CURRICULUM VITAE

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OBJECTIVE

To work in growth oriented organization and to obtain a very challenging position that will utilize my expertise, education and background, expand knowledge, and offer opportunities for personal and professional growth.

EDUCATION QUALIFICATION:

Degree	Year	Discipline/Branch	University/Board	Marks%/CGPA	Division
Ph.D.	2018	Chemical Engineering	I.I.T. Roorkee	**Submitted in April 2018**	NA
M.Tech.	2009	Chemical Engineering	H.B.T.U. Kanpur	**69.25%**	First
B.Tech	2004	Chemical Engineering	N.I.T. Surat	**60.50 %**	First

EXPERIENCE

1. Assistant Professor MIT Moradabad (U.P.) Jan 2010 - 2011

2. Associate Professor REC Roorkee (U. K) Jan 2020-2021

3. Assistant Professor(Contractual) HBTU (U.P) August-2021-2023 ; August 2024-present

SUBJECT TAUGHT

- **Undergraduate level:** Fluid dynamics, Chemical technology, Energy resources and Utilization, Heat Transfer, Chemical Process Calculations, Thermodynamics

AWARDS/SCHOLARSHIPS/ACADEMIC ACHIEVEMENTS

- Qualified, GATE 2006 in Chemical Engineering
- MHRD Fellowship during PhD

RESEARCH & PROJECT EXPERIENCE:

- Worked as a Research Scholar in Department of Chemical Engineering, IIT Roorkee (Registration January 2011). Topic: **"Development of Meshless Local Petrov-Galerkin (MLPG) method for Complex Fluid Flow Simulations"** under the supervision of **Dr. R. P. Bharti of Chemical engineering Department, IIT Roorkee.**

- **M.Tech. Dissertation (Thesis work), Topic: "**Droplet combustion of bio-diesel fuel under elevated pressure and temperature**"** guided by Dr. A. K. Mishra (HBTI Kanpur) and Dr. D. P. Mishra (I.I.T. Kanpur)

- **B.Tech. Project, Topic: "**Manufacturing of Petrochemical Compound (Propylene Oxide)**" at N.I.T. Surat** (Gujarat).

- **Industrial training during B.Tech.** Vocational Industrial training from **L. Kant paper industry** Kanpur (U.P.)**.**

LIST OF SHORT COURSES & WORKSHOP:

1. Attended an International conference on **Advance in Chemical Engineering** (ACE 2013) conducted by Chemical engineering department IIT Roorkee 2013.

2. Attended a Golden jubilee workshop on "Future Trends in Chemical Engineering" on August 2012 and participated in the technical discussions.

COMPUTER SKILLS:

- Languages C,C++, MATLAB
- ORIGIN, Latex, Tec plot , ANSYS, Fluent software's etc.
- Basics of computer.

CURRICULAR ACTIVITIES

- Teaching assistance ship to the undergraduate students from 2011 to 2014 In I.I.T. Roorkee.

RESEARCH AREA OF INTEREST:

Fluid dynamics, Computational Fluid Dynamics (FEM, FVM, FDM), Meshfree methods (EFG, MLPG)

Summary of PhD research work

The main objective of the research work was to develop an advance numerical tool (MLPG) which is a truly meshfree method and used to solve the differential equations such as PDE/IDE/ODE. Afterwards this method had to extend to solve the various fluid flow and complex fluid problems using power law equation. For the formulation of MLPG, a suitable C++ program has been developed. Due to very complex formulation of MLPG, as the construction of shape function and integration technique of computational domain, it is still under development stage for complex fluid flow phenomena.

Publications:

1. Dr, Verma V. K., Bharti R.P., "Meshless Local Petrov Galerkin (MLPG) for Computation of Incompressible Non-Newtonian Fluids" Engineering With Computers (Under Reviewed)
2. Book Chapter " Technological Development In The Synthesis of Eco-Friendly Biodiesel by Metal Oxide Nanocatalyst" (Under Reviewed)