

Dr. Dinesh Kumar

Assistant professor

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Area(s) of Interest: Fluid Mechanics, fluid machinery, Renewable energy (hydro energy, solar energy and wind energy), modeling and simulation, CFD.

Educational details:

Educational Qualifications	Year	Board/Institution	CGPA* / %
Ph.D: Mechanical engineering	2017	IIT (ISM) DHANBAD	N.A
M.Tech: Alternate hydro energy system	2013	IIT ROORKEE	7.606 / 81.06%
B.E: Mechanical Engineering	2011	R.G.P.V, BHOPAL	77.75% With honors.
12 th	2007	J.A.C, RANCHI	61.0 %
10 th	2005	J.A.C, RANCHI	65.2 %

WORK EXPERIENCE:

9 Sept 2013 to present: Assistant Professor, Department of Mechanical engineering, University College of Engineering and Technology (UCET), Vinoba Bhave University (VBU), Hazaribagh, Jharkhand.

PROJECTS:

Title of the project (Ph.D): modeling and simulation of hydrokinetic turbine

Description:

- Design optimization of hydrokinetic turbine with augmentation technique at different operating conditions through Fluid-Structure Analysis
- Funding towards File No. YSS/2015/001259 from DST, GOI to carry out the research work

Project Supervisor: Dr Shibayan Sarkar, Assistant Professor, IIT (ISM) Dhanbad

Title of the project (M.Tech): CFD based analysis of combined Effect of Cavitation and Silt Erosion in Kaplan Turbine

Description:

- Studied Performance of Kaplan turbine under the influence of cavitations and silt erosion with varying silt parameter.
- CFD analysis studied by using ANSYS (FLUENT)

Project Supervisor: Dr R.P. Saini, Professor, Indian Institute of Technology, Roorkee.

Title of the project (M.Tech): Model Testing of Hydro Turbines

Description:

- Studied of model testing of hydro turbines.
- Made a C++ programs for model testing.

Project Supervisor: Dr R.P. Saini, Professor, Indian Institute of Technology, Roorkee.

Title of the project (B.E): Total Internal Heat Transfer Coefficient of Single Slope Solar Still

Description:

- Determined Convective, Radiative & Evaporative Heat transfer coefficient of single slope solar still
- Studied the effect of inclination & depth of water, Distillation of water by using solar energy with the help of experimental setup.

Project Supervisor: Dr Anil Kumar, Assistant Professor, MANIT Bhopal.

RESEARCH PUBLICATIONS

- International journals: 5
- International conferences: 4

SKILLS:

Computer Languages Elementary Knowledge of C++

Software Packages ANSYS, GAMBIT

AWARDS, SCHOLARSHIPS AND ACHIEVEMENTS:

- Qualified Graduate Aptitude Test in Engineering (GATE)-2010, 2011, 2012, 2013 and 2014 with good score in Mechanical engineering.
- Got a scholarship from Ministry of Human Resources Development (**MHRD**) India during July 2011 to May 2013 at IIT Roorkee, India.

TEACHING EXPERIENCES (subjects taught)

S. NO.	DETAILS
1.	Applied thermodynamics
2.	Applied thermodynamics lab
3.	Fluid mechanics
4.	Fluid mechanics lab
5.	Fluid machine
6.	Fluid machine lab
7.	Mechanical vibration
8.	Heat and Mass Transfer
9.	Heat and Mass Transfer lab

Personal Details:

Permanent Address:

Father's Name: Late Rameshwar Mahto

Date of Birth: Oct. 19, 1990

Gender: Male

Marital status: Married

Vill-Torar, P.O- Shila, P.S- Simaria, Dist- Chatra, Jharkhand, India- 825103.

REFERENCES

Dr Shibayan Sarkar

Assistant Professor

Dept. of Mechanical Engineering,

Indian Institute of Technology (Indian School of Mines), Dhanbad

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Dr R.P.Saini

Professor, AHEC

Indian Institute of Technology, Roorkee

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saini.rajeshwer@gmail.com

+91 9412071956

LIST OF RESEARCH PUBLICATIONS

INTERNATIONAL JOURNALS:

- [1]. **Dinesh Kumar**, Shibayan Sarkar. “Modeling of flow- induced stress on helical Savonius hydrokinetic turbine with the effect of augmentation technique at different operating conditions” Renewable Energy 2017; 111:740-748. (I.F:4.357, SCI, Thomson Reuters)
- [2]. **Dinesh Kumar**, Shibayan Sarkar. “Numerical investigation of Hydraulic load and Stress Induced in Savonius Hydrokinetic Turbine with the effects of Augmentation Techniques through Fluid-structure interaction analysis” Energy 2016; 116:609-618. (I.F:4.520, SCI, Thomson Reuters)
- [3]. **Dinesh Kumar**, Shibayan Sarkar. “A review on the technology, performance, design optimization, reliability, techno-economics and environmental impacts of hydrokinetic energy conversion systems” Renewable and Sustainable Energy Reviews 2016; 58: 796-813. (I.F:8.050, SCI, Thomson Reuters)
- [4]. **Dinesh Kumar**, Patel Himanshu, Zameer Ahmad. “Performance analysis of single slope solar still” International Journal of Emerging Technology and Advance Engineering, Volume 3, Issue 3, pp 66-72, March 2013. (ISSN: 2250-2459).
- [5]. Saurabh Sangal, Arpit Garg, **Dinesh Kumar** “Review of Optimal Selection of Turbines for Hydroelectric Projects” International Journal of Emerging Technology and Advance Engineering, Volume 3, Issue 3, pp 424-430, March 2013. (ISSN: 2250-2459).

INTERNATIONAL CONFERENCES:

- [1]. **Dinesh Kumar**, Saurabh Sangal and R.P.Saini “Flow Analysis of Kaplan Hydraulic Turbine by Computational Fluid Dynamics” International Conference on “Various Facets of Energy Technologies and its Management for Sustainable Development” (ET & MSD-2013) held at JNU, New Delhi, on 16-17 March, 2013. Published on International Journal of Applied Engineering Research 2013; 8: 61-65. (SJR:0.15, Scopus, H index:13)
- [2]. **Dinesh Kumar**, Bhingole P. P. “CFD based analysis of combined effect of cavitation and silt erosion on Kaplan turbine” 4th International Conference on material processing and characterization (ICMPC 2015) held at GRIET Hyderabad, on 14-15 march, 2015. Published on material today: proceedings 2015; 2(4): 2314-2322. (SJR:0.53, Scopus, H index:2)
- [3]. Amit Kumar, Bhingole P.P. and **Dinesh Kumar** “Dynamic Analysis Of Bajaj Pulsar 150cc Connecting Rod Using Ansys-14.0” International Conference on Advancements and Futuristic Trends in Mechanical and Materials Engineering (October 16-18, 2014) held at PTU, Kapurthala, Punjab. Published on AJEAT, Vol.3, No.2, 2014, pp.19-24 (ISSN: 2249-068X)
- [4]. **Dinesh Kumar** and Shibayan Sarkar “A Review on the Design Efficient Blade of Hydrokinetic Turbines” Hydro 2014 International Conference on Hydraulics, Water Resources, Coastal and Environmental Engineering jointly organized by MANIT Bhopal and ISH during December 18-20, 2014. Published by Excellent Publishing House, New Delhi, Chapter 29, and pp: 305-315 (ISBN: 978-93 – 84935-04-7)

SOME IMPORTANT LINKS:

<http://orcid.org/0000-0002-4787-8836>

<https://scholar.google.co.in/citations?user=blAjpRgAAAAJ&hl=en>

DECLARATION

I do hereby declare that the information furnished above is true and complete to the best of my knowledge and belief.

Place – Hazaribagh, India.

Date – 23-08-2017