nitte Meenakshi Institute of Technology, Bangalore, from 14-19 December, 2020.
- ❖ Attended faculty development programme on ***Green Technology & Sustainability Engineering*** conducted by AICTE Training and Learning (ATAL) Academy, from 19-23 January, 2021.
- ❖ Attended faculty development programme on ***Renewable Energy Intervention in Industry, Commercial and Domestic Application (Phase-I)*** conducted by Rajeev Gandhi Memorial College of Engineering and Technology, Nandyal, Andhra Pradesh, from 15-27 February, 2021.
- ❖ Attended faculty development programme on ***Renewable Energy Intervention in Industry, Commercial and Domestic Application (Phase-II)*** conducted by Rajeev Gandhi Memorial College of Engineering and Technology, Nandyal, Andhra Pradesh, from 14-26 December, 2020.
- ❖ Attended refresher programme on ***Innovative Teaching-Learning Methods*** conducted by Vidya Pratishthan's Kamalnayan Bajaj Institute of Engineering and Technology, Baramati, Maharashtra, from 07-12 December, 2020.