

To
The HR
Chhatrapati Shivaji Maharaj University
Old Mumbai - Pune Expressway, near Panvel Toll Plaza,
Panvel, Navi Mumbai, Maharashtra 410221

It is with great enthusiasm that I am submitting my application for “**Assistant Professor (Department of Mechanical Engineering)**” at Chhatrapati Shivaji Maharaj University. I am currently a doctoral candidate at Indian Institute of Technology Kharagpur, where I am about to submit my thesis by May 2022.

My doctoral dissertation compares the performance assessment of two power plants i.e. naphtha-fired combined cycle power plant (CCPP) and coal-fired steam power plant (CSPP) through energy, exergy and water footprint methods. Both power plants are captive configured, and are of same unit capacity i.e. CCPP is of 116 MW, whereas CSPP is of 120 MW. It was onsite work, where data was collected from control unit of power plant. The work has recognized on international platforms, where it fetched two best paper awards. Apart from this, the list of scholar contribution is being described in CV.

Before joining as a research scholar at the Indian Institute of Technology Kharagpur, I worked as a JRF at the Indian Institute of Technology Bombay (2014-2015) and worked on two projects. Apart from research experience of one year in IIT Bombay, I had also teaching experience of two years (Manipal Institute of Technology (Udupi, India) and University of polytechnic BIT Mesra).

For the above mentioned position, I have attaching my resume. Looking forward to working with you.

Best Regards
Sankalp Arpit
Research Scholar
IIT Kharagpur

Sankalp Arpit

D144, BR Ambedkar hall of residence,
Near swimming pool,
Indian Institute of Technology Kharagpur
West Bengal, India
Pin: -721302

Email- sankalp.arpit815@gmail.com / sankalp.arpit@iitkgp.ac.in

LinkedIn: <https://www.linkedin.com/in/sankalparpit/>



Professional Experience

- **17th May, 2017- 22nd Oct, 2017**

Teaching Assistant in Energy Conservation & Waste Heat Recovery (NPTEL).

Supervisors: Prof. Prasanta Kumar Das and Prof. Anandaroop Bhattacharya

- **10th Sept, 2014 – 1st July, 2015**

Junior Research Fellow (Department of Mechanical Engineering), IIT Bombay.

Supervisor: - Prof. Sandip Kumar Saha

- **1st Aug, 2013 – 6th Sept, 2014**

Assistant Professor (Department of Mechanical Engineering), Manipal Institute of Technology.

- **11th Dec, 2011- 13th Jan, 2013**

Teaching Assistant in University of Polytechnic, BIT Mesra

Education

- **July, 2015 – April, 2022 (Expected to Submit Dissertation)**

PhD student within School of Energy Science and Engineering (Indian Institute of Technology Kharagpur, West Bengal, India)

Supervisors: Prof. Prasanta Kumar Das and Prof. Sukanta Kumar Dash

- **July, 2011 - July, 2013**

Master of technology in Energy Technology, Department of Mechanical Engineering, BIT Mesra, India.

Supervisor: - Prof. Sabin Kumar Mishra

- **Aug, 2005 - July, 2009**

Bachelor of Technology in Department of Mechanical Engineering, Sikkim Manipal institute of technology, India.

Supervisor: - Prof. B.B Pradhan, Prof. Anand Prakash Tiwari, Prof. Ruben Phipon

Awards and honors

- **Best Paper Award** in 4th ICSTR Singapore- International conference on Science and technology research (4th ICSTR) held at NUSS Singapore/Nov 15-16, 2019.

- **Plenary Speaker** in 4th ICSTR Singapore- International conference on Science and technology research (4th ICSTR) held at NUSS Singapore/Nov 15-16, 2019.

- **Technology Programme Committee Member** in “The 5th international Conference on Energy, Environment and Material Sciences” (EEMS)/**June 21-23, 2019**.
- **Best Paper Award** in International Conference in Energy, Environment and Sustainable Development (ICEESD, 2019) held in Paris/**Jan 24-25, 2019**.
- **Session Chair Person** in International Conference in Energy, Environment and Sustainable development (ICEESD, 2019) held in Paris/**Jan 24-25, 2019**.
- **Committee Member** in International Conference on Materials Science and Energy Technology (ICMSET 2022)/ **March 25-27, 2022** in Guangzhou, China.

Publication list

- M. K. Singh, D. Yadav, **S. Arpit**, S. Mitra, and S. K. Saha, ‘Effect of Nanofluid Concentration and Composition on Laminar Jet Impinged Cooling of Heated Steel Plate’, Appl. Therm. Eng., vol. 100, 2016.
- Shinde A, **S. Arpit**, P. Km, P. V. C. Rao, and S. K. Saha, ‘Heat Transfer Characterization and Optimization of Latent Heat Thermal Storage System Using Fins for Medium Temperature Solar Applications’, J. Sol. Energy Eng. Trans. ASME, vol. 139, no. 3, 2017.
- **S. Arpit**, P.K. Das, S.K. Dash, ‘Thermodynamic analysis of GT fuel with Naphtha or Natural gas as the Fuel: A Thermodynamic Comparison’, International Journal of Energy and Environmental Engineering, Vol: 13, No: 1, 2019.
- **S. Arpit**, P.K. Das, S.K. Dash, ‘Assessment of sustainability indicators of two gas turbine plants with naphtha and naphtha-Rfg mixture as fuels’, Matter: International Journal of science and technology, Vol: 6, No: 1, 01-14, 2019.
- **S. Arpit**, P.K. Das, S.K. Dash, Performance assessment of a steam power plant (120 MW) through energy and exergy analysis (Accepted in Journal of Thermal Engineering).
- **S. Arpit**, P.K. Das, S.K. Dash, Water footprint assessment of a naphtha based combined cycle power plant and coal based steam power plant. (Accepted in Environmental and monitoring Assessment, Springer).
- **S. Arpit**, P.K. Das, S.K. Dash, Appraisal of a naphtha-based combined cycle captive co-generation plant for a petrochemical complex through energy and exergy analysis. (communicated).

Conference presentations delivered

- **S. Arpit**, P.K. Das, S.K. Dash, ‘Exergy-based Comparison of Two Gas Turbine Plants with Naphtha and Naphtha-RFG Mixture as Fuels’ at 7th ICAER- International Conference on Advances in Energy Research held in IIT Bombay. (10-12 December, 2019).
- **S. Arpit**, P.K. Das, S.K. Dash, ‘Assessment of Sustainability Indicators of Two Gas-Turbine Plants with Naphtha and Naphtha-RFG Mixture as Fuels’ at 4th ICSTR-International Conference on Science & Technology Research. Held in NUSS Singapore. (15-16 November, 2019).

- **S. Arpit**, P.K. Das, S.K. Dash, ‘Thermodynamic Analysis of GT Cycle with Naphtha or Natural Gas as the Fuel: A Thermodynamic Comparison at ICEESD 2019-21st International Conference on Energy, Environment and Sustainable Development. Paris, France. (January 24-25, 2019).

Book chapter

- **Arpit S.**, Saren S., Das P.K., Dash S.K., Exergy-Based Comparison of two Gas Turbine Plants with Naphtha and Naphtha-RFG Mixture as Fuels. Proceedings of the 7th International Conference on Advances in Energy Research. Springer Nature Singapore Pte Ltd., 2021.

Review of journal paper/ conference papers

- Paper ID: JTEN-2019-101
Title: Experimental Investigation on Thermal Behavior of Hybrid Single Slope Solar Still for Journal of Thermal Engineering.
- Ms.Ref.No.: ICAMPD-2019_paper_99
Title: Two-phase flow analysis in elbow bend pipe used in Oil Extraction Process: A computational Approach
- Ms.Ref.No.: ICAMPD-2019_paper_69
Heat Transfer and Pressure Drop Assessment of a Vortex Generator Supported Fin and-tube Heat Exchanger for ICAMPD-2019 conference proceeding.
- Paper ID: JTEN-2022-107
Title: Numerical Investigation on the Effect of Slit Thickness and Outlet Angle of a Bladeless Fan for Flow Optimization using CFD Techniques
- Paper ID: EAE-22-0282
Title: - Energetic, Exergetic analysis and Machine learning of Methane Chlorination process for Methyl Chloride Production

Project overviews

- Performance analysis of a naphtha based combined cycle power plant configured into captive mode (Haldia Petrochemicals Limited).
- Performance analysis of a coal based Steam power plant (Tata Power, Jajbhera Thermal).
- Development of Thermal Storage System using Phase Change Material for ORC Based Solar Thermal Power Plant (Project code no.14DST014).
- Effect of Nanofluid Concentration and Composition on Laminar Jet impinged Cooling of Heated Steel Plate.

Certificates and participations

- Poster Presentation on Research Scholar Day in School of Energy Science and Engineering, IIT Kharagpur. (12th March,2016).

- Certificate of Excellence in Rangmanch (Street Play) in Sikkim Manipal Institute of Technology. (28th-30th August, 2008).
- Certificate of Appreciation in Hospitality Committee in Sikkim Manipal Institute of Technology. (1st-3rd November, 2007).
- Certificate of Appreciation from “MEDUSA” in Sikkim Manipal Institute of Technology. (2007).
- Certificate of Appreciation in Enterprise Awareness Campaign in Sikkim Manipal Institute of Technology. (14th -16th February, 2009).
- Certificate of Participation in Engineering Problem Solving using MATLAB in Sikkim Manipal Institute of Technology. (30th September, 2007 - 2nd October, 2007).

Membership of professional/scientific bodies

- Eurasia Research
Membership ID: - ERCICSTR1924066
Membership Category: - Life Time

References

- Prof. Prasanta Kumar Das
Department of Mechanical Engineering
Indian Institute of Technology Kharagpur,
Email:-pkd@mech.iitkgp.ac.in
- Prof. Sukanta Kumar Dash
Department of Mechanical Engineering
Indian Institute of Technology Kharagpur,
Email: - sdash@mech.iitkgp.ac.in
- Prof. Sandip kumar Saha
Department of Mechanical Engineering
Indian Institute of Technology Bombay,
Email: - sandip.saha@iitb.ac.in
- Mr. Prabhakar Kumar
Mechanical Maintenance Department, Group Head
The Tata Power company Limited
Email:-kprabhakar@tatapower.com