

Dr. Abhishek Kumar Lal

DESIGNATION	Assistant Professor	<i>mobile:</i> (+91) 9026541185, 7905356976
INFORMATION	School Of Chemical Technology Leather Technology Department HBTU, Kanpur (UP)	<i>e-mail:</i> abhisheklal@hbtu.ac.in / Abhishek.chelal@gmail.com
AREA OF INTERESTS	Fluid Mechanics, Heat Transfer, Computational Fluid Dynamics (CFD), Non-Newtonian Fluid Flow past a bluff bodies, Leather Processing, Waste Water Treatment	
EDUCATION	Ph. D. in Chemical Engineering <i>Indian Institute of Technology Roorkee, Roorkee, Uttarakhand, India</i>	July 2013 – Feb 2020
	Master of Technology in Chemical Engineering <i>Indian Institute of Technology Kharagpur, Kharagpur, West Bengal, India</i> CGPA/Percentage: 8.56	July 2010 - June 2012
	Bachelor of Engineering in Chemical Engineering <i>Harcourt Butler Technological Institute, Kanpur, Uttar Pradesh, India</i> CGPA/Percentage: 67.80 %	July 2006 –June 2010
	Dr. VSEC, Kanpur, Uttar Pradesh, India Uttar Pradesh Board, Allahabad, U. P., India CGPA/Percentage: 71.00 %	Class XII June 2004
	Dr. VSEC, Kanpur, Uttar Pradesh, India Uttar Pradesh Board, Allahabad, U. P., India CGPA/Percentage: 62.40 %	Class X June 2002
PROFESSIONAL EXPERIENCE	Harcourt Butler Technological Institute , Kanpur (U.P.) <i>Contractual Faculty</i> - Teaching chemical engineering subjects and related laboratory.	July, 2012 – June, 2013
ASSISTANTSHIP	MHRD Assistantship	
Ph. D	Mixed Convection in Non-Newtonian Fluid Flow over a Rotating Circular Cylinder <i>(under guidance of Dr. Ram Prakash Bharti)</i>	July 2013 –February 2020
M. TECH. DISSERTATION	Modeling of Heat Transfer and Crystallization Kinetics in Chocolate Cooling Process. <i>(under guidance of Prof.(Dr) Suddipto Chakraborty, IIT Kharagpur)</i>	July 2011-June 2012
UNDERGRADUATE PROJECT	Up-gradation of Motor Spirit Quality <i>(under guidance of Dr. Ashwani Sood)</i> - This project aim to produce high octane number gasoline from Naphtha.	July 2009-June 2010
PUBLICATIONS		
Journal Articles	<ol style="list-style-type: none">1. Rahul Kumar¹, Abhishek K. Lal¹, Vivek Pancholi, Ram P. Bharti, Experimental and numerical investigation of material flow characteristics around a tool pin in friction stir welding process. <i>Int. J. Adv. Manuf. Technol.</i> https://doi.org/10.1007/s00170-021-07345-3 (Equally contributing first authors)2. Abhishek K. Lal, Ram P. Bharti, Computational Analysis of Mixed Convection Heated Transfer from a Rotating Isothermal Cylinder to Non-Newtonian Fluid. (Under Review)3. Abhishek K. Lal, and R.P. Bharti, “Steady forced convection flow and heat transfer from a channel confined rotating circular cylinder to Non-Newtonian fluids”. (under preparation)4. Abhishek K. Lal, and R.P. Bharti, “Mixed convection heat transfer from a channel confined rotating circular cylinder to Non-Newtonian fluids”. (under preparation)	
Book chapters	<ol style="list-style-type: none">1. Abhishek Kumar Lal, R. P. Bharti, Finite Difference Method for Food Processing and Engineering, Chapter 2, In K. M. Gangawane and M. Dwivedi (ed.) Advance Computational	

Techniques for Heat and Mass Transfer in Food Processing, 1st edition, (2022), CRC press. ISBN: 9780367747824

2. **Abhishek Kumar Lal**, A. Sanyal, Finite Volume Simulation for Heat and Mass Transfer in Food Product/Processing, Chapter 3, In K. M. Gangawane and M. Dwivedi (ed.) Advance Computational Techniques for Heat and Mass Transfer in Food Processing, 1st edition, (2022), CRC press. ISBN: 9780367747824

REFEREED CONFERENCE PROCEEDINGS

1. **Abhishek K. Lal**, Ram P. Bharti, Laminar mixed convection in non-Newtonian fluid flow over an unconfined rotating cylinder. *7th International and 45th National Fluid Mechanics and Fluid Power Conference*, IIT Bombay. December 10-12, 2018. Published (Ref. no. FMFP-2018-432).
2. **Abhishek K. Lal**, Ram P. Bharti, Non-Newtonian power law fluid flow across side by side rotating cylinder. *A National e-Conference on Recent Trends on Fluid Dynamics Research*, NIT Rourkela. April 2-4, 2021.
3. L. Malviya, **Abhishek K. Lal**, and R.P. Bharti. Steady flow of power-law fluids over two rotating cylinders in a side-by-side arrangement. *15th International Conference on Complex fluids and Soft Matter (CompFlu2021)*. IIT Gandhinagar, India. Dec 13 - 14, 2021.

RESONSIBILITY & EXTRA CURRICULARS

Teaching Assistant

2014-2017

- Received an appreciation certificate in recognition for my role as '**Teaching Assistant**' for the B.Tech First year Computer Programing Lab of course titled "Computer Programming and Numerical Analysis" (*CHN-103 Autumn semester*) and involved in Computer Lab up-gradation work for consecutive three semester.

Teaching Assistant

2016

- Received an appreciation in recognition for my role as '**Teaching Assistant**' for the B.Tech 2nd year Reaction Engineering Lab of course titled "Reaction Engineering" (*CHN-204-Spring Semester*) in 2016.

General Secretary

- Received an appreciation certificate in recognition for my role as '**Sports and Games General Secretary**' of Vidyasagar Hall of Residence IIT, Kharagpur

2011-2012

Technical Fest INTERFACE

2009

Received an appreciation certificate in recognition for my role as '**Technical Fest Co-ordinator**' in INTERFACE, the technical fest of Chemical Engineering Department of HBTI Kanpur

TECHNICAL SKILLS SOFTWARE & LANGUAGES

C, C++, Matlab, COMSOL Multiphysics, Ansys-Fluent, OpenFoam, Data-Fit, Tecplot, Sigma plot, Working OS Windows 10, Linux