

## Faculty Profile

Name : Dr. Jayesh Kumar  
Designation : Assistant Professor  
Qualifications : M. Tech, GATE Qualified,  
Ph. D. (Mechanical Engineering)  
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Area of Interest/Specialization: Manufacturing Technology, Thermal  
Energy Storage, CFD  
Experience : 16 years



### Papers Published

1. Kumar Jayesh, Pushpendra Singh, and Rajesh Kumar. "Enhancement of the part-load thermal charging performance of a latent heat thermal energy storage unit with variable length fins at effective locations." *Renewable Energy Focus* 43 (2022): 130-145.
2. Kumar Jayesh, Pushpendra Singh, and Rajesh Kumar. "Performance enhancement of latent heat storage unit by the multiple chambers." *Energy Storage* 5.5 (2023): e446.
3. Kumar Jayesh, Pushpendra Singh, and Rajesh Kumar. "Advancement and challenges in latent heat thermal energy storage system." *Recent Advances in Mechanical Engineering: Select Proceedings of ITME 2019*. Springer Singapore, 2021.
4. Kumar Jayesh, Pushpendra Singh, and Rajesh Kumar. "The Effect of Geometric Parameters of a Container on Thermal Charging of Latent Heat Thermal Energy Storage System: A Review." *Advances in Mechanical and Materials Technology: Select Proceedings of EMSME 2020* (2022): 1185-1195.
5. Kumar Jayesh, Pushpendra Singh, and Rajesh Kumar. "Impact of Eccentric Tube Shapes and Heat Pipes on Phase Change Material's Thermal Charging." *Heat Transfer Engineering* (2024): 1-17.
6. Kumar, Jayesh, Pushpendra Singh, and Rajesh Kumar. "A numerical study on the influence of fin numbers and material embedded with heat pipe for thermal charging in a trapezoidal container." *Numerical Heat Transfer, Part A: Applications* (2024): 1-22.
7. Gupta, N., Kumar, V., Gaddam, R. R., Verma, A., Kumar, J., Kumar, R., ... & Jain, V. K. (2025). Development of soft eutectic phase change material modified with expanded graphite for thermal energy storage and human comfort applications. *Energy & Environment*, 0958305X241310199.

#### Papers presented in Conferences

1. 1<sup>st</sup> international Conference on **“Energy, Materials Sciences and Mechanical Engineering (EMSME-2020)”** on October 30<sup>th</sup> – November 01<sup>st</sup> 2020 in NIT (National Institute of Technology) Delhi. Paper Title – **“Influence of geometric parameters on the performance of latent heat thermal energy storage system: A review”**.
2. 2nd international Conference on **“Sustainable Technologies for Environmental Management” (STEM-2019)** on March 25-26, 2019, in DTU, Delhi. Paper Title- **“Phase change materials as thermal energy storage medium: state of art review”**.
3. International conference on **“innovative technologies in Mechanical Engineering” (ITME- 2019)** on 18-19th October 2019 by department of Mechanical engineering, KIET group of Institutions, Ghaziabad, U.P. Paper Title - **“Advancement and challenges in latent heat Thermal Energy Storage system”**.
4. **5<sup>th</sup> National conference on recent trends in electronics and electrical engineering (NCRTEEE-2021) on 29<sup>th</sup> -30<sup>th</sup> October 2021 in Inderprastha Engineering College, Ghaziabad.** Authors: Jayesh kumar, Dr. Pushpendra Singh and Dr. Rajesh Kumar, Paper Title- Latent heat thermal energy storage and its applications.

#### Awards and Recognitions

1. Certificate of appreciation by MSIT Delhi (2014-2015)
2. Appreciation letter from the exam cell MSIT Delhi – 2019
3. Topper of NPTEL exam in subject welding fundamentals – May-2024
4. Topper of NPTEL exam in subject Fundamental of manufacturing- Nov 2024
5. certificate of excellence in research by MSIT Delhi – 2023
6. certificate of excellence in research by MSIT Delhi - 2022