

Dr. Bhuwanesh Kumar



Contact Information

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Education

Degree	Institution	Duration	Thesis/Details
Ph.D. (Mechanical Engineering)	IIT Roorkee, India	July 2017 – 2023	Thesis: Spray Cooling of a Vertical Grid of Horizontal Tubes.
M.Tech (Applied Mechanics)	IIT Delhi, India	2010 – 2012	Thesis: Performance Analysis of Micro-Scale Multi-Effect Distillation System Compatible with Solar Energy.
B.E. (Mechanical Engineering)	Kumaun Engineering College	Graduated 2009	
GATE Qualification	—	2009, 2010 & 2015	Qualified in Graduate Aptitude Test in Engineering.

Professional Experience

Position	Institution/Organization	Duration	Key Responsibilities/Achievements
Assistant Professor	Dr. Babasaheb Bhimrao Ambedkar Technological University	Sept 2024 – Present	Teaching undergraduate and postgraduate courses
Post-Doctoral Research Associate	IIT Bombay	May–July 2024	Evaporating sessile droplet and capillary bridge of complex fluids in ambient and saturated alcohol vapor environment
Guest Faculty	Motilal Nehru National Institute of Technology Allahabad	2015–2017	Taught undergraduate courses
Assistant Professor	Bipin Tripathi Kumaon Institute of Technology	2012–2013	Taught undergraduate and post-Graduate courses

Research Expertise

Experimental Design

Thermal systems, spray cooling, solar energy applications.

CFD & Data Analysis

Advanced fluid flow and heat transfer modeling.

Instrumentation

Sensor selection, calibration, and high-speed video analysis.

Safety Protocols

Implementation of laboratory safety standards.

Publications

Title	Journal/Conference	Year	DOI/Link
Spray Cooling of Vertical Inline Horizontal Tubes	Nuclear Engineering and Design	2023	10.1016/j.nucengdes.2023.112310
Rewetting and transient heat transfer on the heated horizontal tube surface during the air-atomized spray cooling	Heat Transfer Research	2023	10.1615/HeatTransRes.2022044032
An experimental investigation of spray cooling system for next-generation electronic devices	Journal of Enhanced Heat Transfer	2022	10.1615/JEnhHeatTransf.2022040602
An Experimental Study of Rewetting on a Horizontal Tube with a Constant Heat Flux	Emerging Trends in Energy Conversion and Thermo-Fluid Systems: Select Proceedings of iCONNECTS 2021	2022	-----
Numerical Investigation of a Channel During Loss of Coolant Accident	International Conference on Future technologies in Manufacturing, Automation, Design and Energy	2020	-----

Performance Analysis of a Micro-Scale Multi-Effect Distillation System	Procedia Engineering	2013	—
Linear Fresnel mirror solar concentrator with tracking	Procedia Engineering	2013	-----