

CURRICULUM VITAE



Dr. Bhoopendra Pandey

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<https://scholar.google.com/citations?user=5MP8chsAAAAJ&hl=en>

Profile Summary:

I joined **IISc – Bangalore** in February 2024 and have been working on the gasification of biomass and RDF. I have more than six years of research experience in **IIT Kanpur, BITS Pilani, NIT Uttarakhand, and MNRE Kapurthala**. I received a prestigious Doctoral Fellowship from the MHRD, India, and a Postdoctoral Fellowship from the IISc Bangalore. I am always looking for a challenging position to utilize my skills and abilities in the research and development areas that offers professional growth while being resourceful, innovative, and flexible.

Area of Research:

- Fixed and Fluidized bed biomass gasification and pyrolysis
- Computational Fluid Dynamics (CFD)
- Biodiesel production and utilization
- Alternate Fuels and Emissions
- Internal Combustion Engines
- Modeling and Simulation

Ph. D. Thesis:

My Ph.D. thesis is entitled “**Performance Enhancement of a Downdraft Biomass Gasifier: Modified Air Distribution, Gasifying Agent Variation and CFD Analysis**”.

Educational Qualification:

Degree	Institute	Year
Ph.D. (Mechanical Engineering)	National Institute of Technology Uttarakhand (NIT Uttarakhand)	7 th July, 2023 (Thesis Defended)
M.E. (Thermal Engineering)	Thapar University, Patiala	2017
B.Tech. (Mechanical Engineering)	Jaypee University of Engineering and Technology	2014

Professional Experience:

Position	Institute/Industry	From	To
Senior Project Engineer	IIT-Kanpur, India	December, 2022	October, 2023
Research Associate	SSS-NIBE (MNRE, Govt. Of India)	October, 2023	February-2024

Key skills:

➤ Subject skills:

Thermodynamics
Finite element Method (FEM)
Power Plant engineering
Heat Transfer
Fluid Mechanics
IC Engine
Refrigeration and air conditioning (RAC)

➤ Software skills

ANSYS (Fluent), OpenFOAM, MATLAB, Design Expert, Microsoft office, Solid Work, SPSS, Pro E, Minitab, Q-blade

Publication:

- Bhoopendra Pandey, Pratik N Sheth, Yogesh K Prajapati, Air-CO₂ and O₂-enriched air-CO₂ biomass gasification in an autothermal downdraft gasifier: Experimental studies, **Energy Conversion and Management** 270 (2022): 116216. (SCI, I.F. 11.5)
- Bhoopendra Pandey, Yogesh K Prajapati, Pratik N Sheth “Recent progress in thermochemical techniques to produce hydrogen gas from biomass: A state of the art review”, **International Journal of Hydrogen Energy (IJHE)**, V44 (47), 25384-25415, 2019. (SCI, I.F. 7.139)
- Bhoopendra Pandey, Yogesh K Prajapati, Pratik N Sheth “CFD analysis of the downdraft gasifier using species-transport and discrete phase mode”, **Fuel**, 328 (2022): 125302. (SCI, I.F. 8.035)
- Bhoopendra Pandey, Pratik N Sheth, Yogesh K Prajapati, Tar cracking enhancement by air sparger installation in the combustion zone of the downdraft gasifier, **Biomass & Bioenergy**, 166 (2022): 106620. (SCI, I.F. 5.774)
- Bhoopendra Pandey, Yogesh K Prajapati, Pratik N Sheth, CFD analysis of biomass gasification using downdraft gasifier, **Materials Today: Proceedings**, 2020, (SCOPUS)
- Bhoopendra Pandey, S. S. Ragit, Satish Kumar “Optimization of biodiesel production from sesamum indicum oil by Taguchi’s technique”, **International Journal of Applied Agricultural Research (IJAAR)**, V12 (2), 225-265, 2017. (SCOPUS)

Conferences

- **Bhoopendra Pandey**, Pratik N Sheth, Yogesh K. Prajapati, Sampling and Measurement of Tar in the Product Gas of the Downdraft Gasifier: A Case, 26th National, and 4th International ISHMT-ASTFE Heat and Mass Transfer Conference December 17-20, 2021, IIT Madras, Chennai-600036, Tamil Nadu, India
- **Bhoopendra Pandey**, Yogesh K. Prajapati, CFD analysis of biomass gasification using downdraft gasifier, International Conference on Advances in Materials Processing & Manufacturing Applications (iCADMA 2020), November 5-6, 2020 at NIT Jaipur, Rajasthan, India
- **Bhoopendra Pandey**, Yogesh K. Prajapati, Thermodynamic equilibrium modeling of a downdraft gasifier: stoichiometric model, 3rd International Conference on “Sustainable Energy and Environment Challenges (SEEC – 2018)” December 18-21, 2018 at IIT Roorkee, India
- Sudarshan Kumar, Yogesh K. Prajapati, **Bhoopendra Pandey**, Investigation of heat distribution and thermal stress distribution of piston, 5th International Conference on “Computational Methods for Thermal Problems (THERMACOMP)”, July 9-11, 2018, IISC, Bangalore, India.

- **Bhoopendra Pandey, S. S. Ragit, Satish Kumar**” Preparation of biodiesel from bitter almond oil and characterization for use as a fuel in VCR diesel engines”, National Conference on Recent Advances in Mechanical Engineering (NCRAME), June 2017. NIT Kurukshetra, India.

Participated in Seminar/Workshop/ STC/FDP

- Faculty Development Programme (FDP) on “Computer Based Product Design and Manufacturing” 09-13 Feb, 2018, Department of Electronics and ICT Academy IIT Roorkee.
- DIC Sponsored Workshop on “Design Thinking for Innovative Products” 04-08 March, 2019, Department of Mechanic Engineering, NIT Uttarakhand.
- Short-Term Training Program (STTP) on “Application of Statistics in Experimental Techniques “Department of Mechanical Engineering, 29 July- 2 August 2019, NIT Uttarakhand & MNIT Jaipur.
- Short-Term Training Program (STTP) on “MATLAB and LabVIEW: Application in Engineering & Sciences” Department of Electrical Engineering, 20-24 Jan, 2020, NIT Uttarakhand.
- Faculty Development Programme (FDP) on “VLSI Chip Design Hands-on using open source EDA” 16-20 Dec 2019, Electronics and ICT Academy.
- One-day Workshop on “Energy Audit and Energy Efficiency” 10 December 2018, UPES Dehradun.

Award and Achievements:

- Best Paper award in conference in “iCADMA 2020”, NIT Jaipur.
- Awarded fellowship by MHRD, India, for pursuing a Ph.D. at National Institute of Technology Uttarakhand, Srinagar (Garhwal), Uttarakhand, India, 2017.
- Awarded fellowship by MHRD, India, for pursuing M.Tech. at Thapar University, Patiala, 2015.
- GATE 2015 exam in Mechanical Engineering.

Projects Undertaken:

M.E. project

- Thesis project on “Alternative fuels and its engine testing”
- Minor projects on
 - CFD analysis on Airfoil body
 - Rheological analysis of coal-water slurry
 - Cottonseed feed Biomass Gasifier

B.Tech. project

- Aerodynamic Study of Horizontal Axis Wind Turbine (HAWT)Blade Design

Industrial Training:

Organization	Training Area	Duration (In Weeks)
JAYPEE THERMAL POWER PLANT	BOILER, TURBINE, CHP, AHP	6 Weeks (2013)

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